Impacts of Migration on Households in the Dry Zone, Myanmar

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EXECUTIVE SUMMARY

The analysis of the 2017 Dry Zone Migration Impact Survey is one of the first studies using a systematic survey approach to examine the impacts of migration on households and populations remaining in the Dry Zone areas of central Myanmar from where the migrants originate. This report examines recent migration during the last five years. The focus is on migrants who moved beyond township for at least one year.

Migration is common in the Dry Zone. About two thirds of migrants are men. Migrants tend to first move at the ages of mid- and late-20s. They are usually either adult children of household heads or household heads themselves. Most migrate because of economic reasons, particularly for employment opportunities in the non-agricultural sector. The migration decision is usually made not only by the migrant but also in consultation with immediate family members such as parents and siblings. Nearly three quarters of migrants received at least some financial support from origin households to set up at the destination. Internal migration to another region or state in Myanmar is more common than international migration. It is more common for men than women and from households in middle wealth quintiles than those in the top or bottom wealth strata to participate in international migration. Remittances from international migrants tend to be significantly larger than those from internal migrants.

Several perspectives exist for interpreting the impacts of migration on origin households and their members.

- T*he alarmist perspective* views extensive migration especially from rural to urban areas as having adverse effects on households and populations remaining in sending communities potentially resulting in labor shortages and leaving young children and frail older persons in rural areas to fend for themselves.
- *The household strategy perspective* views migration more positively as a way to diversify economic risks for the origin households and as benefiting both migrants and family members who remain behind.
- *The modified extended family perspective* posits that advances in transportation and communication technology permit family members to maintain relationships and fulfill at least some of the associated obligations although in modified forms.

Our findings are least consistent with the alarmist perspective. Migrant-sending households do not appear particularly disadvantaged. Migrant-sending households in rural areas do not experience shortages of working-age adults as they tend to be larger and have more working-age adult members than non-migrant households. Migrant-sending households are better off in terms of household wealth and size of land ownership. They are also less likely to report income inadequacy. Migrant-sending households may more likely be better off economically in the first place. Given the nature of our data source, we are limited in explaining causality between migration and household material wellbeing, e.g. in terms of income and household possessions. A majority of both migrant-sending and non-migrant households in the Dry Zone rely on the work of household members as their major

income source. At present, only a quarter of urban migrant-sending households and a third of their rural counterparts rely on remittances as their main source of income.

Other evidence also contradicts the alarmist perspective. We find that parental migration has few adverse effects on dependent children under age 15 remaining in the Dry Zone. Adverse impacts appear limited to the small number of children whose mother or both parents migrated beyond township. Furthermore, results also indicate that disabled members of migrant-sending households are not worse off than their counterparts from non-migrant households in terms of receiving care and having unmet care needs.

The observed lack of (or very limited) negative impacts of migration on origin households and their members in the Dry Zone is possibly explained by the current patterns of migration, which may change over time. Households with a larger size and those with some landholding and assets are more likely to have one of their members migrate compared to smaller households and those with limited material resources. This is perhaps because they can afford to do so in terms of available number of members as well as migration-related expenses. Evidence from this study further suggests that households may strategize to ensure not all adult members migrate elsewhere. Migrant-sending households tend to have enough members to cover household needs (e.g., care provision for children and disabled household members). For instance, in migrant-sending households with young children, migrants tend to be fathers rather than mothers.

Exchanges frequently take place between migrants and origin households. Economic migrants contributed more materially to their households of origin than they receive. For migrants who left behind young children, origin households provide care and pay for some daily necessities for the children including school expenses. This mutual dependence benefits both migrants and family members remaining in the Dry Zone.

The recent proliferation of cellular phone technology in Myanmar has greatly enhanced the ability for migrants and origin households to maintain social contacts and possibly other aspects of intergenerational support. Almost two thirds of migrants are in daily or weekly phone contact with origin households. It is extremely rare (less than 1%) for economic migrants to desert their origin households completely by not providing regular financial support, visits, or phone contacts.

Migration has both benefits and disadvantages for migrant-sending households including their older members although it appears that in most cases the advantages outweigh the disadvantages. A common assumption is that young adult migration from rural areas leaves older persons behind in a disadvantaged situation. However frail family members (often elderly parents) of migrants that need assistance are often cared for by siblings of migrants that remain in or near the origin household. Migrants also typically enjoy benefits from their households of origin. For example, they can leave their young dependent children in care of remaining adult members in origin households.

Looking ahead, migration flows are expected to increase as Myanmar becomes more developed and urbanized. The country's transition to smaller family size poses new challenges to families in migration-source areas. The current situation, in which some

household members migrate while others remain with dependent children, frail household members, or elderly parents, will be more difficult to maintain. Our findings provide a useful baseline. Nevertheless, continual monitoring of migration trends and their implications in Myanmar's changing socio-demographic context is critical for developing informed policies and programs that address needs of migrant-sending households and prepare them to confront risks associated with migration.

1. INTRODUCTION

Myanmar's 53-million population has been on the move at an unprecedented level following a series of political and structural reforms that began around 2011. According to the 2014 census which was the country's first national census in three decades, there were nearly 9.5 million internal migrants[1] and approximately 2 million international migrants[2]. Furthermore, 12% of all households contained internal migrants, whereas almost 8% of them had international migrants. The actual level of population movements was likely to be greater than these census estimates (Department of Population, 2016a). First, the census definition of internal migration did not include movements on a temporary basis of less than 6 months as well as intra-township movements. Moreover, an underestimation of the number of international migrants is also very likely due in part to the method of data collection as well as some respondents' concerns about providing information about former household members who are undocumented migrants[3]. Nevertheless, there is a consensus among experts that the levels of both internal and international migration will rise significantly within the next decade, given Myanmar's ongoing transformation from a rural, agriculture-based economy to a more urban, industry- and service-based economy (World Bank, 2016a).

Empirical evidence on patterns of migration, scale of migration from and within Myanmar, and the roles that remittances play in its economy has begun to emerge (for example, see Department of Population, 2016a; Gupta, 2016; Helvetas, 2015; ILO, 2015). However, much less is known about the impacts of migration on sending as well as destination communities (Griffiths & Ito, 2016). Open questions include, for example, to what extent does urban-bound migration lead to labor shortages in Myanmar's rural agricultural communities and what are the eventual consequences of such labor shortages? To what extent does out-migration of working-age adults skew the age structure of migration source areas? More importantly, how does the skewed age structure impact upon social dynamics in sending communities, particularly intergenerational support systems (e.g., material, social, care support) for older persons and young children who remain in rural areas? To what extent do households in sending communities rely on remittances as their main source of income? How much income gaps are there between migrant-sending

[1] The 2014 census defined internal migration as a movement of an individual (i.e., current household member) beyond his/her township for 6 months or more. It intends to capture permanent or semi-permanent changes of residence. The census' thematic report on migration focuses on migration within the 5-year period before the census "because of the need to closely match the characteristics of individual to the migration" (Department of Population, 2016a, p.10).

[2] The 2014 census asked respondents whether or not there were former household members who were living abroad. They were not included in the count (approximately 50.3 million) from the 2014 census enumeration of the population (i.e., the current population residing in Myanmar at the time of census, plus non-residents who were present in Myanmar on Census night).

[3] While the census estimated that there were about 2 million international migrants, a backward projection method indicates that a total of 4.25 million who were born in Myanmar were living abroad at the time of census (Department of Population, 2016b).

households and non-migrant households? Why do some migrant-sending households manage to use remittances for financial and social investments whereas others use remittances primarily for consumption?

To fill in some of these knowledge gaps, our study analyzes data from the 2017 Dry Zone Migration Impact Survey to examine the impacts of migration on households in migration-source areas. Specifically, we examine characteristics and patterns of migration in the Dry Zone distinguishing between economic and non-economic migration. Moreover, we investigate the extent to which migration affects material wellbeing and livelihoods experienced by migrant-sending households, compared to non-migrant households. We also examine economic and social implications of migration for household members remaining in the Dry Zone. We specifically assess the wellbeing of potentially vulnerable segments of the population left behind in migrant-sending households, including dependent children as well as family members in need of personal care (e.g., the disabled or the elderly with functioning and/or cognitive difficulties), with a focus on unmet needs of these household members. Based on the empirical findings, we discuss how policy and support can be enhanced to increase the positive impacts of migration on migrant-sending households and to address its negative consequences.

This study extends current knowledge in important ways. First, we survey migrant-sending and non-migrant households in Mandalay and Magway Regions, which cover a large portion of the Dry Zone where populations are exposed to climate vulnerability and landlessness is prevalent (Mercy Corps, 2015; World Food Program, 2011). Our research provides a relatively new perspective to existing survey-based studies that examined samples of migrants in and outside Myanmar (ILO, 2015; IOM & ARCM, 2013). Second, our study offers nuanced empirical findings regarding the impacts of migration on migrant-sending households and their remaining members, particularly those at risk of vulnerability. In addition to examining migration impacts on young children – a commonly studied topic (IOM, 2015), we also address how migration affects the wellbeing of disabled and frail household members and their care providers. Furthermore, while existing research tends to use qualitative or mixed-method approaches to examine migration impacts (e.g., Helvetas, 2015; World Bank, 2016b), our study utilizes data that is based on a household survey designed specifically to systematically study migration impacts[4]. We focus on quantifying the situation, needs, unmet needs, and vulnerabilities of families and individuals in migration source areas. Furthermore, our analyses differentiate not only households with migrants from those without migrants but also differentiate households with economic migrants from those with non-economic migrants.

[4] We do not attempt a representative survey in order to generalize the regional prevalence of migration since such study efforts were conducted in 2015 by the World Bank Myanmar in Magway (World Bank, 2016b) and as of 2017, have been planned for Mandalay by the International Organization for Migration.

This report is outlined as follows. Following the introduction, Section 2 provides an overview of the Dry Zone's demographic and socio-economic context based on a review of existing literature. Section 3 describes the study's data source and methodology. Section 4 describes characteristics of households and individuals in the study areas in Mandalay and Magway. Section 5 examines characteristics and patterns of migration in the study areas. Section 6 addresses economic support and social contacts from migrants to their households of origin. Sections 7 and 8 examine the wellbeing and needs of dependent children and disabled household members remaining in migrant-sending households respectively. Section 9 concludes key findings and discusses policy recommendations.

2. DEMOGRAPHIC AND SOCIOECONOMIC CONTEXT OF THE DRY ZONE

This section provides an overview of the demographic and socioeconomic settings of the study area. The Dry Zone in central Myanmar covers a total of 58 townships in Mandalay, Magway, and Sagaing Regions. Its area size of over 54,000 km^2 covers approximately 13% of the country's total area. Accounting for roughly 30% of Myanmar's total population, the Dry Zone's population size ranges between 10 million and 14.5 million based on different sources (Department of Population, 2015; Mercy Corps, 2015). The area is more densely settled and more rural compared to the national average.

Livelihoods in the Dry Zone depend greatly on the Southwest monsoon. The area is prone to erratic rainfall and prolonged dry spells. Its land is characterized by clay and sandy soils which are at high risk of water and wind erosion leading to land degradation and declining agricultural production. Given the environmental constraints, the Dry Zone is one of Myanmar's most food insecure regions (World Food Program, 2011). Although households generally report adequate food consumption, nearly two fifths have at least some difficulty meeting their food needs on an annual basis and reduction in food portion size is a common coping strategy (Mercy Corps, 2015). Evidence suggests high rates of low birth weight, wasting and stunting in children, and under-nutrition in mothers (WHO, 2000). A 2010 report further reveals that approximately 43% of the Dry Zone population lives in poverty and 40-50% of its rural population is landless (JICA, 2010).

Households in the Dry Zone are often characterized by low undiversified agriculture-based income, high debts, and heavy reliance on credits (Mercy Corps, 2015). Crop production is the main livelihood activity with primary crops including rice, oil crops (sesame, groundnut, sunflower), and pulses (chickpeas, pigeon peas). Average farm size is small. More than half of farms are less than 5 hectares and over 80% are less than 10 hectares. Farm households generally have low access to stored water for crop production. Furthermore, a significant proportion of farming communities in the Dry Zone lacks infrastructure such as good-quality roads that connect them with township and state capitals and gives them convenient access to information and market for their crops. In addition to crop production, other livelihood activities in the Dry Zone include livestock production, petty trade, industrial labor, and migration.

Labor migration has long been utilized as an important livelihood strategy by households in the Dry Zone[5]. According to the World Food Program's assessment of Magway Region during 2009, more than one in five households has a labor migrant (World Food Program, 2011). Out of these, one in three households has more than one migrant.

[5] It is important to note that different studies conducted by different organizations use varying definitions of migration. Estimates of the volume of migration from existing surveys may not be readily comparable.

A more recent estimate by the World Bank (2016b) indicates that migration levels are high in Magway with internal migration being more common than international migration. About one fifth of sampled households in Magway experienced internal migration and 5% international migration. Most labor migrants remain in Myanmar. Internal migration within regions especially seasonal migration is common although not examined in this report, while Yangon is a popular domestic destination outside the Dry Zone. In Magway, for instance, seasonal migrants from various townships typically work in oil seed processing factories in Magway City several months a year before returning to their own farms during the planting season for groundnut and sesame (Helvetas, 2015).

Furthermore, regarding gender differences in patterns of migration, research shows that there are no gender differences in levels of internal migration; yet, international migration is male-dominated (Helvetas, 2015). There is a clear gender division regarding the sectors of employment. Female migrant workers tend to be employed on tea plantations and in garment factories, or as domestic help. Their male counterparts are preferred in rubber plantations, mines, and construction sites.

Like elsewhere in Myanmar, major drivers of migration in the Dry Zone include lack of sufficient and year-round livelihood opportunities, landlessness and oversupply of labor in rural areas, crop failures and income-related shocks, adverse climatic conditions and environmental changes, as well as better job and income opportunities in destination areas. Social networks play an important role in facilitating both internal and international migration. Among migrant-sending households in the Dry Zone, internal migration depends on networks of family, relatives, and friends as well as traditional labor routes (e.g., from the Dry Zone to tea plantations in Shan State). The role of governmental institutions in facilitating internal migration is almost non-existent. A qualitative study reveals that while internal migration is typically considered by households in the Dry Zone as a survival strategy particularly to diversify risks, international migration is adopted by medium to high landholding households as their wealth accumulation strategy (Helvetas, 2015). International migration is rarely experienced by landless or near landless households. Confirming this evidence, the 2014 census further reveals that there was very little overlap between households with internal migrants and those with international migrants (Department of Population, 2016a).

By and large, there is still a lack of systematic evidence regarding the impact of migration on households and communities in the Dry Zone. Existing reports hypothesize that labor shortages in migration source areas are highly likely, especially during the peak agriculture season (Helvetas, 2015; Griffiths & Ito, 2016). Further, the extent to which migration can improve or worsen the economic situation of the households and the wellbeing of household members also remain an open question. The extent of the impact is likely to depend on the type of migration, skills of migrant workers, the sector of

employment, and primary purpose of migration (i.e., household income maximization versus risk diversification).

3. DATA AND METHODS

This study is based on analyses of a recent survey of households in the Dry Zone of Myanmar. The survey was designed by the authors in collaboration with the HelpAge International. It is part of several ongoing research and programmatic activities for the Dry Zone Social Protection Project[6] funded by the Livelihoods and Food Security Trust Fund (LIFT). The survey was conducted between February and April 2017 by Myanmar Survey Research (MSR) under close supervision of the authors. This section describes the survey's definition of migration, sample design, study instruments, and study limitations. Detailed information about fieldwork preparation, data collection, and quality control is available elsewhere (see Myanmar Survey Research, 2017).

3.1 Definition of migration

Migration terminologies employed in this study are by and large consistent with the 2014 census definition (Department of Population, 2016a) as well as terminologies used in previous migration research in Myanmar (e.g., World Bank, 2016b). For the purpose of our analysis, we define migration as a movement beyond township for at least one year. Migrants are thus former or current household members[7] who moved out for more than one year during the last five years prior to the survey (i.e., since 2012) to another township, elsewhere in Myanmar, or elsewhere outside Myanmar. They may have returned to this or different household in the current township. Additionally, we consider migrants as former household members who left less than a year ago but intend to remain away for at least a year. Our study also includes information about deceased household members who migrated during the last five years. Furthermore, our study distinguishes between economic and non-economic migration. Economic migration refers to migration with the primary intention to work or to look for work beyond township. Meanwhile, non-economic migration includes migration with other main purposes such as education, marriage, family reunification, and wars/armed conflicts.[8]

[6] The project began in late 2015 with aims to assist vulnerable households cope and manage risks by enhancing informal community-based mechanisms and practices, strengthening government and community capacity to protect the poor and delivering cash benefits to vulnerable groups (people with disabilities and older people). The project has been implemented in 180 villages in the Dry Zone in six target townships in Mandalay and Magway Regions. See McCarty & Whitehead (2016) for more information.

[7] In our survey, household members refer to individuals who regularly reside in the present household. Former household members are those who used to live in the present household for at least three months. Our study's definition of household membership is rather different from the 2014 census, which considered household members as those who spent the census night in the present household (i.e., the night of 29th March 2014).

[8] This study does not focus on seasonal migration, which usually occurs when employment opportunities are present in other locations (often nearby villages or urban areas) during the off-peak harvest and planting seasons. Seasonal migrants practice both agricultural and non-agricultural casual labor based on the seasonal calendar.

Since the study's main interest is to assess migration impacts on households in migration-source areas, our definition of migration intends to capture permanent and semi-permanent changes of residence that involve some geographic distance (at least movements between townships), rather than seasonal/temporary movements and intra-township movements. Furthermore, like the census definition, we focus on migration that occurs within the last 5 years prior to the survey. First, it provides a better indication of current mobility patterns (Department of Population, 2016a). Second, recall errors are less likely to be an issue when key informants were interviewed about patterns and decisions of recent migration in the household as well as remittances and other support from recent migrants, compared to when being probed about information regarding migration that took place a long time ago.

3.2 Sample design

The sample design of the survey specified randomly selecting 700 households in the Dry Zone. We began by selecting two townships in Mandalay (Myingyan and Tuangtha) and two townships in Magway (Pakkoku and Yesagyo) where HelpAge International has implemented the Dry Zone Social Protection Project since 2015. The selection of study sites as well as sample size determination were conducted in consultation with HelpAge International and Myanmar Survey Research taking into consideration feasibility and budget issues. We also considered economic development levels and population age structure in targeted study sites (McCarty and Whitehead, 2016).

Table 3.1. Key characteristics of population and households in selected townships in the Dry Zone

	Total population (enumerated)	Percent population in urban areas	Number of households	Mean household size
Whole country	50.28 million	29.6%	10.88 million	4.4
Mandalay				
Whole region	6.17 million	34.8%	1.32 million	4.4
Myingyan Township	276,096	31.8%	62,340	4.3
Taungtha Township	216,642	8.1%	49,852	4.3
Magway				
Whole region	3.92 million	15.0%	919,717	4.1
Pakokku Township	290,139	31.3%	66,340	4.2
Yesagyo Township	215,352	10.8%	47,332	4.5

Source: The 2014 census of Myanmar.

Table 3.1 describes key characteristics of population and households in the four selected townships based on the 2014 census. Results from the census indicate that the total population size of Mandalay Region is about 1.5 times larger than that of Magway. Mandalay on average has higher percentages of population in urban areas than Magway (Mandalay City is Myanmar's second largest city). Nevertheless, the selected townships in the two regions are comparable in several respects. For example, Mandalay's Myingyan Township and Magway's Pakkoku Township have close to 300,000 population with approximately over 30% in urban areas. Meanwhile, the population size of Mandalay's Taungtha Township and Magway's Yesagyo Township are slightly over 200,000 with approximately 10% in urban localities. A similar pattern among these pairs of townships is also observed for the number of households. Furthermore, across all four townships, average household size is almost the same ranging between 4.2 and 4.5.

After selecting the four townships, a total of 35 urban wards and rural villages were randomly selected using the PPS (probability proportional to size) approach. Of these wards/villages, 20 are located in Mandalay and 15 in Magway. Many of these 35 study sites are target villages in HelpAge International's Dry Zone Social Protection Project. We are mindful that certain wards/villages are much more likely than others to experience greater levels of migration, given that chain migration is common and that social networks play a crucial role in facilitating migration (Griffiths & Ito, 2016).

Table 3.2. Distribution of sampled households by its location and migration status

	Total number of households	Number of migrant-sending households		Number of non-migrant households	
		Urban	Rural	Urban	Rural
Total	700	130	340	70	160
Mandalay					
Myingyan Township	200	40	95	20	45
Taungtha Township	200	40	95	20	45
Magway					
Pakokku Township	140	25	70	15	30
Yesagyo Township	160	25	80	15	40

Household registries maintained by local officials were used as the sampling frame from which to select eligible households. To meet the target sample size of 700 households, we randomly selected 470 households with at least one migrant at the time of survey and 230 households without any migrants. For each ward/village, the survey team interviewed 20 households that meet our eligibility criteria for migration status. Table 3.2 describes the distribution of sampled households by location and migration status. For each sampled household, the survey team interviewed a household key informant who usually is the

household head, spouse of the head, or other adult household member that are knowledgeable about household members, especially migrants. The survey team selected the key informants so that half were male while the other half female. The survey's response rate is 94.6%. Common reasons for failing to interview include that key informants were away/unavailable or refused to participate in the study. For further details about sample design, see Myanmar Survey Research (2017), pp. 11-17.

3.3 Survey Instruments

We developed a survey questionnaire for the purpose of assessing the impact of migration on households in migration-source areas. The content of the questionnaire is primarily influenced by migration impact studies in neighboring Southeast Asian countries (e.g., Knodel et al., 2007; Vietnam General Statistical Office and United Nations Population Fund, 2006) and by existing relevant studies conducted in Myanmar (e.g., Knodel, 2014; Teerawichitchainan & Knodel, 2015; World Bank, 2016b). The questionnaire is organized in the following sections:

1. *Household schedule* containing a listing of current household members (i.e., individuals residing in the household regularly). Socio-demographic characteristics and health and disability status of current members are probed here.
2. *Household socio-economic situation, housing and household possessions, and food security* containing information on housing characteristics, major economic activity, household assets and debts, and food security.
3. *Migrants* containing information about former household members (i.e., those living in this household for at least three months) who moved out during the last five years to another township, elsewhere in Myanmar, or elsewhere outside Myanmar. This section probes their migration history and pathways to a decision to migrate, economic activity, current location, remittances, contact with the migrant-sending household, and perception of key informants regarding the migration of former household members.
4. *Returned migrants* containing information about current and/or former household members who lived outside the township continuously for at least a year and have returned to the township during the last five years. This section probes their migration history and reasons for returning.
5. *Dependent children* containing information about current household members under age 15. This section probes the presence of their father and mother in the household, parents' migration status, their needs for material and instrumental support, sources of support, and unmet needs.
6. *Disabled household members in need of care* containing information about current members who are frail and had physical and/or mental difficulties or difficulties in

activities of daily living. This section probes care needs of these members, their main and secondary care providers, and whether and how their care needs are met.

3.4 Caveats and study limitations

We are mindful of limitations in our study design. First, this study does not examine migrants' experience at their destination. Information about actual migrants in the survey was obtained through interviews with household key informants, rather than directly from the migrants themselves. Key informants may not always have accurate information about migrants' employments or locations. Second, the study is cross-sectional in design. Given the nature of the dataset, we are restricted in pinpointing definitive causality between migration and the wellbeing of household or that of household members. For example, if results indicate that migrant-sending households are economically better off than non-migrant households, we are unable to determine whether the households are better off because of remittances from their former household members who are migrants, or because of greater likelihood that well-off households use migration as a wealth accumulation strategy in the first place. Nevertheless, our study can reveal nuanced associations between migration and various outcome variables. Given the scarcity of evidence related to migration impacts in Myanmar, evidence from our study can still be very useful for policy and programmatic recommendations.

Furthermore, since several sampled villages are target villages in HelpAge International's Dry Zone Social Protection Project, we may risk having non-typical villages because of potential effects of the HelpAge activities and programs. Lastly, the survey is not national or regional in scope. Thus, it is limited when it comes to make regionally or nationally representative claims based on our empirical findings. Nevertheless, Mandalay and Magway are two regions with relatively large populations. Understanding the impacts of migration on households in the regions based on nuanced research is thus critical for Myanmar's economic growth and poverty reduction.

4. KEY CHARACTERISTICS OF HOUSEHOLDS AND INDIVIDUALS IN STUDY AREAS

In this section, we examine key demographic characteristics, material wellbeing (i.e., housing conditions and household possessions), economic status, and sources of income of sampled households in the Dry Zone. Additionally, we assess socio-demographic characteristics of individuals in the sampled households.

4.1 Demographic characteristics

The number, size and composition of sampled households in the Dry Zone Migration Survey are presented in Table 4.1. According to the sample design, 400 households in Mandalay region and 300 in Magway region were interviewed. Also, according to the design, the 700 interviewed households are allocated so that 200 came from urban areas and 500 from rural areas. Consistent with the 2014 census (Table 3.1), the mean household size averaged modestly over 4, with only minor differences in household size between Mandalay and Magway. However, household size is noticeably higher in urban areas averaging 4.6 versus modestly less than 4 in rural areas. This likely reflects the greater availability of land in rural areas enabling family members to form adjacent or very nearby households in relation to each other. A substantial minority of the households interviewed were headed by women with the proportion modestly higher in Magway than Mandalay as well as in urban compared to rural areas.

Table 4.1 Size and composition of sampled households in the Dry Zone, Myanmar

	Total sample	Region		Location	
		Mandalay	Magway	Urban	Rural
	(n=700)	(n=400)	(n=300)	(n=200)	(n=500)
Mean household size	4.15	4.19	4.08	4.63	3.95
% female-headed households	30.4	28.0	33.7	36.5	28.0
% 1+ migrants[a]	67.1	67.5	66.7	67.5	67.0
% 1+ children under 15	52.0	52.0	52.0	54.5	51.0
% 1+ persons aged 60 and older	46.1	45.8	46.7	45.5	46.4
% 1+ disabled household members[b]	19.6	20.7	18.0	17.5	20.4

Source: The 2017 Dry Zone Migration Impact Survey.

Notes:
a Migrant refers to a former household member who moved out of the household during the last 5 years (since 2012) to another township, elsewhere in Myanmar, or elsewhere outside Myanmar for a continuous period of 12 months or more.
b Disabled household members refer to members who are reported having either "a lot of difficulty" or "cannot do at all" for at least one of the disability indicators in the household roster.

Following the study design, two thirds of sampled households reported at least one current migrant. In addition, slightly over half had at least one child under age 15 and varied very modestly across the two regions and between rural and urban areas. Likewise, somewhat less than half of households included one or more persons aged 60 and over with little difference between the two regions and rural and urban areas. Moreover, about a fifth of the households contained at least one disabled member again with only modest differences by region or by urban and rural areas.

4.2 Material wellbeing

Table 4.2 describes the material wellbeing of sampled households in the Dry Zone as indicated by the condition of housing and the extent of household possessions. Results suggest that about four fifths of sampled households live in housing that was judged to have either permanent or semi-permanent structures (i.e., houses that are not a hut or a shack) with virtually no difference between the two regions. However, permanent or semi-permanent structures are more frequent in urban than rural areas. Moreover, housing in urban areas is at least modestly and often substantially more likely to have the various positive conditions as well as the amenities shown in the table (e.g., durable walls and roofs, modern floors, modern toilet facilities). A notable exception is access to electricity which is close to being universal in both rural and urban areas in each region. What does differ with respect to electricity is that urban areas obtain it through access to the power grid while in rural areas electricity is commonly provided presumably through local generators particularly from solar power. A large majority of households have access to telephones with little difference between the two regions but with greater access in urban than rural areas.

There are only modest differences between the two regions with respect to the percentage of households that have the specific possessions shown in the table. However, there is distinctively higher possession of the items listed in Table 4.2 in urban than rural areas with the exception of motorcycles which are actually slightly more common among rural households. Also, although only a small proportion of households have computers, they are largely confined to households in urban areas. Home ownership is very high exceeding 90 percent in both regions and in both urban and rural areas and is in fact almost universal in rural areas. Ownership of land other than the household plot as well as owning livestock is modestly higher in Mandalay than Magway likely reflecting the higher percentage of sampled Mandalay households that are engaged in agriculture. Land and livestock ownership differences are far higher in rural than urban areas undoubtedly reflecting the far higher percentage of rural households that are engaged in agriculture.

Table 4.2. Housing conditions and household possessions of sampled households in the Dry Zone, Myanmar

	Total sample (n=700)	Region		Location	
		Mandalay (n=400)	Magway (n=300)	Urban (n=200)	Rural (n=500)
Housing conditions and amenities					
% permanent or semi-permanent dwelling structure[a]	79.3	79.5	79.0	85.5	76.8
% with durable walls[b]	28.1	28.2	28.0	32.0	26.6
% with durable roof[c]	84.1	85.8	82.0	86.0	83.4
% with modern floor[d]	36.7	34.5	39.7	43.0	34.2
% with any toilet facilities	84.3	81.3	88.3	97.5	79.0
% with modern toilet[e]	82.3	79.0	86.7	95.0	77.2
% with access to clean drinking water[f]	27.9	10.0	51.7	43.5	21.6
% with any access to electricity	97.4	98.3	96.3	97.5	97.4
% with access to power grid electricity	39.4	36.8	43.0	95.0	17.2
% with ownership or access to phones (landline or mobile)	88.0	89.0	86.7	94.5	85.4
Household possessions					
% with television	51.4	54.5	47.3	80.0	40.0
% with refrigerator	10.4	11.0	9.7	30.5	2.4
% with motorcycle	72.6	71.3	74.3	70.5	73.4
% with computer	1.6	1.8	1.3	5.0	0.2
% with internet access	39.7	40.8	38.3	59.5	31.8
Mean number of household possessions (out of 15 items)	4.12	4.13	4.12	5.90	3.41
Home and land ownership					
% home ownership	96.1	95.3	97.3	91.5	98.0
% owning land other than the house plot	47.0	49.3	44.0	7.0	63.0
% engaging in agriculture	43.3	47.3	38.0	3.0	59.4
% owning any livestock[g]	45.3	48.0	41.7	13.5	58.0

Source: The 2017 Dry Zone Migration Impact Survey.

Notes:

a Permanent or semi-permanent dwelling structure refers to houses that are not "hut or shack".

b Durable walls refer to walls that are made of wood, brick/concrete/limestone, or corrugated tin/galvanized iron.

c Durable roof refers to roofs that are made of tiles, cement, or corrugated tin/galvanized iron.

d Modern floor refers to floors that are made of wood planks, parquet/polished wood, or cement/stone/brick/tile.

e Modern toilet refers to flush or water seal toilets.

f Clean drinking water refers to having the main source of drinking water from tap/piped water or bottled purified water.

g Livestock includes pigs, cattle, goats, ducks, chickens, and others.

4.3 Economic conditions

Apart from assessing housing conditions and household possessions, the survey also asked household key informants about savings, debts, as well as food insecurity. Table 4.3 describes basic indicators of the economic conditions of sampled households in the Dry Zone.

Table 4.3 Economic conditions of sampled households in the Dry Zone, Myanmar

	Total sample	Region		Location	
		Mandalay	Magway	Urban	Rural
% having any types of savings	23.7	22.3	25.7	26.0	22.8
% having serious debts[a]	36.3	34.3	39.0	29.0	39.2
% reporting inadequate income[b]	41.1	40.5	42.0	38.0	42.4
% experiencing food insecurity[c]	1.8	2.0	1.3	4.0	0.8

Source: The 2017 Dry Zone Migration Impact Survey.

Notes:

a Serious debt refers to households reporting having "somewhat serious" or "very serious" debts.

b Inadequate income refers to households reporting "only sometimes adequate" or "rarely or never adequate" income to meet daily needs.

c Food insecurity refers to whether any household members went to sleep hungry during the past month because there was not enough food.

About one fourth of households have some type of savings and just over one third report having serious debts. Slightly more than two fifths report having inadequate incomes at least sometimes. Nevertheless, only very small percentages experience food insecurity although it is more common among urban than rural households. This finding is consistent with recent studies in the Dry Zone that show food security situation has improved considerably, particularly among severely food insecure households (Mercy Corps, 2015; World Food Program, 2011). Furthermore, the percentage reporting having savings differs little by region or by rural-urban residence. Having a serious debt is modestly more common in Magway compared to Mandalay but noticeably more common in rural than urban areas. In contrast, the differences in the percentage reporting inadequate income is less pronounced either between regions or between urban and rural households.

4.4 Sources of income

Sources of household income is shown in Table 4.4 with the top panel showing the percentage that received any income from various sources and the bottom panel showing the relative distribution of households with respect to their main source of income. According to the top panel, work is the most common source being reported by over 90 percent of sampled households regardless of region or whether the household is located in

an urban or rural area. The second most common source of income is remittances being sent from another township in Myanmar, although the percentage reporting this source is less than half of the percentage that report work as an income source. Nevertheless, if remittances from either another township or from outside the country are considered together, then slightly more than half of the sample receive remittances. All other sources of income (such as savings, pension, welfare) are relatively uncommon.

Table 4.4 Sources of income of sampled households in the Dry Zone, Myanmar

	Total sample	Region		Location	
		Mandalay	Magway	Urban	Rural
Percent households receiving income from the following sources					
Work	94.7	95.3	94.0	94.5	94.8
Savings/investment	11.6	9.8	14.0	13.0	11.0
Pension	4.4	5.0	3.7	10.0	2.2
Remittances from another township in Myanmar	39.1	35.8	43.7	38.5	39.4
Remittances from another country	13.1	18.0	6.7	6.0	16.0
Welfare/social agency/NGO	7.9	7.2	8.7	3.0	9.8
Non-coresident relatives	10.7	10.0	11.7	11.0	10.6
Non-relatives	2.9	3.0	2.7	2.0	3.2
Percent distribution of the main source of income					
Total	100%	100%	100%	100%	100%
Work	71.3	69.8	73.3	74.5	70.0
Savings/investments	2.6	2.0	3.3	2.0	2.8
Pension	0.9	1.0	0.7	1.0	0.8
Remittances from another township in Myanmar	15.1	13.3	17.7	16.0	14.8
Remittances from another country	8.7	12.8	3.3	4.5	10.4
Welfare/social agency/NGO	0.1	0.3	0.0	0.0	0.2
Non-coresident relatives	1.1	1.0	1.3	2.0	0.8
Non-relatives	0.1	0.0	0.3	0.0	0.2

Source: The 2017 Dry Zone Migration Impact Survey.

Regional and urban-rural differences in receiving the various sources of income are fairly modest, especially if remittances are treated as a single category that combines domestic and international sources. However, international remittances are considerably more common in Mandalay than Magway and among rural households than urban ones. In contrast, pensions are a more common source of income for urban than rural households. This undoubtedly reflects the fact that pensions are associated with employment in the

formal sector including with the government and that such employment is concentrated in urban rather than rural areas.

With respect to the main source of income (the bottom panel), work is far ahead of all other sources being reported as the main source for over 70% of sampled households. This is true both for the two regions shown and for rural and urban populations. Remittances are the second most common main source of income although substantially less common than work. In Mandalay proportions of households reporting domestic and international remittances as the main source of income are also equal. However, in Magway domestic remittances are much more prominent as the main source of income than international remittances. Apart from work and remittances, all other sources are fairly minor as main income sources. Almost virtually no sampled households reported having welfare or non-relatives as their main source of income, suggesting that family remains the linchpin of material support system in Myanmar.

4.5 Socio-demographic characteristics of individuals in sampled households

Table 4.5 shows the distribution of individuals in sampled households with respect to their socio-demographic characteristics (n=2,903). Females are more common among the household members than are males. There is little difference in this respect either by region or by urban-rural location. Likewise, there is little difference in the age distribution of household members either by region or urban-rural residence. Those under age 15 constitute slightly more than one fifth of household members, while older persons aged 60 and above also constitute roughly 15 percent. Almost all household members are ethnically Bamar and adhere to Buddhism as their religion. Currently married individuals constitute close to or slightly over one half of household members while widowed individuals represent about a tenth of household members.

The educational status distributions differ only modestly between regions but the urban population overall is considerably higher educated than the rural population. Just over 60% of household members worked during the previous year although this is modestly lower for urban than rural members. The main occupations of household members who worked last year differs modestly between the two regions with agricultural work being more common in Mandalay than Magway. Occupational distributions differ more sharply between urban and rural areas with agricultural work being largely absent in the former and quite common in the latter.

Table 4.5. Percent distribution of individuals in sampled households by their socio-demographic characteristics

	All household members	Region		Location	
		Mandalay	Magway	Urban	Rural
	(n=2903)	(n=1678)	(n=1225)	(n=926)	(n=1977)
Gender (%)					
Male	42.6	43.3	41.6	43.5	42.1
Female	57.4	56.7	58.4	56.5	57.9
Age (%)					
Under 15	21.3	20.1	23.0	21.2	21.4
15-59	63.0	63.9	61.7	64.9	62.1
60+	15.7	16.0	15.3	13.9	16.5
Ethnicity (%)					
Bamar	99.2	99.9	98.3	97.6	99.9
Non-Bamar	0.8	0.1	1.7	2.4	0.1
Religion (%)					
Buddhism	99.6	100.0	98.9	98.6	100.0
Other religions	0.4	0.0	1.1	1.4	0.0
Current marital status (among individuals age 13+) (%)					
Never married	39.1	38.2	40.4	42.1	37.6
Currently married	48.5	49.8	46.6	43.5	50.8
Divorced/separated	2.2	2.2	2.3	3.4	1.7
Widowed	10.2	9.8	10.7	11.0	9.8
Education (among individuals age 6+) (%)					
No education	16.6	16.5	16.7	6.9	21.2
Some primary	24.8	25.2	24.5	22.7	25.7
Complete primary	15.1	15.4	14.9	9.3	17.8
Some/complete secondary school	19.7	19.0	20.6	20.9	19.1
Some high school or beyond	23.8	24.9	22.3	40.2	16.2
Work status (among individuals age 11+) (%)					
Worked last year	62.7	62.2	63.4	58.5	64.7
Did not work	37.3	37.8	36.6	41.5	35.3
Main occupation (among those who worked last year) (%)					
Farm, own account	26.7	30.9	21.0	0.9	37.5
Farm, wage labor	3.7	3.5	4.1	0.6	5.0
Non-farm, wage labor	28.6	26.7	31.2	31.6	27.4
Government, military, private	10.7	11.1	10.1	22.6	5.7
Sales/service/business owner	22.0	19.5	25.5	38.5	15.1
Unpaid family work	6.2	6.4	5.9	3.9	7.1
Other	2.1	2.0	2.3	1.9	2.2

Source: The 2017 Dry Zone Migration Impact Survey.

5. CHARACTERISTICS AND PATTERNS OF MIGRATION IN THE DRY ZONE

This section describes characteristics and patterns of migration in the Dry Zone based on analyses of the 2017 Dry Zone Migration Impact Survey. At household level, we compare demographic characteristics as well as material and economic wellbeing of migrant-sending and non-migrant households. Additionally, at individual level, we examine socio-demographic characteristics of migrants and their patterns of migration. We further address differentials in migration patterns by gender of the migrants and by wealth status of their origin households. We also differentiate patterns of movements among economic and non-economic migrants.

5.1 Demographic characteristics of migrant-sending and non-migrant households

Analyses presented in Table 5.1 address the following research questions: To what extent do migrant-sending and non-migrant households differ in terms of their size and composition? What are the differences among these two types of households in urban and rural areas? Results indicate that two of the most distinct differences between migrant-sending and non-migrant households are their size and proportions of female heads. Size of migrant-sending households is typically larger than that of non-migrant households. Proportions of female-headed households are also higher among households with migrants compared to those without migrants. These differences are consistent across urban and rural locations in the Dry Zone.

Regarding gender composition, female members tend to outnumber their male counterparts in both migrant-sending and non-migrant households in urban and rural areas. According to Table 5.1, there is almost no difference in mean number of male members among these two types of households. However, migrant-sending households appear to have slightly larger number of female members than non-migrant households in urban and rural localities.

Age composition is often expected to be adversely affected in a typical developing country by migration, given migration tends to involve working-age household members. In particular, migrant-sending households are hypothesized to have disproportionately smaller numbers of working-age adults. While we find that migrant-sending households have on average between 1.34 and 1.37 migrants, results suggest that migration may have few implications for the age composition of migrant-sending households in the Dry Zone (at least at the time of our survey). Average number of members aged 15-59 is actually higher among migrant-sending households than among non-migrant households in both urban and rural areas. This could be because households with larger number of working adults can in the first place afford to have one or more of its adult members migrate for a considerable distance (i.e., beyond township), whereas households with fewer working-age members are

unable to do so. Apart from working-age members, results further show that there is very little difference between migrant-sending and non-migrant households in terms of the number of their members who are children under age 15, persons aged 60 and older, and disabled persons.

5.2 Economic status of migrant-sending and non-migrant households

Migration is commonly used as a household economic strategy to survive, to diversify risks, to accumulate wealth, or for a combination of these reasons. Analyses presented in Table 5.2 examine the extent to which migrant-sending and non-migrant households differ regarding their economic wellbeing. More specifically, we address whether migrant-sending households are economically better off than those without migrants and how the disparity in material wellbeing (if any) varies across urban and rural locations. We examine three aspects of material and economic wellbeing, including home and land ownership, housing quality and household possessions, and self-reported economic and food insecurity.

Regarding home ownership, while well over 90% of sampled households own their homes, proportions of home ownership are slightly higher among migrant-sending than non-migrant households in urban and rural localities. Owning land other than the house plot is much less common than home ownership, particularly in urban areas. Nevertheless, results show that slightly higher proportions of migrant-sending households in both urban and rural areas own additional land compared to their non-migrant counterparts. In terms of the size of landholding (excluding house plot), on average households with migrants own a larger piece of land (3.5 acres) than those without migrants (2.8 acres). The difference is consistent across urban and rural locations.

Furthermore, findings show that migrant-sending households in rural areas typically live in houses with better housing quality and more amenities than those without any migrants. Their houses are more likely to have permanent or semi-permanent structure, modern toilet facilities, phones, and greater number of household possessions. Exceptions are access to clean drinking water and grid electricity whereby rural non-migrant households appear to have slightly greater access than their migrant-sending counterparts. In urban areas, results indicate little or no differences between migrant-sending and non-migrant households in terms of housing quality and household assets.

Table 5.1 Demographic characteristics of migrant-sending and non-migrant households in the Dry Zone

	All		Urban		Rural	
	Migrant-sending households	Non-migrant households	Migrant-sending households	Non-migrant households	Migrant-sending households	Non-migrant households
	(n=470)	(n=230)	(n=135)	(n=65)	(n=335)	(n=165)
Mean household size	4.22	3.99	4.70	4.48	4.03	3.80
% female-headed households	31.3	28.7	38.5	32.3	28.4	27.3
Mean number of males	1.77	1.75	2.04	1.95	1.66	1.67
Mean number of females	2.45	2.24	2.66	2.52	2.37	2.13
Mean number of persons 15-59	2.70	2.44	3.10	2.82	2.53	2.29
Mean number of children under 15	0.87	0.91	0.99	0.97	0.82	0.89
Mean number of persons 60 and older	0.66	0.64	0.62	0.69	0.67	0.62
Mean number of disabled household members	0.24	0.20	0.21	0.18	0.25	0.21
Mean number of migrants	1.36	--	1.34	--	1.37	--

Source: The 2017 Dry Zone Migration Impact Survey.

Table 5.2 Material wellbeing and economic conditions of migrant-sending and non-migrant households in the Dry Zone

	All		Urban		Rural	
	Migrant-sending households (n=470)	Non-migrant households (n=230)	Migrant-sending households (n=135)	Non-migrant households (n=65)	Migrant-sending households (n=335)	Non-migrant households (n=165)
Home and land ownership						
% Home ownership	97.0	94.3	91.9	90.8	99.1	95.8
% Owning land other than the house plot	47.7	45.7	7.6	6.2	63.9	61.2
Mean size of landholding (acres)	3.45	2.75	0.46	0.18	4.65	3.76
Housing quality and household possessions						
% permanent or semi-permanent dwelling structure	82.6	72.6	85.2	86.2	81.5	67.3
% with modern toilet	85.3	76.1	94.8	95.4	81.5	68.5
% access to clean drinking water	27.2	29.1	43.0	44.6	20.9	23.0
% access to grid electricity	39.6	39.1	97.0	90.8	16.4	18.8
% access to phones (landline or mobile)	90.2	83.5	94.1	95.4	88.7	78.8
Mean number of household possessions	4.36	3.65	6.16	5.35	3.63	2.98
Self-reported economic and food insecurity						
% reporting inadequate income	40.2	43.0	36.3	41.5	41.8	43.6
% with serious debts	37.2	34.3	31.1	24.6	39.7	38.2
% experiencing food insecurity	1.7	1.7	3.7	4.6	0.9	0.6

Source: The 2017 Dry Zone Migration Impact Survey.

Consistent across urban and rural localities, moderately higher percentages of non-migrant households report income inadequacy compared to their migrant-sending households. Nevertheless, when asked about debts, migrant-sending families are more likely than their non-migrant counterparts to report having serious debts. This may actually imply that migrant-sending households have relatively greater access to credits than non-migrant households and/or incur debt in connection with helping to fund migration. For food insecurity, unlike past studies conducted prior to Myanmar's structural reforms (e.g., World Food Program, 2011), it is rare (under 2%) but slightly more common in urban than rural areas for sampled households to report that one of their members went to sleep hungry without enough food during the month prior to the survey. In urban locations, lower percentages of migrant-sending households experienced food insecurity compared to non-migrant households. However, the pattern is reversed in rural locations.

Figure 5.1 Percent distribution of household wealth status among migrant-sending and non-migrant households in the Dry Zone

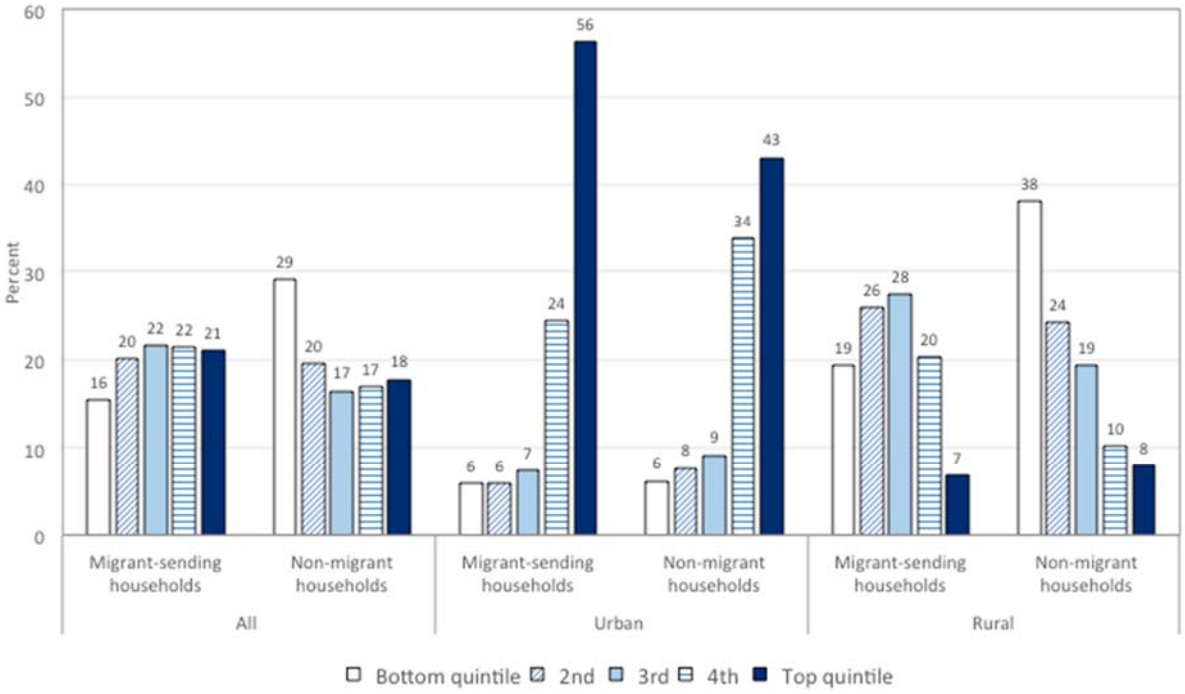


Figure 5.1 shows percent distribution of household wealth among migrant-sending and non-migrant households in urban and rural areas of the Dry Zone. In this analysis, household wealth is a summary measure calculated using Principal Component Analysis based on ownership of household assets and housing conditions as compared to ownership by other households in the total sample (Filmer & Pritchett, 2001; Teerawichitchainan & Knodel, 2015). We divided sampled households into quintiles based on their household wealth status. Overall, results suggest that non-migrant households are disproportionately located in the bottom quintile of household wealth, particularly those in rural areas. Nearly 40% of rural non-migrant households are among the poorest, compared to 19% of their

migrant-sending counterparts. In contrast, relatively higher proportions of migrant-sending households are in the top quintile of the Dry Zone's wealth hierarchy. In urban areas, well over half of migrant-sending households are in the top wealth quintile, compared to about two fifths of non-migrant households.

In sum, for a majority of measures of material wellbeing and economic conditions, migrant-sending households in urban and rural areas of the Dry Zone appear to be better off than non-migrant households. Our evidence is consistent with past findings which indicate that households with some landholding and assets were more likely to have one of their members migrate for some substantial distance (e.g., beyond township). Other studies show that poor landless households in the Dry Zone tend to migrate as well; however, they are likely to migrate seasonally or to move as a whole family (Helvetas, 2015). Since our study excludes seasonal migration and focuses on only households remaining in the Dry Zone, we do not capture seasonal migration and households in which all members have left migration-source areas. An important caveat is that while we find that migrant-sending households are materially well off, drawing causal relationship between migration and improved material wellbeing should be done with caution. Given our survey is cross-sectional in design, it is uncertain whether migrant-sending households are economically well off because of remittances or because of selectivity (i.e., well-off households are more likely to experience migration of its members).

5.3 Sources of income among migrant-sending and non-migrant households

Analyses presented in Table 5.3 compare sources of income among migrant-sending and non-migrant households. The top panel shows percent of households receiving income from various sources, while the bottom panel presents percent distribution of the main income source.

When asked about sources of income received, respondents indicate that work is their most common source of income for both migrant-sending and non-migrant households across urban and rural areas accounting for well over 90%. Remittances within Myanmar are the second-most common source of income for migrant-sending households. Over half of urban and rural migrant-sending households receive remittances from internal migrants. Overseas remittances are more common for rural migrant-sending households (23%), compared to their urban counterparts (9%). It is interesting to note that a small proportion of households without migrants (less than 10%) also report receiving some remittances within Myanmar. Apart from work and remittances, slightly over 10% of both migrant-sending and non-migrant households report savings and investment as their income source. Pension is more common among urban migrant-sending households than other types of households. Meanwhile, welfare is more likely reported as income source in rural areas with a small difference between migrant-sending and non-migrant households.

Table 5.3 Sources of income among migrant-sending and non-migrant households in the Dry Zone

	All		Urban		Rural	
	Migrant-sending households (n=470)	Non-migrant households (n=230)	Migrant-sending households (n=135)	Non-migrant households (n=65)	Migrant-sending households (n=335)	Non-migrant households (n=165)
Percent households receiving income from the following sources						
Work	94.9	94.3	93.3	96.9	95.5	93.3
Savings/investment	11.3	12.2	14.1	10.8	10.1	12.7
Pension	5.3	2.6	12.6	4.6	2.4	1.8
Remittances from another township in Myanmar	54.5	7.8	51.9	10.8	55.5	6.7
Remittances from another country	18.9	1.3	8.9	0.0	23.0	1.8
Welfare/social agency/NGO	8.3	7.0	3.0	3.1	10.4	8.5
Non-coresident relatives	9.1	13.9	8.9	15.4	9.3	13.3
Non-relatives	2.1	4.3	1.5	3.1	2.4	4.8
Percent distribution of the main source of income						
Total	100%	100%	100%	100%	100%	100%
Work	62.3	89.6	68.1	87.7	60.0	90.3
Savings/investment	1.9	3.9	2.2	1.5	1.8	4.8
Pension	0.6	1.3	0.7	1.5	0.6	1.2
Remittances from another township in Myanmar	21.3	2.6	20.7	6.2	21.5	1.2
Remittances from another country	13.0	0.0	6.7	0.0	15.5	0.0
Welfare/social agency/NGO	0.0	0.4	0.0	0.0	0.0	0.6
Non-coresident relatives	0.9	1.7	1.5	3.1	0.6	1.2
Non-relatives	0.0	0.4	0.0	0.0	0.0	0.6

Source: The 2017 Dry Zone Migration Impact Survey.

As for the main income source, over 60% of migrant-sending households and 90% of non-migrant households reported work as their primary source. This pattern is consistent across urban and rural localities. Approximately 20% of migrant-sending households in urban areas rely primarily on remittances within Myanmar for their livelihoods, while 7% of them depend on overseas remittances. In rural areas, a similar pattern is observed, except that twice as many migrant-sending households in rural areas depend mainly on overseas remittances than those in urban areas. In sum, about a quarter of urban migrant-sending households and one third of their rural counterparts report remittances as their main income source. Note that the amounts of remittances received by origin households were not recorded. Thus, this does not imply that rural households received larger absolute amounts in remittances but only that it was a larger relative amount compared to their total income. Other than work and remittances, sources such as savings, investments, pension, and welfare are uncommon primary sources of income for households in the Dry Zone.

5.4 Characteristics of migrants and their migration patterns by migrant-source areas

The 2017 Dry Zone Migration Impact Survey contains information about current or recent migrants who used to be members of sampled households. It is important to note that information about them was reported by household key informants not the migrants themselves. Among the 700 sampled households, there are a total of 623 migrants. Of these, 363 migrants (58%) are from origin households in Mandalay and 260 (42%) from Magway. Approximately 28% are from urban households and the rest from rural households[9]. Analyses presented in Table 5.4 describe socio-demographic characteristics of migrants and their migration patterns by migrant-source areas.

Results show that male migrants outnumber females. The pattern is consistent in Mandalay and Magway as well as in urban and rural locations. Male migrants comprise of roughly two thirds of the sample. Mean current age of migrants is 28 years. Migrants from Magway are on average two years older than those from Mandalay. Migrants from urban locations are also slightly older than those from rural areas. In terms of educational attainment, migrants are generally better educated than average persons remaining in the Dry Zone (see Table 4.5). Nearly 65% of migrants have at least some secondary education. About four fifths of migrants from urban areas, for instance, have secondary education and beyond.

[9] The Dry Zone Migration Impact Survey provides limited information about migrants who recently returned to the study areas. Results (not shown) suggest that average age of returned migrants is 29.5 years, with returned male migrants being slightly older than female returned migrants. Most of them worked outside the home region before returning. Nearly half of them worked for government, the military, or in the private sector. Almost 30 percent were non-farm wage labor and about one fifth were in sales or service industries. On average, they were away for about slightly over two years. About 30% returned because of family reasons or to get married. A quarter returned because their job ended or visa expired, while 20% reported homesickness as the reason. Smaller proportions returned because of insufficient income (10%) or health reasons (6%).

Table 5.4 Characteristics of migrants and their migration patterns by migrant-source areas in the Dry Zone

	All migrants	Region of origin households		Location of origin households	
	(n=623)	Mandalay (n=363)	Magway (n=260)	Urban (n=174)	Rural (n=449)
Socio-demographic characteristics of migrants					
Gender (%)					
Male	65.0	61.2	70.4	62.1	66.1
Female	35.0	38.8	29.6	37.9	33.9
Mean age in 2017	27.81	26.94	29.03	28.84	27.41
Educational attainment (%)					
No education	8.4	9.1	7.4	3.5	10.3
Some primary	12.1	13.2	10.5	9.8	12.9
Complete primary	15.3	14.0	17.1	4.6	19.4
Secondary and beyond	64.3	63.6	65.1	82.1	57.4
Migration patterns					
Mean age when first migrating	25.68	24.74	27.00	26.50	25.37
Destination (%)					
Same district (different township)	3.4	5.0	1.2	6.3	2.2
Same region/state	7.4	11.6	1.5	10.9	6.0
Yangon	16.4	11.8	22.7	20.1	14.9
Another region/state (not Yangon)	54.4	47.9	63.5	52.9	55.0
Another country	18.5	23.7	11.2	9.8	21.8
Main reasons for migration (%)					
Work/employment	87.8	85.4	91.2	78.2	91.5
Education	4.3	6.1	1.9	8.6	2.7
Marriage/followed family	7.6	8.5	6.1	12.1	5.8
Conflicts/wars	0.3	0.0	0.8	1.1	0.0
Main decision maker for migration (%)					
Migrant him/herself	51.2	58.4	41.2	59.2	48.1
Parents of migrant	13.6	12.7	15.0	17.2	12.2
Siblings of migrant	12.7	11.6	14.2	8.0	14.5
Friends of migrants	12.4	8.5	17.7	7.5	14.3
Relatives	9.6	8.5	11.2	6.3	10.9
Others	0.5	0.3	0.8	1.7	0.0
Financial support from origin households (%)					
HH paid most/all expenses	53.5	55.1	51.2	42.5	57.7
HH paid some expenses	19.3	19.6	18.8	16.7	20.3
HH did not pay	24.1	22.3	26.5	37.9	18.7
HH loaned money to migrants	3.2	3.0	3.5	2.9	3.3

Source: The 2017 Dry Zone Migration Impact Survey.

Regarding migration patterns, average migrants from the Dry Zone typically migrated (beyond township) at the age of slightly over 25 years. Age at first migration among migrants from Magway is higher than those from Mandalay. The most common destination is another region/state that is not Yangon. In Mandalay, almost half of the migrants moved to another region/state, while nearly a quarter migrated to another country and slightly over 10% moved to Yangon. Movements within Mandalay account for about 17% of migrants. In Magway, more than 60% of migrants moved to another region/state and over 20% migrated to Yangon. International migration accounts for slightly over 10% of migrants from Magway. Results also make clear that twice as many migrants from rural areas compared to their urban counterparts migrated to another country.

Work or employment (i.e., an economic reason) is overwhelmingly the main reason for migration in both regions as well as in urban and rural areas. Non-economic reasons (e.g., education and family) are much less common. Migrants from urban areas are more likely than their rural counterparts to have moved because of family or educational purposes. In the Dry Zone, it is very rare for individuals to migrate because of armed conflicts. Furthermore, about half of the migrants decided to move by themselves. Migrants from Mandalay and those from urban areas are more likely to be the main decision maker compared to their counterparts from Magway or from rural areas. Immediate family members such as parents and siblings account roughly for about a quarter of main decision makers, while approximately 12% of migrants had their friends as primary decision makers. In Magway and rural areas, friends accounted for moderately higher proportions of main decision makers for migration. Lastly, results suggest that households play an important role in financing migration (at least at the beginning of the movement). About half reported that they paid for most or all migration-related expenses and nearly 20% paid for some. Only about a quarter of households mentioned they did not help the migrants financially. It is interesting to note that urban households are more likely than rural households to not financially supporting their migrant members.

5.5 Gender differences in characteristics of migrants and their migration patterns

Table 5.5 examines the extent to which gender differences exist in socio-demographic characteristics of migrants and their migration patterns. Results show that male migrants are typically older than female migrants by about two years. Female migrants tend to be better educated than male migrants. About 70% of them attained secondary education and beyond, compared to about 60% of their male counterparts.

Table 5.5 Gender differentials in characteristics of migrants and their migration patterns among migrants from sampled households in the Dry Zone

	Male (n=405)	Female (n=218)
Socio-demographic characteristics of migrants		
Mean age in 2017	28.47	26.58
Educational attainment (%)		
No education	10.1	5.1
Some primary	12.7	11.5
Complete primary	16.6	12.9
Secondary and beyond	60.9	70.5
Migration patterns		
Mean age when first migrating	26.34	24.46
Destination (%)		
Same district (different township)	2.5	5.0
Same region/state	5.9	10.1
Yangon	13.6	21.6
Another region/state (not Yangon)	53.3	56.4
Another country	24.7	6.9
Main reasons for migration (%)		
Work/employment	90.4	83.0
Education	3.0	6.9
Marriage/followed family	6.5	9.6
Conflicts/wars	0.2	0.5
Main decision maker for migration (%)		
Migrant him/herself	50.6	52.3
Parents of migrant	13.3	14.2
Siblings of migrant	11.9	14.2
Friends of migrants	12.8	11.5
Relatives	10.9	7.3
Others	0.5	0.5
Financial support from origin households (%)		
HH paid most/all expenses	55.3	50.0
HH paid some expenses	17.3	22.9
HH did not pay	23.7	24.8
HH loaned money to migrants	3.7	2.3

Source: The 2017 Dry Zone Migration Impact Survey.

In terms of migration patterns, male migrants on average migrate at an older age (26.3 years) than female migrants (24.5 years). Another notable difference is that male migrants are much more likely to migrate to another country than their female counterparts who tend to migrate shorter distance (e.g., within the same district or same region).

Nevertheless, over half of both male and female migrants moved to another region/state (not Yangon). Yangon is the destination for about one fifth of female migrants and for nearly 15% of male migrants. Findings indicate that work and employment is the dominant reason for migration for both male and female migrants, although women are more likely than men to move for non-economic reasons especially for education or for marriage and family. Furthermore, when it comes decision making regarding migration and financial support by households for migration, results show little gender differences. About half of male and female migrants are the main decision maker for migration. Parents, siblings, and friends combined account for over one third of the primary decision maker. Likewise, approximately half of both male and female migrants were fully supported financially by their origin households, while about one fifth received some support. Only about a quarter of male and female migrants did not receive any financial support from origin households. In sum, our empirical results are more or less consistent with previous findings regarding gender differences in migration (Helvetas, 2015; World Bank, 2016b).

5.6 Comparison between economic and non-economic migrants

As elsewhere in Myanmar, economic migration is the predominant form of migration in the Dry Zone (Department of Population, 2016a). Analyses presented in Table 5.6 examine how economic migrants differ from non-economic migrants in terms of their characteristics and migration patterns.

On average economic migrants are older than non-economic migrants by almost three years. They are more likely to be male. Regarding educational attainment, non-economic migrants appear to be disproportionately better educated. A significant majority of non-economic migrants (84%) had at least some secondary education, compared to about 60% of economic migrants. Furthermore, age at first migration is lower for non-economic migrants. They typically migrated in their early 20s as compared to the mid-20s among economic migrants. While Yangon and other regions/states are main destinations for both economic as well as non-economic migrants, economic migrants are much more likely to move to another country. Non-economic migrants tend to move a shorter distance within the same district or the same region.

Results show that economic and non-economic migrants themselves account for half of the main decision makers for migration. For non-economic migration, apart from self, parents play an important role in decision making accounting for 25% of this type of movements; other persons such as siblings, friends and relatives are considerably less important. For economic migration, parents, siblings and friends more or less account for equal proportions as the main decision maker. In terms of financial support, approximately half of economic and non-economic migrants are fully supported by their origin family. The

key difference is that greater percentages of non-economic migrants did not receive any support from their families compared to economic migrants.

Table 5.6 Differences in characteristics and migration patterns of economic versus non-economic migrants from sampled households in the Dry Zone

	Economic migrants (n=547)	Non-economic migrants (n=76)
Socio-demographic characteristics of migrants		
Mean age in 2017	28.14	25.45
Gender (%)		
Male	66.9	51.3
Female	33.1	48.7
Educational attainment (%)		
No education	8.4	8.0
Some primary	13.2	4.0
Complete primary	16.8	4.0
Secondary and beyond	61.5	84.0
Migration patterns		
Mean age when first migrating	25.99	23.47
Destination (%)		
Same district (different township)	2.2	11.8
Same region/state	6.6	13.2
Yangon	16.6	14.5
Another region/state (not Yangon)	53.9	57.9
Another country	20.7	2.6
Main decision maker for migration (%)		
Migrant him/herself	50.6	55.3
Parents of migrant	12.1	25.0
Siblings of migrant	13.5	6.6
Friends of migrants	13.5	3.9
Relatives	9.7	9.2
Others	0.5	0.0
Financial support from origin households (%)		
HH paid most/all expenses	53.7	51.3
HH paid some expenses	20.5	10.5
HH did not pay	22.5	35.5
HH loaned money to migrants	3.3	2.6

Source: The 2017 Dry Zone Migration Impact Survey.

5.7 Differences in migration patterns by wealth status of origin households

Past studies indicate that rich and poor households tend to use migration for different purposes. While poor households use migration to diversify risks, well-off households tend to consider migration for their income maximization (World Bank, 2016b). Analyses presented in Table 5.7 examine how characteristics of migrants and their patterns of migration vary by wealth strata of their origin households. Household wealth is measured using the same approach as in analyses presented in Figure 5.1. We divide households into three groups, including bottom quintile (the 20% poorest), middle quintiles (those in 2nd, 3rd, and 4th quintiles), and top quintile (the 20% richest).

We find that migrants from the bottom quintile households tend to be considerably younger than those from richer households. Furthermore, while about one third of migrants from the bottom and middle quintiles are females, over 40% of those from the top quintile are women. Evidence indicates that migrants from the bottom quintile of wealth have remarkably lower educational attainment than those from the middle and top quintiles. For example, only one third of them has secondary education and beyond, compared to nearly 90% among migrants from the 20% richest households.

Results further indicate that average age at first migration is lower for migrants from the bottom wealth stratum compared to their counterparts from the middle and top household wealth quintiles. With regards to destination, migrants from the 20% richest households in the Dry Zone are more likely to move within the same district or the same region/state, or to migrate to Yangon compared to those from less affluent households. While about half of migrants from the middle and top quintiles moved to another region/state that is not Yangon, over 60% of those from the bottom quintile did so. Interestingly, migrants from middle-income households are twice more likely than those in the 20% poorest or richest households to migrate to another country.

Regarding motivation for migration, almost all migrants from the poorest households and nearly 90% moved because of economic reasons. While about three quarters of migrants from the top wealth quintile migrated for work or employment, the rest moved for other reasons, particularly for marriage and family. Furthermore, results do not reveal considerable variation in migration decision making by wealth status. Approximately half of migrants from all strata of wealth made the decision to migrate themselves. A notable difference is that nearly one fifth of migrants from the bottom wealth quintile refer to their friends as the main decision maker for migration. Lastly, regardless of their household wealth status, a significant majority of migrants are financially support by their households either fully or partially.

Table 5.7 Differences in characteristics of migrants and their migration patterns by wealth status of origin households

	Wealth status of origin households		
	Bottom quintile	Middle quintiles (2nd, 3rd, and 4th)	Top quintile
	(n=97)	(n=396)	(n=130)
Socio-demographic characteristics of migrants			
Mean age in 2017	25.46	27.73	29.78
Gender (%)			
Male	66.0	67.2	57.7
Female	34.0	32.8	42.3
Educational attainment (%)			
No education	10.4	9.3	3.9
Some primary	22.9	11.9	4.7
Complete primary	31.3	14.6	5.4
Secondary and beyond	35.4	64.1	86.0
Migration patterns			
Mean age when first migrating	23.82	25.70	27.02
Destination (%)			
Same district (different township)	4.1	2.3	6.2
Same region/state	6.2	7.1	9.2
Yangon	16.5	15.2	20.0
Another region/state (not Yangon)	61.9	53.3	52.3
Another country	11.3	22.2	12.3
Main reasons for migration (%)			
Work/employment	96.9	89.4	76.2
Education	1.0	4.0	7.7
Marriage/followed family	2.1	6.5	14.7
Conflicts/wars	0.0	0.0	1.5
Main decision maker for migration (%)			
Migrant him/herself	50.5	50.0	55.4
Parents of migrant	9.3	13.1	18.5
Siblings of migrant	10.3	14.1	10.0
Friends of migrants	18.6	12.9	6.2
Relatives	11.3	9.8	7.7
Others	0.0	0.0	2.3
Financial support from origin households (%)			
HH paid most/all expenses	45.4	57.1	48.5
HH paid some expenses	23.7	18.4	18.5
HH did not pay	29.9	21.2	28.5
HH loaned money to migrants	1.0	3.3	4.6

Source: The 2017 Dry Zone Migration Impact Survey.

6. MATERIAL SUPPORT AND SOCIAL CONTACTS FROM MIGRANTS

We now turn to examining extent and nature of material support and social contacts that migrants provide to members of their household of origin in the Dry Zone. We start by examining patterns and differentials in material support to origin households and then turn to the nature and extent of social contacts. This is followed by examining the extent to which origin households are essentially deserted by migrant members. The analysis ends with an examination of the extent to which origin households are concerned about migrant members' wellbeing and their future prospects.

6.1 Patterns and differentials in material support to origin households by migrants

One important aspect of material support from migrants to origin households is the frequency with which this support is provided during the time that the migrant is absent from the household. As results in Table 6.1 show, among all migrants collectively, almost two-fifths provided financial support to their origin household all or most of the entire time they were absent. Another third provided such support at least some of the time. Thus slightly less than 30% did not provide any regular support. In addition, just over 60% provided money or goods during the previous year.

Since providing material support is presumably far more feasible from economic than non-economic migrants, we focus on the material support economic migrants provided. Overall somewhat more than three-fourths of economic migrants provided financial support at least some of the time. Moreover, modestly over two-fifths provided financial support during the entire time they were away and a third did so some of the time. In addition, just over three-fifths of economic migrants provided money or goods during the previous year. The overall percentage of migrants that provided some financial support during the entire time they were away differs little between those from Mandalay and Magway. However, migrants from Mandalay are considerably more likely to have provided financial support all or most of the time. In contrast, there is little difference in the frequency of financial support from migrants that originated from urban and rural households. Male compared to female migrants are modestly more likely to have provided financial support. Yet men and women migrants differ little with respect to providing money or goods during the previous year. Interestingly, there are only modest differences in relationship to the wealth status of the origin household either in the frequency with which migrants provided financial support during the entire time they were away or with respect to providing money or goods during the previous year.

Table 6.1 Patterns of material support from migrants to origin households in the Dry Zone

	Frequency of financial support from migrants during the entire time of being away			% providing money or goods last year[a]	*Number*
	% All or most of the time	% Some of the time	% Did not provide regular support		
All migrants	39.0	32.4	28.6	61.1	*623*
Economic migrants only					
All economic migrants	43.3	34.0	22.7	66.5	*547*
Region of origin household					
Mandalay	50.6	28.1	21.3	68.4	*310*
Magway	33.8	41.8	24.5	63.9	*237*
Location of origin household					
Urban	37.5	33.1	29.4	54.5	*136*
Rural	45.3	34.3	20.4	70.2	*411*
Gender of migrant					
Male	45.1	34.2	20.8	67.0	*366*
Female	39.8	33.7	26.5	65.5	*181*
Wealth status of origin household					
Bottom quintile	43.6	34.0	22.3	68.1	*94*
Middle quintiles	43.2	35.0	21.8	66.3	*354*
Top quintile	43.4	30.3	26.3	65.5	*99*
Destination of migrant					
Same region	43.8	41.7	14.6	80.4	*48*
Another region/state (incl. Yangon)	37.3	35.0	27.7	62.3	*386*
Another country	63.7	27.4	8.8	75.0	*113*

Source: The 2017 Dry Zone Migration Impact Survey.

Note:
a The analyses exclude recent migrants who returned and those who were deceased (n=39).

Noticeable differences in the frequency of financial support are associated with the destination of migrants. Those who went to another country were considerably more likely than internal migrants to provide financial support during all or most of the time they were absent. This likely reflects the fact that international migrants earned more than domestic migrants. Among internal migrants, those that remained in the same region as their household of origin were more likely to provide financial support during the entire time of being away as well as to provide money or goods during the previous year.

While providing any support is important, the amount of such support is also of interest. Figure 6.1 compares the distribution of support according to the amount provided in Myanmar kyat ($1US=about 1350 kyat). The results reveal that the value of the material

support migrants from Mandalay provide is noticeably greater than the value that those from Magway provide. Thus while 54% of those from Mandalay provided at least 500,000 kyat, only 44% of those in Magway did so. Only a very minor difference in the value of support provided to urban compared to rural households is evident with 51% of migrant-sending households in urban areas receiving at least 500,000 kyat compared to 49% of rural households.

Figure 6.1 Value of material support (Myanmar kyat) to origin households from each economic migrant who remitted last year by regions and locations of origin households

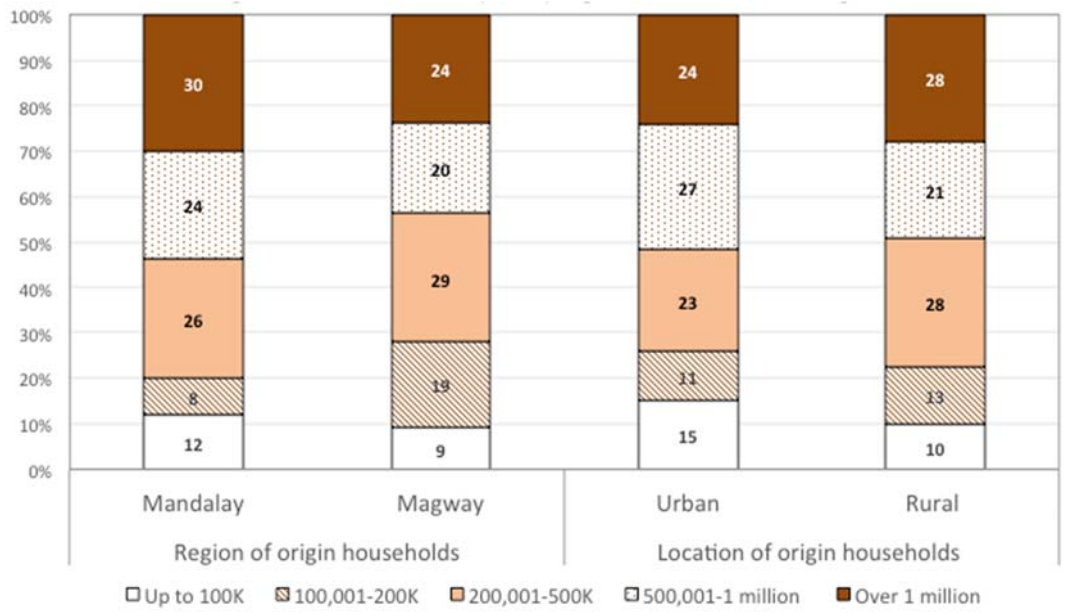
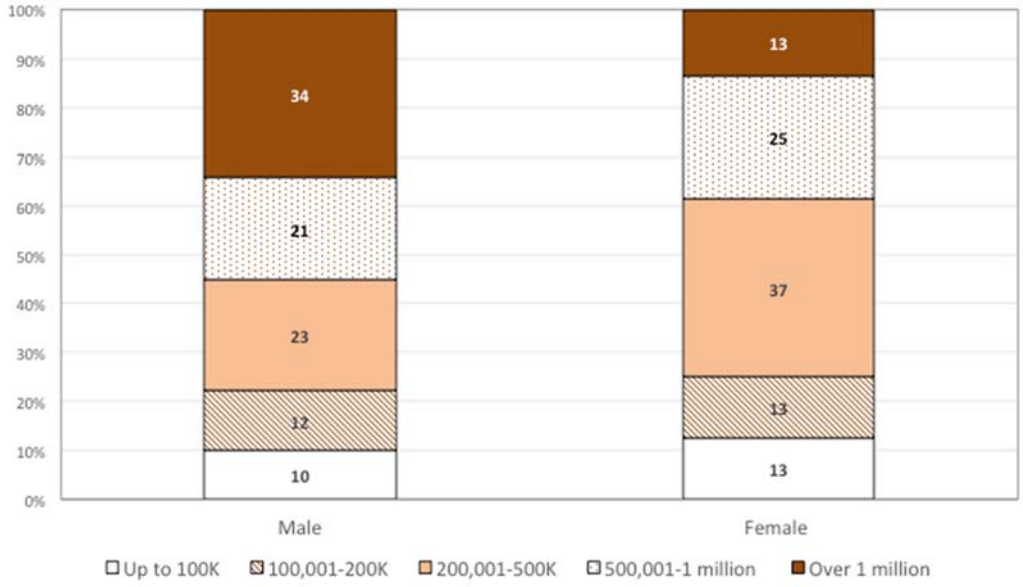


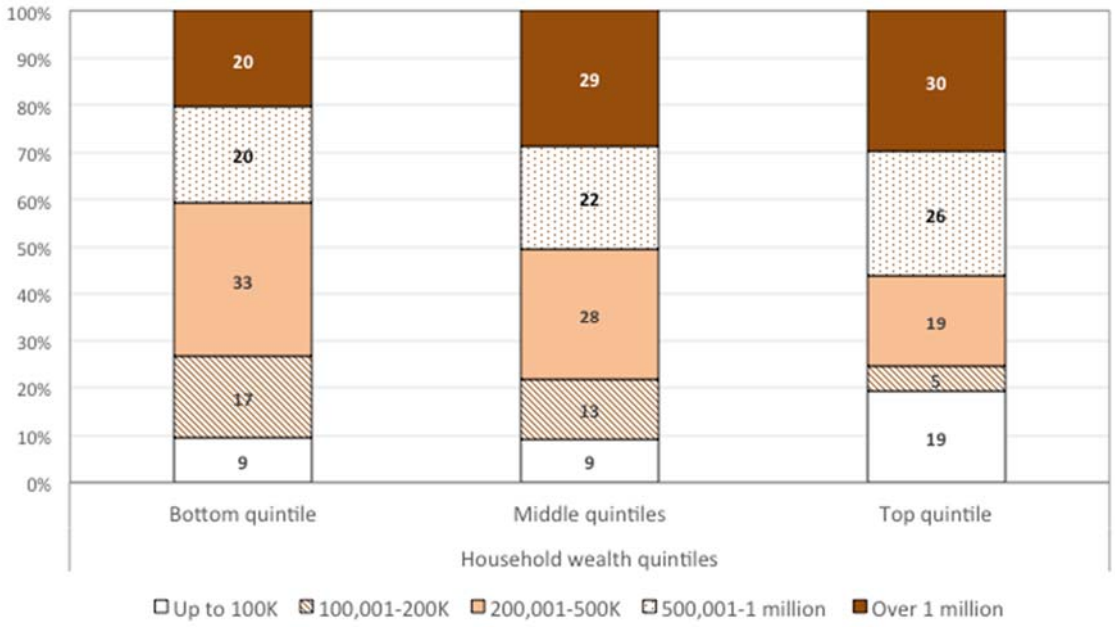
Figure 6.2 Value of material support (Myanmar kyat) to origin households from each economic migrant who remitted last year by gender of migrant



Also of interest are differentials in the amount of support provided according to gender of migrants. Figure 6.2 compares the value of material support (in Myanmar kyat). Among migrants providing material support to their origin households, males clearly provide larger amounts of money. For example, just over a third of males provide at least one million kyat compared to only 13% of females. In contrast, only 45% of males that provided material support gave no more than 500,000 kyat compared to 63% of females. This likely reflects that men are able to work in better paying jobs than women.

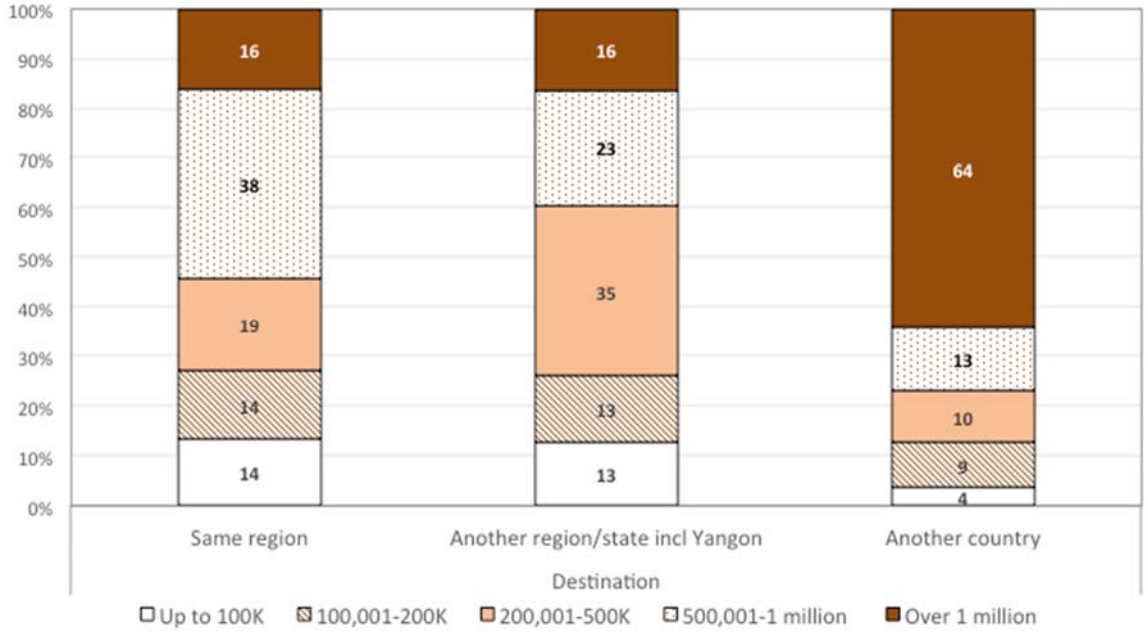
The value of material support to origin households from economic migrants who remitted funds in the previous year is directly related to the household wealth level as shown in Figure 6.3. For example, among migrants from households in the bottom quintile (based on household wealth as estimated from household possessions), only 40% provided over 500,000 kyat. This compares to 51% of migrants from households in the middle quintiles and 56% in the top quintile.

Figure 6.3 Value of material support (Myanmar kyat) to origin households from each economic migrant who remitted last year by household wealth quintiles



The value of material support to origin households as evident in figure 6.4 is noticeably associated with the destination of migration. Clearly migrants who went to another country were able to submit much larger remittances than those that remained in Myanmar. For example 64% of international economic migrants were able to remit 1 million or more kyat compared to only 16% for migrants that remained in the same region or that migrated to a different region or state in Myanmar. In contrast, only 4% of international migrants remitted less than 100 kyats compared to 14% that remained in the same region and 13% that migrated to a different region or state within Myanmar.

Figure 6.4 Value of material support (Myanmar kyat) to origin households from each economic migrant who remitted last year by migration destination



Material exchanges between migrants and origin households can often be in both directions. Respondents in the survey were asked to compare the relative value of the contributions in each direction during the entire period of migration. Table 6.2 summarizes the results. Among all migrants, as well as among all categories of economic migrants, migrants were considerably likelier to have contributed more to the household of origin than the origin household contributed to the migrant.

Overall 64% among all migrants contributed more to the origin household than they received. The contributions of the origin household were judged to be greater than those of the migrants in only 13% of the cases. Contributions were judged to be equal in only 8% of cases and in an additional 15% there was no contribution in either direction. When only economic migrants are considered the results are fairly similar although the percentage in which the migrant contributed more is generally somewhat higher and the percentage in which the origin household contributed is lower.

Results differ little by region of the origin household. However for rural households the percentage in which migrants contributed more is higher and the percentage in which the household contributed more is lower than for urban households. Male migrants are likelier to contribute more compared to the household than female migrants. This likely reflects gender differences in the extent and types of employment. An inverse association is apparent between the percentage of migrants that contributed more and the wealth level of the origin household. Also the destination of migration is related to the direction of exchanges. Contributions are more likely for international migrants and least likely for those

that remain in the same domestic region. It is also noteworthy that for only a modest share of migrants were contributions lacking in either direction.

Table 6.2. Patterns of material exchanges between migrants and origin households in the Dry Zone

	Exchanges of material support during the entire period of migration				*Number*
	% Migrant contributed more	% Origin household contributed more	% Migrant and origin household contributed equally	% No contribution in either directions	
All migrants	63.6	13.3	8.2	14.9	*623*
Economic migrants only					
All economic migrants	68.9	9.7	8.8	12.6	*547*
Region of origin household					
Mandalay	69.4	10.0	8.7	11.9	*310*
Magway	68.4	9.3	8.9	13.5	*237*
Location of origin household					
Urban	60.3	16.2	5.1	18.4	*136*
Rural	71.8	7.5	10.0	10.7	*411*
Gender of migrant					
Male	73.8	7.7	7.1	11.5	*366*
Female	59.1	13.8	12.2	14.9	*181*
Wealth status of origin household					
Bottom quintile	76.6	4.3	6.4	12.8	*94*
Middle quintiles	69.8	9.3	9.0	11.9	*354*
Top quintile	58.6	16.2	10.1	15.2	*99*
Destination of migrant					
Same region	56.3	14.6	22.9	6.3	*48*
Another region/state (incl. Yangon)	65.0	11.4	8.5	15.0	*386*
Another country	87.6	1.8	3.5	7.1	*113*

Source: The 2017 Dry Zone Migration Impact Survey.

6.2 Patterns and differentials in social contacts from migrants

We now turn to examining the nature and extent of social contacts through visits and phone calls including an assessment of the extent to which origin households are essentially deserted by all migrant members. Face-to-face contact with migrants requires visits. Table 6.3 indicates the frequency of visits by migrants to their origin household. Although members of the household of origin can also visit migrants at their place of destination, it is more likely that migrants will return occasionally to visit their place of

origin. Since respondents were asked about visits by migrants during the past year, analysis concerning visits is limited to migrants who left at least a year ago.

Table 6.3. Frequency of visits to origin households by migrants who left more than a year ago

	Frequency of visits in the past year[a]					*Number*
	% At least monthly	% Several times a year	% Once a year	% Every few years	% Not yet visited	
All migrants	1.6	14.4	48.8	10.2	24.9	*381*
Region of origin household						
Mandalay	2.0	16.8	42.2	10.2	28.9	*256*
Magway	0.8	9.6	62.4	10.4	16.8	*125*
Location of origin household						
Urban	3.9	19.4	43.7	11.7	21.4	*103*
Rural	0.7	12.6	50.7	9.7	26.3	*278*
Gender of migrant						
Male	1.2	10.7	45.1	12.3	30.7	*244*
Female	2.2	21.2	55.5	6.6	14.6	*137*
Type of migration						
Economic migrant	1.2	13.2	50.6	8.7	26.3	*334*
Non-economic migrant	4.3	23.4	36.2	21.3	14.9	*47*
Wealth status of origin household						
Bottom quintile	0.0	21.1	50.9	3.5	24.6	*57*
Middle quintiles	1.6	11.0	48.8	12.2	26.4	*246*
Top quintile	2.6	20.5	47.4	9.0	20.5	*78*
Destination of migrant						
Same region	9.8	25.5	56.9	3.9	3.9	*51*
Another region/state (incl. Yangon)	0.4	16.7	59.1	8.5	14.3	*252*
Another country	0.0	0.0	10.3	16.7	73.1	*78*

Source: The 2017 Dry Zone Migration Impact Survey.

Note:
a The analyses exclude recent migrants who returned and those who were deceased (n=39).

Overall, a fourth of migrants were reported as not having visited during the past year. Only a very small percentage visited at least monthly and just less than 15% visited several times during the past year. The most common frequency of visiting was once during the previous year which was reported for almost half of all migrants. Another 10% visited every few years.

The frequency of visiting is clearly related to the destination of the migrant. Not surprisingly, migrants that went to another country visited least frequently. Only 10% did so during the past year and almost three quarters have not visited since they left. Some

difference in the frequency of visits is associated with the region of origin. Migrants from Mandalay are more likely to visit several times a year than are those from Magway but at the same time they are also more likely not to have visited at all. Migrants from urban areas are somewhat more likely to visit than those from rural areas. This possibly reflects easier access to available means of transportation for those in urban areas although data to verify this are not available from the survey. Women migrants visit more frequently than men. Noneconomic migrants visit somewhat more frequently than economic migrants. This may be because noneconomic migrants are located at less distance from their place of origin although data to determine this are not available in the survey. Wealth status of the origin household shows a mixed pattern in relationship to the frequency of visiting. Migrants from households of origin in the middle quintiles of wealth status appeared to visit less frequently than those in the bottom or top quintiles.

The frequency of phone call contact by migrants to their households of origin is presented in Table 6.4. Unlike visits, phone contact is not particularly affected by distance. Overall just over a fourth of migrants had phone contact on a daily or almost daily basis. Another two fifths had at least weekly phone contact. Thus almost two thirds are in either daily or weekly phone contact. Moreover, the proportion making at least monthly or more frequent contact is reasonably close to almost 90%. Only 4% had less than yearly contact including those that never had any phone contact.

Phone contact is somewhat more frequent among migrants from Magway than Mandalay. Also migrants in urban areas are more likely to have almost daily phone contact compared to those in rural areas. Female migrants had more frequent phone contact than their male counterparts. There is little difference in the extent of phone contact according to whether the migration was for economic or noneconomic purposes. Daily phone contact is positively associated with the wealth status of the origin household. Those in the top quintile are more than twice as likely as those in the bottom quintile to have daily contact. This may reflect differences in the ability to afford the costs. Having a phone available in the origin household is clearly associated with being in almost daily phone contact. Moreover, the lack of a phone in the origin household increases the chance that phone contact is monthly or less frequent. For example, a tenth of migrants from households without a phone compared to only 3% of those with a phone have less than yearly or no phone contact.

While migration of household members can be beneficial to the household, it can also result in loss of support and even loss of contact between the migrant and household members. Table 6.5 assesses the extent to which economic migrants that moved out at least a year ago failed to provide regular financial support to the origin household or maintain social contact.

Table 6.4. Frequency of phone contact to origin households by migrants who left more than a year ago

	Frequency of phone contact in the past year[a]					*Number*
	% Almost daily	% At least weekly	% At least monthly	% At least yearly	% Less than yearly or never	
All migrants	26.0	39.4	20.7	10.0	3.9	*381*
Region of origin household						
Mandalay	27.3	36.3	21.1	12.9	2.3	*256*
Magway	23.2	45.6	20.0	4.0	7.2	*125*
Location of origin household						
Urban	33.0	33.0	21.4	8.7	3.9	*103*
Rural	23.4	41.7	20.5	10.4	4.0	*278*
Gender of migrant						
Male	21.7	38.5	24.6	11.1	4.1	*244*
Female	33.6	40.9	13.9	8.0	3.6	*137*
Type of migration						
Economic migrant	25.4	39.4	20.7	10.2	4.2	*334*
Non-economic migrant	29.8	38.3	21.3	8.5	2.1	*47*
Wealth status of origin household						
Bottom quintile	17.5	47.4	15.8	8.8	10.5	*57*
Middle quintiles	24.4	38.6	23.6	11.0	2.4	*246*
Top quintile	37.2	35.9	15.4	7.7	3.8	*78*
Destination of migrant						
Same region	25.5	41.2	19.6	5.9	7.8	*51*
Another region/state (incl. Yangon)	24.6	44.8	18.7	8.7	3.2	*252*
Another country	30.8	20.5	28.2	16.7	3.8	*78*
Availability of phones in origin household						
Available	28.6	38.5	20.1	9.6	3.2	*343*
Not available	2.6	47.4	26.3	13.2	10.5	*38*

Source: The 2017 Dry Zone Migration Impact Survey.

Note:
a The analyses exclude recent migrants who returned and those who were deceased (n=39).

Table 6.5. Desertion of origin households by economic migrants who moved out of the household more than a year ago[a]

	% Not regular financial support	% Neither regular financial support nor visit	% Neither regular financial support, visit, nor contact via phone	*Number*
All economic migrants who moved out more than a year	17.1	3.9	0.3	*334*
Region of origin household				
Mandalay	13.6	2.7	0.0	*220*
Magway	23.7	6.1	0.9	*114*
Location of origin household				
Urban	25.3	3.6	0.0	*251*
Rural	14.3	4.0	0.4	*83*
Gender of migrant				
Male	16.5	4.6	0.0	*218*
Female	18.1	2.6	0.9	*116*
Wealth status of origin household				
Bottom quintile	14.8	0.0	0.0	*54*
Middle quintiles	16.5	5.0	0.5	*218*
Top quintile	21.0	3.2	0.0	*62*
Destination of migrant				
Same region	10.5	0.0	0.0	*38*
Another region/state (incl. Yangon)	22.4	5.0	0.5	*219*
Another country	5.2	2.6	0.0	*77*

Source: The 2017 Dry Zone Migration Impact Survey.

Note:
a The analyses exclude recent migrants who returned and those who were deceased.

Overall, 17% of migrants did not provide regular financial support and 4% neither provided financial support nor visited. However complete desertion by economic migrants defined as not providing regular financial support, visits, or phone contact is only a fraction of 1% and thus extremely rare. The lack of providing regular financial support is considerably higher for economic migrants from Magway than from Mandalay, for those whose origin household is urban compared to rural, and for migrants that moved within Myanmar but outside the region or state compared to those who did not. It is particularly rare for migrants that went to another country not to provide regular financial support to their household of origin. Interestingly, the proportion of migrants not providing regular financial support is lowest for those whose household of origin are in the bottom quintile of wealth and highest for those in the top quintile. This may reflect an inverse association between need of support from migrants and wealth level of household of origin.

6.3 Perception of origin households regarding migrants' wellbeing

While migration may be a means to find opportunities for employment and earn a better living, it also carries unknown risks for the migrant. Thus members of the migrant's origin household may be concerned about members that migrate elsewhere. In order to assess the extent of such concern respondents in the households of origin were asked to what extent they worried about the member that migrated. Table 6.6 indicates the degree of concern household key informants expressed about migrants' wellbeing.

Table 6.6. Concerns for migrants' wellbeing as reported by household key informants

	Concerns for migrants' wellbeing				*Number*
	% Not worried	% Worried some	% Worried a lot	% Don't think about it	
All migrants	40.0	20.9	31.6	7.5	*623*
Location of origin household					
Urban	43.1	20.1	31.0	5.7	*174*
Rural	38.8	21.2	31.8	8.2	*449*
Gender of migrant					
Male	35.1	22.7	35.6	6.7	*405*
Female	49.1	17.4	24.3	9.2	*218*
Type of migration					
Economic migrant	38.9	21.6	32.0	7.5	*547*
Non-economic migrant	47.4	15.8	28.9	7.9	*76*
Wealth status of origin household					
Bottom quintile	37.1	15.5	40.2	7.2	*97*
Middle quintiles	38.6	21.7	31.3	8.3	*396*
Top quintile	46.2	22.3	26.2	5.4	*130*
Destination of migrant					
Same region	56.7	22.4	19.4	1.5	*67*
Another region/state (incl. Yangon)	39.2	21.1	30.6	9.1	*441*
Another country	33.0	19.1	42.6	5.2	*115*

Source: The 2017 Dry Zone Migration Impact Survey.

Overall, 40% indicated they were not worried, a fifth indicated they worried some and almost a third said they worried a lot. Less than 10% indicated they did not think about it. There was little difference in the extent of concern among key informants in urban and rural households. However, there was greater concern about the wellbeing of male than of female migrants perhaps reflecting differences in the reason for migrating. It appears that it was somewhat less likely to feel worried about non-economic than economic migrants. Although the survey did not probe the reasons for concern, it is noteworthy that modestly over a third of noneconomic migration was attributable to furthering education and modestly less than a third due to following family and that both of these situations were

substantially below average in being associated with worry about the migrant living elsewhere. Wealth status is associated with concern about migrants' wellbeing. Key informants in the top household wealth quintile are distinctively less worried than those in lower quintiles. Concern about migrants' wellbeing is also associated with the destination of migration. There is distinctively less worry about migrants that remained within the same region in Myanmar than those that went outside the region and especially those that went to another country.

Table 6.7. Belief that migrants would have a better life as expressed by household key informants

	Belief that migrants would have a better life				
	% Agree	% Disagree	% Uncertain	% Don't think about it	*Number*
All migrants	83.1	12.5	3.2	1.1	*623*
Location of origin household					
Urban	78.2	17.2	4.0	0.6	*174*
Rural	85.1	10.7	2.9	1.3	*449*
Gender of migrant					
Male	82.5	13.3	3.2	1.0	*405*
Female	84.4	11.0	3.2	1.4	*218*
Type of migration					
Economic migrant	83.5	12.1	3.5	0.9	*547*
Non-economic migrant	80.3	15.8	1.3	2.6	*76*
Wealth status of origin household					
Bottom quintile	85.6	11.3	3.1	0.0	*97*
Middle quintiles	83.6	11.6	3.3	1.5	*396*
Top quintile	80.0	16.2	3.1	0.8	*130*
Destination of migrant					
Same region	92.5	7.5	0.0	0.0	*67*
Another region/state (incl. Yangon)	81.6	13.6	3.4	1.4	*441*
Another country	83.5	11.3	4.3	0.9	*115*

Source: The 2017 Dry Zone Migration Impact Survey.

Household key informants were asked if they believed migrants would have a better life as a result of migrating. Table 6.7 shows the extent to which there was agreement with this view. Overall a very substantial majority, over four-fifths, agreed that migrants would benefit from their move and only a very modest minority disagreed or were uncertain. A somewhat higher percentage of rural than urban respondents believed this to be the case. In addition, there was modestly higher agreement that migrants that remained in the same region would be more likely to have improved lives compared to those that moved to a different area of Myanmar or went to another country. However, there was little difference with respect to gender in the extent of this favorable view or with respect to economic

versus non-economic migration. Higher wealth status of the origin household is inversely related to the percentages that agree although the differences between wealth status levels are quite modest.

7. IMPACTS OF MIGRATION ON DEPENDENT CHILDREN

This section addresses the implications of migration for the wellbeing of dependent children (i.e., children under age 15) who remain in migrant-source areas. We first examine the extent to which children in the Dry Zone experience an absence of one or both parents due to migration. Moreover, we examine how socio-demographic characteristics of children whose parent(s) have migrated beyond township differ from the attributes of children who coreside with both parents in the Dry Zone. Furthermore, we explore the extent to which migration affects provision of care, instrumental support, and material support for children under age 15. We examine sources of support within the household as well as non-household sources of support (e.g., government or non-governmental programs). Lastly, we address patterns and differentials in unmet need experienced by children in the Dry Zone with a focus on children affected by their parents' migration.

The Dry Zone Migration Impact Survey asked household key informants about all children under age 15 in the households. Information reported by key informants allows us to examine children's demographic and social characteristics, their parents' presence in the household and migration status, as well as provision of care, instrumental support, and financial support for children. Approximately 52% of the 700 sampled households have at least one child under age 15. There is a total of 619 dependent children under age 15 in our sample. Of these, 337 (54%) reside in Mandalay and the rest (46%) in Magway region.

7.1 Prevalence of children experiencing parental absence due to migration

Research on child development has shown that parental absence can have adverse impacts on the wellbeing of children. Parents can be absent from the household for several reasons, including death, marital disruption, or migration. The degree of adverse effects on children may depend on whether mother, father or both parents are absent. The following analyses examine the extent to which children in the Dry Zone experience an absence of one or more parents. Our focus is on absence that is due to migration.

Table 7.1 describes location of mother and father of children under age 15 in sampled households. Results indicate that nearly all children live in the same household as their mother. Approximately 94% of children do so with little variations between those in Mandalay and Magway. Rural children are slightly more likely than their urban counterparts to coreside with their mothers. It is relatively rare for children to have their mother live elsewhere beyond the township. Only 3% of children live apart from their mother for a substantial distance (i.e., different township and beyond). Among these mothers, most remain in Myanmar. Children with mothers living overseas account for only 0.3% of the sample.

Table 7.1. Location of parents of children under age 15 in sampled households.

	All children	Region		Location	
		Mandalay	Magway	Urban	Rural
	(n=619)	(n=337)	(n=282)	(n=196)	(n=423)
Location of mother (%)					
Same household	94.0	94.7	93.3	91.8	95.0
Next door/same village	0.8	0.9	0.7	2.0	0.2
Same township	0.0	0.0	0.0	0.0	0.0
Same region	0.6	0.9	0.4	0.5	0.7
Other state/region	2.1	2.7	1.4	1.5	2.4
Other country	0.3	0.3	0.4	0.5	0.2
Deceased	1.3	0.6	2.1	1.0	1.4
Don't know	0.8	0.0	1.8	2.6	0.0
Location of father (%)					
Same household	68.3	71.2	64.9	66.3	69.3
Next door/same village	2.2	2.7	1.8	2.6	2.1
Same township	1.0	1.5	0.4	2.0	0.5
Same region	3.4	4.2	2.5	2.0	4.0
Other state/region	10.7	5.6	16.7	10.2	10.9
Other country	4.8	6.2	3.2	1.0	6.6
Deceased	7.6	7.7	7.4	12.8	5.2
Don't know	1.9	0.9	3.2	3.1	1.4

Source: The 2017 Dry Zone Migration Impact Survey.

Findings show that it is less common for children to share the same household with their fathers. Compared to 94% who live with mothers, the rate that children coreside with fathers is only 68%. Children in Mandalay are slightly more likely than those in Magway to live with their fathers. The coresidence rate is also slightly higher for rural than urban children. Close to one fifth of children in the sample live apart from their fathers for a substantial distance. Overall, 3% live in a different township but in the same region as their father; 11% of children have fathers who live in different region/state and 5% have fathers who live outside Myanmar. It is more common for children in Mandalay than those in Magway to have fathers living in another country. This is also the case for rural children compared to their urban counterparts. A significant majority of Magway children living far apart from their fathers have fathers who moved to a different region/state in Myanmar. This is consistent with our findings on regional differences in migration patterns (see Table 5.4).

According to Table 7.1, just over 1% of children experienced mother's absence in the household because of maternal mortality. Meanwhile, there are almost 8% of children whose fathers are deceased. Findings do not show salient differences across the two regions. Nevertheless, urban children are twice more likely than their rural counterparts to

have deceased fathers. Results further indicate that there are small percentages of children whose parents' location is unknown to household key informants. This is more likely the case for father than mothers.

Table 7.2 compares migration status of parents of children in sampled households. This study defines migrants as former household members who moved beyond township for a period of one year or longer during the last five years prior to our survey (see Section 3.1). In this analysis, we consider parents who live outside (the child's) township to be migrants.

Table 7.2. Migration status of parents of children under age 15 in sampled households[a]

	All children	Region		Location	
		Mandalay	Magway	Urban	Rural
	(n=619)	(n=337)	(n=282)	(n=196)	(n=423)
% both parents present in HH	67.4	70.9	63.1	66.3	67.8
% father outside township[b]	18.9	16.0	22.3	13.3	21.5
% mother outside township[b]	3.1	3.9	2.1	2.6	3.3
% both parents outside township	2.3	2.7	1.8	1.5	2.6

Source: The 2017 Dry Zone Migration Impact Survey.

Notes:
a The analysis does not consider those whose mother or father are deceased or whose parents' location is unknown. Migration refers to movement beyond one's township.
b These two categories include cases in which either one or both parents are outside the township.

Results show that about two thirds of children coreside with both parents at the time of survey. Coresidence rates are moderately higher for children in Mandalay than for those in Magway and slightly higher for rural children than for urban children. Fathers are much more likely than mothers to be the one who migrated outside township. Almost 20% of children have fathers migrating outside township. Such proportions are higher for Magway and rural locations than for Mandalay and urban areas. Only 3% of children have migrant mothers. This pattern is consistent across regions and urban/rural localities. It is rather rare for children in the Dry Zone to have both parents that migrated beyond township. They account for only 2% of the sample. In sum, about one fifth of children in the sample experience parental absence due to migration. Most of the absence is accounted for by father's migration.

7.2 Socio-demographic characteristics of children in the Dry Zone

Analyses presented in Tables 7.3 describe socio-demographic characteristics of children in the sample by their region and urban/rural locations. Results show that boys and girls account for approximately equal proportions in the sample with small variations across the two regions and rural areas. An exception is that in urban locations there is a higher proportion of boys over girls. Average age of children in the sample is 8 years old with small

regional and urban/rural differences. About two thirds of children in the sample currently attend school at the time of survey. Almost 30% are not yet in school age (roughly age 6), while nearly 5% of children in school-eligible age do not attend school. Again, results show little variations between Mandalay and Magway, while there are more children not yet in school age in urban areas than rural areas.

Table 7.3. Socio-demographic characteristics of children under age 15 in sampled households

	All children	Region		Location	
		Mandalay	Magway	Urban	Rural
	(n=619)	(n=337)	(n=282)	(n=196)	(n=423)
Gender (%)					
Male	50.9	50.4	51.4	53.1	49.9
Female	49.1	49.6	48.6	46.9	50.1
Mean age of children	8.04	7.98	8.12	7.70	8.20
Currently attending school (%)					
Attending	66.7	66.8	66.7	63.8	68.1
Not attending	4.5	5.0	3.9	3.1	5.2
Not yet school age	28.8	28.2	29.4	33.2	26.7
Location of residence (%)					
Urban	31.7	32.9	30.1	--	--
Rural	68.3	67.1	69.9	--	--
Relationship to head (%)					
Child	66.2	61.4	72.0	53.1	72.3
Grandchild	30.9	34.7	26.2	41.8	25.8
Other	2.9	3.9	1.8	5.1	1.9
Mean household size	5.50	5.35	5.68	6.47	5.05
Household wealth (%)					
Lowest quintile	22.1	23.0	21.4	9.7	27.9
2nd	17.9	14.2	21.1	7.7	22.7
3rd	19.2	14.5	23.1	8.2	24.3
4th	19.5	27.3	13.1	25.0	17.0
Top quintile	21.2	20.9	21.4	49.5	8.0
Type of households (%)					
Migrant-sending	66.1	63.5	69.1	67.9	65.2
Non-migrant	33.9	36.5	30.9	32.1	34.8

Source: The 2017 Dry Zone Migration Impact Survey.

About one third of children live in urban areas while the rest are in rural localities. Approximately two thirds of them are offspring of household head, while almost one third are household head's grandchildren. Few children live in households where household heads are not one of their own parents or grandparents. Notable differences include relatively higher proportions of offspring of household heads in Magway and in rural areas

(as compared to Mandalay and urban areas). Moreover, average size of the households that children reside is about 5.5. Those in urban areas typically live in households with larger number of household members than their rural counterparts. Results further indicate that children in urban areas tend to live in an economically better off household. Meanwhile, children in rural areas disproportionately belong to households in lower wealth quintiles. About two thirds of children are from migrant-sending households and the rest are from non-migrant households.

Table 7.4. Socio-demographic characteristics of children under age15 by migration status of parents

	Parents' migration status[a]			
	Both parents present in HH	Father outside township[b]	Mother outside township[b]	Both parents outside township
	(n=417)	(n=117)	(n=19)	(n=14)
Gender (%)				
Male	52.0	51.3	57.9	57.1
Female	48.0	48.7	42.1	42.9
Mean age of children	8.14	7.06	9.37	9.07
Currently attending school (%)				
Attending	66.4	63.2	78.9	78.6
Not attending	4.8	1.7	0.0	0.0
Not yet school age	28.8	35.0	21.1	21.4
Location of residence (%)				
Urban	31.2	22.2	26.3	21.4
Rural	68.8	77.8	73.7	78.6
Relationship to head (%)				
Child	78.4	48.7	0.0	0.0
Grandchild	20.6	48.7	89.5	92.9
Other	1.0	2.6	10.5	7.1
Mean household size	5.63	4.93	4.42	4.43
Household wealth (%)				
Lowest quintile	23.3	17.9	0.0	0.0
2nd	17.0	28.2	31.6	28.6
3rd	18.2	23.9	26.3	28.6
4th	18.9	20.5	15.8	21.4
Top quintile	22.5	9.4	26.3	21.4
Type of households (%)				
Migrant-sending	56.6	96.6	94.7	92.9
Non-migrant	43.4	3.4	5.3	7.1

Source: The 2017 Dry Zone Migration Impact Survey.

Notes:
a The analysis does not consider those whose mother or father are deceased or whose parents' location is unknown. Migration refers to movement beyond one's township.
b These two categories include cases in which either one or both parents are outside the township.

Table 7.4 describes characteristics of children in the sample by migrant status of their parents. Among children whose both parents are present in the household (i.e., non-migrants), proportion of boys (52%) is slightly higher than that of girls (48%). A similar pattern is observed for children with migrant fathers. Among children with migrant mothers or those with both parents outside township, nearly 60% of them are boys. While average age of children with non-migrant parents is 8 years, those with absent father is typically younger (approximately 7 years). For a small number of children whose mothers or both parents live outside township, their average age is over 9 years. Most likely for this reason, results also show greater proportions of these two groups currently attending school.

Furthermore, findings indicate that significantly greater proportions of children who experience parental absence due to migration live in rural areas, compared to those with non-migrant parents. The former also tends to be in households with a smaller size than the latter. While nearly 80% of children with non-migrant parents are offspring of household head, this is the case for less than half of children with migrant fathers. Among those whose mothers or both parents are absent due to migration, approximately 90 percent are grandchildren of household head. In terms of household wealth, we find that disproportionately small percentages of children with migrant fathers belong to the top 20% richest households. Meanwhile, there are no children whose mothers or both parents are migrants in the 20% poorest households. There is actually a higher proportion of children with migrant mothers in the 20% richest households compared to children in other categories of parental migration status.

It is interesting to observe relatively small proportions of children whose one or more parents are absent due to migration (3%-7%) come from non-migrant households. It is plausible that their migrant parents who were former household members have moved beyond township prior to 2012 (5 years prior to the survey) and thus, the households are not considered “migrant-sending households” by our survey. Alternatively, it could be because children with migrant parent(s) moved into the present household at some point prior to the survey. Their migrant parent(s) were not household members so the household is not considered belonging to the migrant-sending household category. Without longitudinal data, we are restricted in precisely explaining the observed findings.

7.3 Provision of care, instrumental and material support for children

Absence of parents is hypothesized to negatively affect the wellbeing of children because children’s various needs for care may not be adequately addressed. In this study, we examine three aspects of care provision for children, including their primary care provider, frequency of instrumental support provision, and patterns of material support such as daily and school expenses. While care and support for children are typically fulfilled

by the household, we examine the extent to which non-household sources provide material support for children in the Dry Zone.

Table 7.5. Percent distribution of primary care provider for children under age 15 in sampled households

	Primary care provider						*Number*
	Total	Mother	Father	Sibling	Other household members	This child care for self	
All	100%	82.1	2.7	2.1	8.7	4.4	*619*
Child's age							
Age 0-4	100%	88.1	0.0	0.7	11.3	0.0	*151*
Age 5-9	100%	84.0	3.5	2.5	9.0	1.0	*200*
Age 10-14	100%	77.2	3.7	2.6	7.1	9.3	*268*
Migration status of parents							
Both parents present	100%	87.5	3.6	1.4	2.4	5.0	*417*
Father outside township	100%	75.2	0.0	2.6	21.4	0.9	*117*
Mother outside township	100%	0.0	5.3	5.3	84.2	5.3	*19*
Both parents outside township	100%	0.0	0.0	7.1	85.7	7.1	*14*

Source: The 2017 Dry Zone Migration Impact Survey.

Main care provider: Table 7.5 addresses who primarily provides care for children in sampled households. We examine patterns and differentials of care providers by children's age and by their parents' migration status. Results indicate that mothers take a lion's share of care provision for children. Approximately 82% of children have their mothers as the primary care provider. Proportions of mother as the main carer are particularly higher for under-5 children, compared to older children. Among children whose parents are non-migrant, 88% of them are primarily cared for by their mothers. Meanwhile, about three quarters of children with migrant father have mothers as their main caregiver. Importantly, results indicate that it is very rare for father in the Dry Zone to be the main care provider for their children. This suggests a clear gender division of labor in care giving in study areas. Only 3% of children are taken care of mainly by their fathers. Even in cases whereby mothers are absent due to migration, only 5% of them are primarily cared for by their fathers. Like fathers, siblings play a small role in being the main care provider for children, particularly under-5 children and children with non-migrant parents.

Apart from immediate family members such as parents and siblings, other household members – particularly grandparents – are an important source of care provision for children. Overall, about 9% of children are primarily taken care of by other household members. Such proportion is higher for under-5 children than older children. Among children with migrant fathers, about one fifth of them receive main care from household members other than the mother. The proportions go up to 85% among children whose

mothers are absent due to migration and those whose both parents migrated away. Furthermore, results in Table 7.5 show that a small proportion of children (4%) care for themselves. This is relatively more common among children in their early teens, those with a migrant mother, and those whose parents are both absent. It is important to note that none of children in sampled households are primarily taken care of by non-household members (e.g., friends, neighbors) or by paid caregivers (e.g., maid, nanny).

Table 7.6. Patterns of instrumental support provision for children under age 15 by household members

	Frequency of instrumental support provision for child (mean score)[a]				*Number*
	Meal preparation	Personal care[b]	Emotional support[c]	Help with school work	
All	2.44	2.22	2.42	1.57	*619*
Child's age					
Age 0-4	2.99	3.00	2.62	1.21	*151*
Age 5-9	2.64	2.52	2.55	1.81	*200*
Age 10-14	2.00	1.55	2.21	1.60	*268*
Migration status of parents					
Both parents present	2.44	2.19	2.42	1.54	*417*
Father outside township	2.57	2.44	2.41	1.65	*117*
Mother outside township	2.11	1.79	2.16	1.53	*19*
Both parents outside township	1.79	1.79	2.00	1.36	*14*

Source: The 2017 Dry Zone Migration Impact Survey.

Notes:
a Dependent variable for this analysis is frequency that household members provide different types of instrumental support for each child during the past year. Score of 1 means never/rarely; 2 sometimes; 3 frequently/routinely.

b Personal care includes bathing, feeding, dressing.

c Emotional support includes providing comfort, confiding, giving encouragement, listening to child.

Instrumental support: Table 7.6 describes frequency of instrumental support provision for children. The Dry Zone Migration Impact Survey incorporates four types of instrumental support including meal preparation, personal care (e.g., bathing, feeding, dressing), emotional support (e.g., providing comfort and encouragement), and assistance with school work. Key household informants were probed how frequent during the past year each specific child in their households received each type of instrumental support from household members. Possible answers include never/rarely (coded 1), sometimes (2), frequently/routinely (3). Mean score is reported in Table 7.6 with a higher value indicating greater frequency that the child received a specific instrumental support.

Results suggest that children's age is an important indicator of type and the extent to which they receive instrumental support. For example, under-5 children are more likely than older children to routinely receive personal care, assistance in meal preparation, and emotional support. Since most of them are not in school, under-5 children rarely or never received assistance with school work. Older children, particularly those aged 10-14, are more independent. They tend to less frequently receive provision for all four types of instrumental support.

Besides age, a key question for this analysis is whether and to what extent parental absence due to migration is associated with frequency of instrumental support for children. Results suggest that migration matters relatively little for children's receipt of instrumental support. Children with migrant fathers are not distinctly different from children with non-migrant parents in terms of type and frequency of instrumental support they receive. On average, they actually appear to have received provision of meal preparation and personal care more frequently than those with non-migrant parents. Nevertheless, among a very small proportion of children with mothers or with both parents absent because of migration, they received much less frequent provision of all four types of instrumental support. Those with both parents absent appear to be the most disadvantaged in this regard. While age of children plays an important role in explaining this disparity, an absence of mother is likely to play an important part.

Material support: Analyses shown in Table 7.7 describe patterns and differentials in sources of material support for children in sampled households. The survey asked the extent to which parents and household members provide financially to the child's daily expenses and school expenses. Possible responses are that the expenses are covered (i) all or mostly by parents; (ii) all or mostly by other household members; and (iii) shared between parents and other household members. Table 7.7 shows percent distribution of the responses for children's daily expenses and school expenses respectively.

Nearly 90% of children have both daily and school expenses covered all or mostly by their parents. Meanwhile, household members paid all or most expenses for about 7% of all children. For less than 5% of children their daily and school expenses are reportedly shared by parents and household members. Furthermore, while results indicate very little differences across children's age group, parental migration status appears to explain some variations in sources of material support for children. For children coresiding with both parents, all or most of their daily and school expenses are usually covered by their parents. However, among children with migrant father or mother, parents play a relatively less predominant role in financial support provision while other household members increasingly become the main or partial provider of children's daily or school expenses. For instance, 80% of children with migrant fathers and 26% of those with absent mothers have their daily expenses covered fully or mostly by their parents. Other household members are

the main provider for daily expenses for about 15% of children with migrant father and 42% of children with migrant mother.

While parents and/or other household members are major providers of material support for children, non-household sources may also play some roles in supplementing household support. Figure 7.1 examines how prevalent it is for children in sampled households to receive non-household material support. In this analysis, we differentiate children by migration status of their parents. Results suggest that the most common non-household source of material support is government-sponsored programs (e.g., free school lunches, tuition subsidies, and healthcare), followed by non-coresident family members, and private charities. We find that it is very rare for children to receive material support from neighbors and friends. Furthermore, it is also clear that children whose mothers or whose parents are both absent due to migration are more likely to receive financial support from non-household sources than those with a migrant father and those with non-migrant parents. In fact, children coresiding with both parents are the least likely to receive non-household material support, except for the support coming from neighbors or friends. Given lack of information in the survey, we are unable to assess the extent to which these non-household sources of material support help meet the financial needs of children.

Figure 7.1 Percent children under age 15 receiving non-household sources of material support by migration status of patents

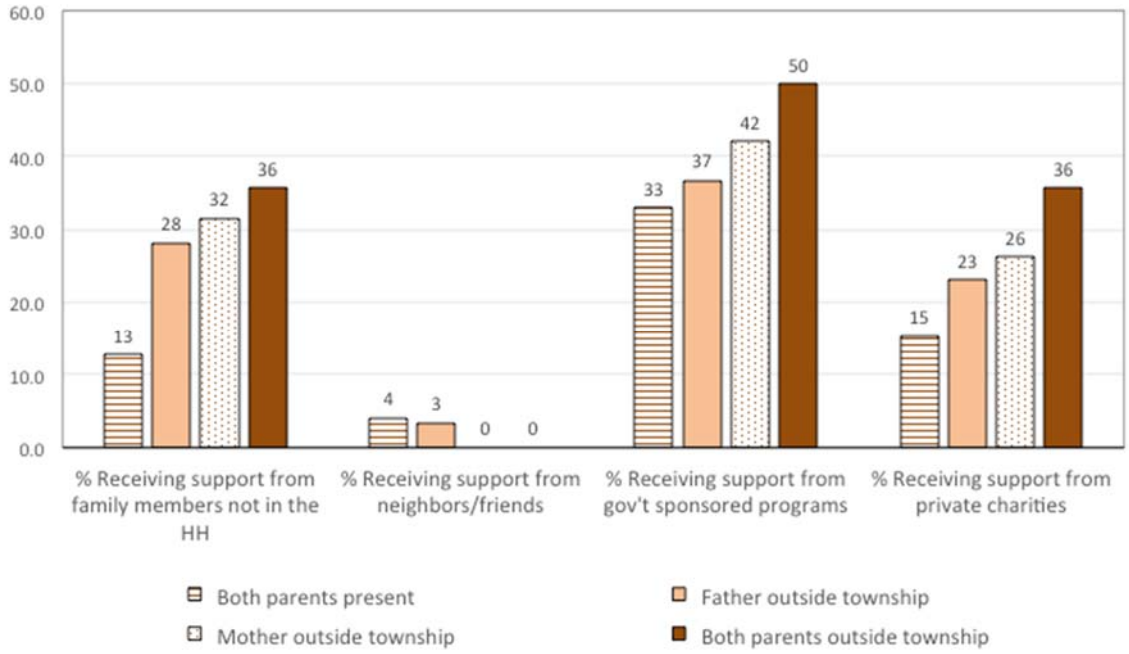


Table 7.7. Percent distribution of material support provision for children under age 15 by household members

	Child's daily expenses				Child's school expenses[a]				*Number*
	Total	All or mostly by parents	All or mostly by other HH members	Shared between parents and other HH members	Total	All or mostly by parents	All or mostly by other HH members	Shared between parents and other HH members	
All	100%	88.9	6.9	4.2	100%	88.2	7.3	4.5	*619*
Child's age									
Age 0-4	100%	89.4	6.6	4.0	100%	90.1	9.9	0.0	*151*
Age 5-9	100%	88.0	7.0	5.0	100%	87.6	7.0	5.4	*200*
Age 10-14	100%	89.2	7.1	3.7	100%	88.0	6.8	5.2	*268*
Migration status of parents									
Both parents present	100%	95.4	1.2	3.4	100%	95.3	1.2	3.5	*417*
Father outside township	100%	79.5	14.5	6.0	100%	74.7	17.9	7.4	*117*
Mother outside township	100%	26.3	42.1	31.6	100%	18.8	50.0	31.3	*19*
Both parents outside township	100%	35.7	35.7	28.6	100%	25.0	41.7	33.3	*14*

Source: The 2017 Dry Zone Migration Impact Survey.

Note:
a The analysis is restricted for those who are currently in school.

7.4 Patterns of unmet needs experienced by children under age 15

Table 7.8 examines prevalence of unmet needs experienced by children under age 15. The Dry Zone Migration Impact Survey provides information for assessing four aspects of unmet needs including children's daily necessity (e.g., food), financial need for education, emotional support, and assistance with school work. It is important to note that unmet needs were reported in the survey by household key informants not the children themselves. In this analysis, we describe patterns and differentials of children's unmet needs by their age, location of residence, household wealth, and parents' migration status.

Table 7.8 Patterns and differentials in unmet needs experienced by children under age 15

	Type of unmet needs				Mean number of unmet needs	*Number*
	% Daily necessity (e.g., food)	% Education financing	% Emotional support	% Help with school work		
All	38.8	43.0	30.0	31.5	1.43	*619*
Age						
0-4	28.5	15.9	15.2	8.6	0.68	*151*
5-9	42.5	46.0	36.0	39.0	1.64	*200*
10-14	41.8	56.0	34.0	38.8	1.71	*268*
Location of residence						
Urban	28.1	38.3	22.4	26.0	1.15	*196*
Rural	43.7	45.2	33.6	34.0	1.57	*423*
Household wealth						
Lowest quintile	43.8	46.7	32.1	35.8	1.58	*137*
Middle quintiles	41.6	45.3	31.1	32.8	1.51	*351*
Top quintile	26.0	32.8	25.2	23.7	1.08	*131*
Migration status of parents						
Both parents present	41.0	42.4	29.0	31.2	1.40	*417*
Father outside township	34.2	35.0	29.9	27.4	1.27	*117*
Mother outside township	42.1	47.4	31.6	21.1	1.42	*19*
Both parents outside township	50.0	50.0	35.7	21.4	1.57	*14*

Source: The 2017 Dry Zone Migration Impact Survey.

The most common unmet need is financial needs for education. Approximately 43% of children in the sample reportedly did not have this particular need fulfilled. The second most common is unmet needs in daily necessity (38%), school work assistance (32%), and emotional support (30%). Typically, a child experiences an average of 1.4 types of unmet needs. Results further indicate that all four types of unmet needs tend to increase with children's age. The increase is particularly striking for unmet financial needs for schooling.

More than half of children ages 10-14 reportedly experience unmet needs in education financing compared to only 16% among those less than 5 years old. Additionally, we find that higher proportions of rural children compared to their urban counterparts experience unmet needs. Urban-rural disparity is most pronounced for unmet needs in daily necessity (e.g., food). Furthermore, results show significant differences in unmet needs between children from the top 20% richest households and those from the middle and bottom wealth quintiles. Children from relatively well-off households are much less likely to experience all kinds of unmet needs. The differences in unmet needs between those belonging to the middle quintiles and the poorest quintile are relatively small.

One of our key interests is to address whether migration status of parents is associated with children's unmet needs. Results from Table 7.8 suggest that migration of father does not appear to increase unmet needs of children remaining in migrant-sending households. For all types of unmet needs except for emotional support, proportions of unmet needs experienced by children with migrant fathers are actually lower than those experienced by children coresiding with both parents. Differences in unmet needs in emotional support between children with migrant fathers and those with non-migrant parents are negligible. Mean number of unmet needs are lower for children with migrant fathers compared to those with non-migrant parents.

For children with migrant mothers, percentages experiencing unmet needs are higher than their counterparts with non-migrant parents regarding education financing and emotional support and are only marginally higher for daily necessity. On average, children whose mothers are absent due to migration have about the same number of unmet needs as those living with both parents. Furthermore, findings suggest that the group most adversely affected by parents' migration is children with both parents absent. Percentages experiencing unmet needs are higher for this group than others regarding daily necessity, education financing, and emotional support. Their unmet needs for school work assistance are much lower than other categories of children. While this group can be considered most disadvantaged, they are relatively small in numbers.

In sum, findings from the Dry Zone Migration Impact Survey reveal that parental migration has limited negative impacts on children remaining in the Dry Zone. Adverse impacts appear to be restricted to a small number of children whose mother or both parents migrated beyond township. These children reportedly receive less instrumental support (e.g., meal preparation, personal care, emotional support, assistance with school work) and experience greater unmet needs particularly in education financing and emotional support. Regarding the provision of instrumental support, children with migrant fathers do not appear to be more disadvantaged than those coresiding with both parents. In fact the opposite may be true. Percentages of children with migrant fathers experiencing

unmet financial needs for education are remarkably lower compared to other children perhaps because their migrant fathers can send remittances to finance educational costs.

Limited negative impacts of migration on children in the Dry Zone are likely explained by the current patterns of migration in these areas. While migration is common, among households with children under age 15 migration tends to involve only fathers. It is relatively rare for mothers or both parents to migrate and leave their children behind. This is consistent with a prior study based on nationally representative data that shows skip-generation households (i.e., households with only grandparents and grandchildren) to be rare and much less common in Myanmar compared to a more developed neighboring country like Thailand (Knodel & Teerawichitchainan, forthcoming). This could be a household strategy not to have all working-age members migrate elsewhere. Household are likely to diversify risks by having different members fulfil different functions of the household. Since care provision for the young and the old are usually considered women's tasks and roles in the context of Myanmar, female household members with young children are perhaps less likely to migrate. Children with migrant mothers and those whose parents are both absent due to migration tend to be older and thus are more likely to be independent and able to take care of themselves to some extent. Results show that these children are not deserted; however, they are often embedded in family networks and primarily cared for by other household members (usually grandparents).

8. IMPACT OF MIGRATION ON DISABLED HOUSEHOLD MEMBERS

This section examines prevalence of disabled household members in sampled households and the extent to which migration may have implications for their wellbeing. We are particularly interested in addressing who provides care for disabled household members, the extent to which these members receive care, and whether their care needs are met.

The Dry Zone Migration Impact Survey asked household key informants to identify household members age 11 and older with five types of disabilities including visual impairments (even if wearing glasses), hearing difficulty (even if using hearing aid), functional limitations (i.e., difficulty in walking, climbing steps, or carrying items), difficulty in activities of daily living (e.g., bathing, dressing, feeding), and cognitive impairment (i.e., difficulty in remembering or concentrating). These are the same as the short list of disability items endorsed for censuses by the Washington Group with the exclusion of difficulty in communicating (Washington Group, undated).

They were also probed about severity of each type of disability. In this study, disabled household members refer to those who were reported having "a lot of difficulty" or "cannot do at all" for at least one of the five disability indicators. After identifying disabled household members, the survey further probed household key informants about care provision and healthcare needs of these individuals. Analyses of the survey show that approximately 20% of the 700 sampled households have at least one disabled household members. There are a total of 159 disabled individuals in our sample. Of these, 100 (64%) reside in Mandalay and the rest (36%) in Magway region.

8.1 Prevalence and types of disabilities in the Dry Zone

Table 8.1 describes prevalence and types of disabilities in sampled households in the Dry Zone. Results show that the most common form of disability is functional difficulty. Approximately 64% of disabled individuals in the sample experience functional limitations. The second most common type of disability is difficulty of activities in daily living (ADL) which requires intensive personal care. About two fifths of disabled individuals are affected by ADL difficulties. About 30% of disabled household members have visual impairment and cognitive impairment. The least common type of disability is hearing impairment which affects 16% of disabled individuals. On average disabled persons in our sample experience 1.8 types of disabilities.

We further differentiate the sample of disabled individuals by their age (age 11-59 versus age 60 and older) and by types of households (migrant-sending or non-migrant households). Results indicate small differences between younger and older disabled persons regarding the prevalence of functional and ADL difficulties. While visual and cognitive impairments are much more common among those 60 and over, hearing difficulty is slightly

more prevalent among younger disabled persons. In general, older disabled individuals typically have higher number of disabilities compared to their younger counterparts.

Table 8.1. Prevalence and types of disabilities among disabled household members in sampled households

	All disabled household members[a]	Age of disabled household members		Type of households	
		Age 11-59	Age 60+	Migrant-sending household	Non-migrant households
	(n=157)	(n=69)	(n=88)	(n=110)	(n=47)
% Visual impairment	30.6	26.1	34.1	28.2	36.2
% Hearing impairment	15.9	18.8	13.6	18.2	10.6
% Functional difficulty[b]	63.7	62.3	64.8	66.4	57.4
% ADL difficulty[c]	40.8	39.0	42.0	40.9	40.4
% Cognitive impairment[d]	29.9	23.2	35.2	29.1	31.9
Mean number of disabilities	1.81	1.70	1.90	1.83	1.77

Source: The 2017 Dry Zone Migration Impact Survey.

Notes:
a Disabled household members refer to members age 11+ who were reported having either "a lot of difficulty" or "cannot do at all" for at least one of the five disability indicators
b Functional difficulty refers to difficulty in walking, climbing steps, and carrying items.
c ADL difficulty refers to difficulty in conducting activities of daily living (ADL) including bathing, dressing, toileting, transferring.
d Cognitive impairment refers difficulty in remembering or concentrating.

Moreover, results suggest that average number of disabilities experienced by disabled individuals is about the same for those from migrant-sending or non-migrant households. Nevertheless, there are some moderate differences between migrant-sending and non-migrant households regarding prevalence of each type of disabilities. Proportions of disabled individuals with hearing impairments and functional difficulty are substantially higher among households with migrants than those without migrants. Meanwhile, it is more common for non-migrant households than migrant-sending households to have disabled individuals with visual and cognitive impairments.

8.2 Socio-demographic characteristics of disabled household members

Table 8.2 examines socio-demographic characteristics of disabled household members. It also addresses differentials in the characteristics by type of households that disabled persons reside (migrant-sending versus non-migrant) and by their age (age 11-59 versus age 60 and older). Findings show that there are higher proportions of females than males among disabled individuals. This is the case for older disabled persons (age 60 and over) as well as for both migrant-sending and non-migrant households. Average age of

disabled individuals in our sample is 60 years old. Disabled members of non-migrant households are typically older than those from migrant-sending households.

Table 8.2. Socio-demographic characteristics of disabled household members in sampled households

	All disabled household members	Age of disabled household members		Type of households	
		Age 11-59	Age 60+	Migrant-sending household	Non-migrant households
	(n=157)	(n=69)	(n=88)	(n=110)	(n=47)
Gender (%)					
Male	42.0	50.7	35.2	43.6	38.3
Female	58.0	49.3	64.8	56.4	61.7
Mean age	60.08	--	--	58.34	64.17
Education (%)					
No education	42.3	26.5	54.5	41.3	44.7
Some primary	23.1	22.1	23.9	22.9	23.4
Complete primary	13.5	19.1	9.1	12.8	14.9
Secondary and beyond	21.2	32.4	12.5	22.9	17.0
Work status (%)					
Work	19.7	34.8	8.0	20.0	19.1
Did not work	80.3	65.2	92.0	80.0	80.9
Location of residence (%)					
Urban	25.5	34.8	18.2	25.5	25.5
Rural	74.5	65.2	81.8	74.5	74.5
Relationship to household head (%)					
Household head	47.8	36.2	56.8	45.5	53.2
Spouse	15.3	15.9	14.8	17.3	10.6
Child/child in law	15.3	34.8	0.0	17.2	10.6
Parent/Parent in law	10.8	0.0	19.3	9.0	14.9
Other relatives	10.8	13.0	9.1	10.9	10.6
Mean household size	4.37	4.93	3.93	4.60	3.83
Household wealth (%)					
Lowest quintile	19.7	8.7	28.4	14.5	31.9
2nd	19.1	17.4	20.5	20.0	17.0
3rd	19.7	21.7	18.2	20.9	17.0
4th	19.7	20.3	19.3	20.9	17.0
Top quintile	21.7	31.9	13.6	23.6	17.0

Source: The 2017 Dry Zone Migration Impact Survey.

Results suggest that percentages of disabled individuals with no education are disproportionately high. Approximately 42% of them are uneducated. Among older disabled individuals, more than half of them had no schooling. Furthermore, disabled individuals are not likely to be economically active. Only one fifth of them worked last year, while 80% did not work. There is little variation across types of households. It is only among disabled individuals of younger age that higher proportions (35%) are reported to have worked last year.

About three quarters of disabled individuals live in rural areas, with no differences across migrant-sending and non-migrant households. Furthermore, nearly half of disabled household members (particularly those who are age 60 and older and who belong to non-migrant households) are household heads. About 15% are spouse of household head while another 15% children or children-in-law of household head. About 11% are parent or parent-in-law of household head. The rest are other relatives. The main differentials observed here include that disabled persons of younger age groups (age 11-59) are twice as likely than their older counterparts to reside in urban areas. They are also more likely to be children or children-in-law of household head.

Average size of households in which disabled individuals reside is approximately 4.4 persons. Younger disabled persons and those in migrant-sending households belong to households with a slightly larger size. Meanwhile, older disabled persons and those from non-migrant households typically live in households with fewer than 4 members. In terms of household wealth, higher proportions of younger disabled individuals and those from migrant-sending households belong to the top 20% wealth quintile. Meanwhile, significantly larger proportions of older disabled persons and those from non-migrant households are from the lowest wealth quintile. In sum, disabled persons from migrant-sending and non-migrant households differ from one another in only some socio-demographic characteristics, including average age, proportions that are household head, mean household size, and household wealth distribution.

8.3 Patterns and differentials in receipt of care among disabled household members

Table 8.3 examines the extent to which disabled household members receive regular care by types of disability and number of disabilities. We also assess differentials in receipt of care by age, gender, and type of households. Overall, we find that approximately two fifths of disabled individuals reportedly receive regular care. Those with ADL difficulty are more likely to be care recipients than those with functional difficulty, cognitive impairments and a combination of visual or hearing impairments. Just 15% of individuals with one disability receive care compared to more than 60% among those with multiple disabilities.

Table 8.3 Patterns and differentials in receipt of care among disabled household members by their type and number of disabilities

	All disabled individuals	Type of disability				Number of disabilities	
		Visual or hearing impairment	Functional difficulty	ADL difficulty	Cognitive impairment	One disability	Multiple disabilities
	(n=157)	(n=71)	(n=100)	(n=64)	(n=47)	(n=75)	(n=82)
	Percent receiving regular care						
All disabled individuals	39.5	38.0	49.0	73.4	48.9	14.7	62.2
Age							
11-59	34.8	38.7	44.2	66.7	62.5*	8.3	63.6
60+	43.2	37.5	52.6	78.4	41.9	20.5	61.2
Gender							
Male	36.4	29.6	48.8	76.9	46.7*	6.3	64.7
Female	41.8	43.2	49.1	71.1	50.0	20.9	60.4
Type of households							
Migrant-sending household	39.1	42.9	45.2	71.1	53.1	14.0	60.0
Non-migrant household	40.4	27.3	59.3	78.9*	40.0*	16.0	68.2

Source: The 2017 Dry Zone Migration Impact Survey.

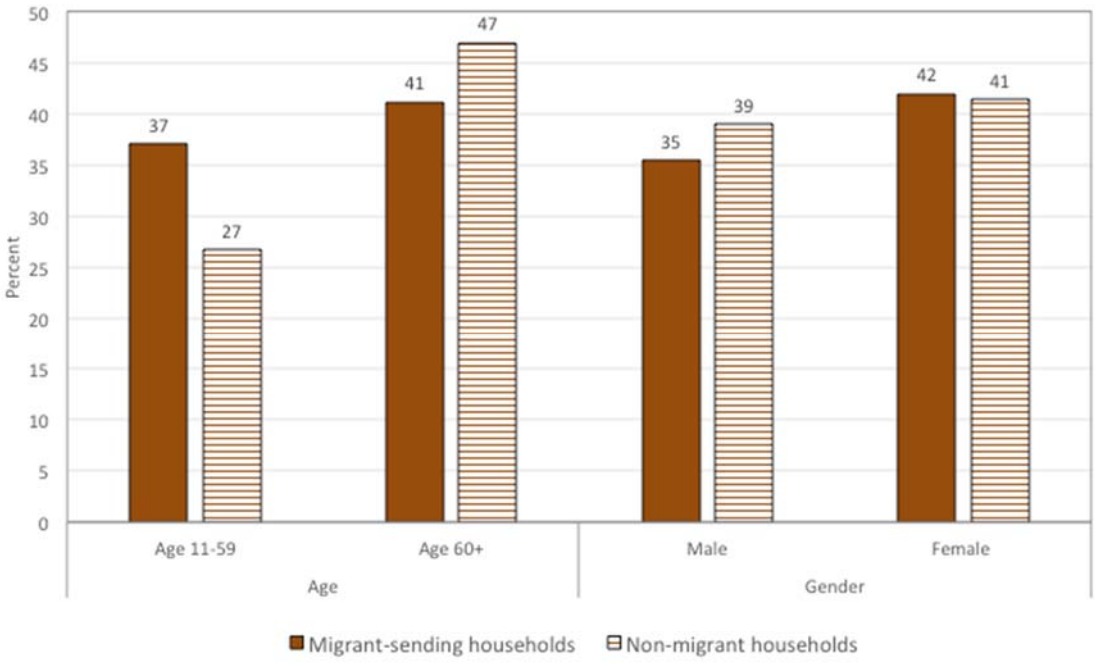
Notes:

**Estimates shown are calculated based on fewer than 20 observations.*

Receipt of care appears to depend on age of disabled individuals. Nearly 45% of older disabled individuals receive care compared to 35% among their younger counterparts. This pattern is consistent across certain types of disability. For example, over three quarters of older persons with ADL difficulty receive regular care, while just two thirds of younger counterparts are regular care recipients. Nevertheless, when younger individuals experience multiple disabilities, proportions receiving regular care are about the same (or even slightly higher) than their older counterparts. Furthermore, higher percentages of disabled women receive regular care compared to their male counterparts. This is consistent for all types of disability except for ADL difficulty. Among those with one disability, disabled women are much more likely to receive care. However, the differences are minimal and even somewhat reversed for those with multiple disabilities.

One of our main interests is to examine whether migration of one or more household members adversely affect care for disabled household members. Results from Table 8.3 show almost no differences in percentages receiving care among disabled individuals in migrant-sending and non-migrant households. When controlling for types of disability, no consistent patterns emerge. Among those with visual or hearing impairments and cognitive impairments, percentages receiving care are actually higher for individuals from migrant-sending than non-migrant households. The opposite pattern is observed among individuals with functional and ADL difficulties as well as among those with multiple disabilities.

Figure 8.1 Percent receiving regular care among disabled household members by types of households



Given observed age and gender differentials in receipt of care (Table 8.3), analyses presented in Figure 8.1 further control for these demographic characteristics and assess whether disabled individuals, particularly those of younger ages and men, from migrant-sending households are more disadvantaged regarding receipt of care. Results are by and large mixed. Older disabled persons and disabled men from migrant-sending households are less likely to receive regular care compared to their counterparts from non-migrant households. However, younger disabled persons from migrant-sending households have higher likelihood in care receipt than those from non-migrant households. We further find virtually no differences in care receipt among women from migration-sending and non-migrant households. In sum, an absence of household members due to migration does not appear to have significant adverse implications for care receiving among disabled household members. In other words, disabled individuals from migrant-sending households are not particularly disadvantaged compared to those from non-migrant households regarding receipt of care.

8.4 Who provides care for disabled household members?

Table 8.4 explores patterns of primary care providers for disabled household members who receive regular care. We find that spouses of disabled persons account for close to one third of all primary caregivers. Daughter (and to some extent, daughter-in-law) accounts for nearly 30%. Mother, son, and grandchild comprise of much smaller proportions of main care providers for disabled household members. Results also indicate that no disabled individuals in our sample are primarily cared for by a father or son-in-law. About 16% of disabled persons are taken care of by other relatives (including siblings, nieces, nephews) and in some rare occasions by friends and neighbors. No disabled individuals in sampled households are mainly cared for by paid care providers, including servants and maids. These findings are by and large consistent with a study on long-term care for older persons in Myanmar based on a nationally representative sample (Teerawichitchainan and Knodel, forthcoming).[10]

[10] The Dry Zone Migration Impact Survey provides limited information to examine secondary care provider for disabled household members. In an analysis not shown, we find that having a secondary care provider is not uncommon and tend to be some members of the household. For disabled individuals with spouse as their main care provider, their secondary care providers include daughter (45%), daughter-in-law (10%), son (15%), grandchild (15%), parents (10%) and friend/neighbor (5%), About 35% of this group have no secondary care provider. Among those with daughter or daughter-in-law as the main caregiver, their secondary care providers include son (28%), son-in-law (11%), and grandchild (17%). More than half of this group does not have secondary care providers.

Table 8.4. Percent distribution of primary caregivers for disabled household members who received regular care

	Percent distribution of primary caregivers among those receiving care[a]							*Number*
	Total	Spouse	Mother	Son	Daughter or daughter in law	Grandchild	Others[b]	
All receiving regular care	100%	32.3	8.1	8.1	29.0	6.5	16.1	*62*
Age								
11-59	100%	37.5	20.0	0.0	16.7	0.0	25.0	*24*
60+	100%	28.9	0.0	13.2	36.8	10.5	10.5	*38*
Gender								
Male	100%	54.2	4.2	8.3	16.7	0.0	16.7	*24*
Female	100%	18.4	10.5	7.9	36.8	10.5	15.8	*38*
Number of disabilities								
One disability	100%	27.3	9.1	9.1	27.3	18.2	9.1	*11*
Multiple disabilities	100%	33.3	7.8	7.8	29.4	3.9	17.6	*51*
Types of disabilities								
Visual and hearing impairment	100%	33.3	11.1	7.4	33.3	0.0	14.8	*27*
Functional difficulty	100%	36.7	6.1	8.2	28.6	4.1	16.3	*49*
ADL difficulty	100%	31.9	6.4	8.5	29.8	6.4	17.0	*47*
Cognitive impairment	100%	8.7	13.0	13.0	30.4	8.7	26.1	*23*
Type of households								
Migrant-sending households	100%	34.9	9.3	7.0	27.9	7.0	14.0	*43*
Non-migrant households	100%	26.3	5.3	10.5	31.6	5.3	21.1	*19*

Source: The 2017 Dry Zone Migration Impact Survey.

Notes:

a There is no report that disabled household members were primarily cared for by his/her father or son-in-law.
b Others category usually refers to other relatives (e.g., siblings, nieces, nephews) and, in few occasions, friends/neighbors. There is no report of disabled household members being primarily cared for by paid caregiver, servant, or maid.

We further examine differentials in main care providers by age, gender, number and types of disabilities, and type of households (migrant-sending versus non-migrant). Age and gender differentials are noteworthy. Results indicate that younger disabled individuals (age 11-59) are more likely to be cared for by their spouse, while older disabled persons tend to be taken care of by their daughters or daughters-in-law. It is also interesting to note that higher percentages of younger disabled persons have others as their main care provider compared to their older counterparts. Furthermore, we find that half of disabled men receive care primarily from their spouse compared to only 18% among disabled women. The latter are more than twice likely to be taken care of by daughter or daughter-in-law.

The main difference between individuals with one disability versus those with multiple disabilities is that a much higher percentage of the former is reportedly cared for by grandchildren. Meanwhile, slightly greater proportions of those with multiple disabilities have spouse, daughter, and others as their primary care provider compared to individuals with one disability. Patterns of primary care providers for individuals with visual/hearing impairments, functional difficulty and ADL difficulty vary only slightly. Notable difference can be observed among individuals with cognitive impairments who are much less likely to be cared for by their spouse and more so by others compared to other disabled persons.

Differences in care providers between migrant-sending and non-migrant households are rather modest. The most common care provider for disabled individuals from migrant-sending households are spouses. Meanwhile, it is daughters or daughters-in-law for non-migrant households. Another noteworthy point is that others account for 21% of main caregiver for disabled individuals from non-migrant households compared to 14% among migrant-sending households.

8.5 Patterns of care needs and unmet needs for care

Table 8.5 describes patterns of care needs and receipt of care among disabled household members. Overall, results show that slightly over one quarter of disabled household members do not need care. Only about one fifth reportedly receive adequate care. Meanwhile, about 19% received inadequate care and nearly one third want but do not receive care.

Results indicate some noteworthy differentials. Compared to their older counterparts, younger disabled persons are more likely to need care but not receive it. This is also true for disabled men (relative to females) and those with one disability (relative to those with multiple disabilities). Those with functional difficulty have greater likelihood of needing care but not receiving it than those with other types of impairments. Those with ADL difficulty are the least likely to want care and not get it. Results also show that slightly over half of those who self-care need care.

Table 8.5. Patterns and differentials in care needs and receipt of care among disabled household members

	Care needs and receipt of care				
	% Need care but do not receive care	% Receive inadequate care	% Receive adequate care	% Do not need care	*Number*
Total	32.5	19.1	20.4	28.0	*157*
Age					
11-59	44.9	13.0	21.7	20.3	*69*
60+	22.7	23.9	19.3	34.1	*88*
Gender					
Male	37.9	16.7	19.7	25.8	*66*
Female	28.6	20.9	20.9	29.7	*91*
Type of households					
Migrant-sending	30.9	17.3	21.8	30.0	*110*
Non-migrant	36.2	23.4	17.0	23.4	*47*
Number of disabilities					
One disability	42.7	8.0	6.7	42.7	*75*
Multiple disabilities	23.2	29.3	32.9	14.6	*82*
Types of disabilities					
Visual or hearing impairment	26.8	22.5	15.5	35.2	*71*
Functional difficulty	31.0	21.0	28.0	20.0	*100*
ADL difficulty	17.2	34.4	39.1	9.4	*64*
Cognitive impairment	25.5	25.5	23.4	25.5	*47*
Primary caregiver					
Spouse	--	55.0	45.0	--	*20*
Daughter/daughter in law	--	38.9	61.1	--	*18*
Other family members	--	50.0	50.0	--	*24*
Self-care/no one	53.7	--	--	46.3	*95*

Source: The 2017 Dry Zone Migration Impact Survey.

Nearly one fifth of disabled individuals receive care but find the care to be inadequate. Our analyses show that older disabled individuals, disabled women, and those with multiple disabilities are more likely to experience inadequate care compared to their counterparts who are younger, male, or who have only one disability. Individuals with ADL difficulty also experience greater tendency to receive inadequate care than individuals with other types of disabilities. Results show higher proportions of inadequate care among those being cared for primarily by spouse and other family members, compared to those cared for by daughter or daughter-in-law.

Findings indicate relatively small differences in proportions receiving adequate care among disabled individuals of different age and gender. Much greater differentials are observed among individuals with one versus multiple disabilities. Proportions receiving

adequate care are 5 times higher among individuals with multiple disabilities than those with a single disability. Individuals with ADL difficulty and those cared for by daughter and daughter-in-law also appear to receive relatively more care attention. Furthermore, results show that some disabled individuals reportedly do not need care. They tend to be those with only one disability or with visual/hearing disability. Interestingly, moderately higher proportions of older disabled persons and disabled women are reported not needing care compared to their younger and male counterparts respectively.

Regarding whether migration of household members has adverse implications for the wellbeing of disabled individuals, findings suggest that disabled persons from migrant-sending households are not worse off with respect to care needs and care receipt compared to their counterparts from non-migrant households. Results from Table 8.5 show that both percentages needing care but not receiving it and percentages receiving inadequate care are actually lower for disabled members from migrant-sending households. They are also more likely to report experiencing adequate care.

Figure 8.2 Percent unmet need for care among disabled household members by type of households

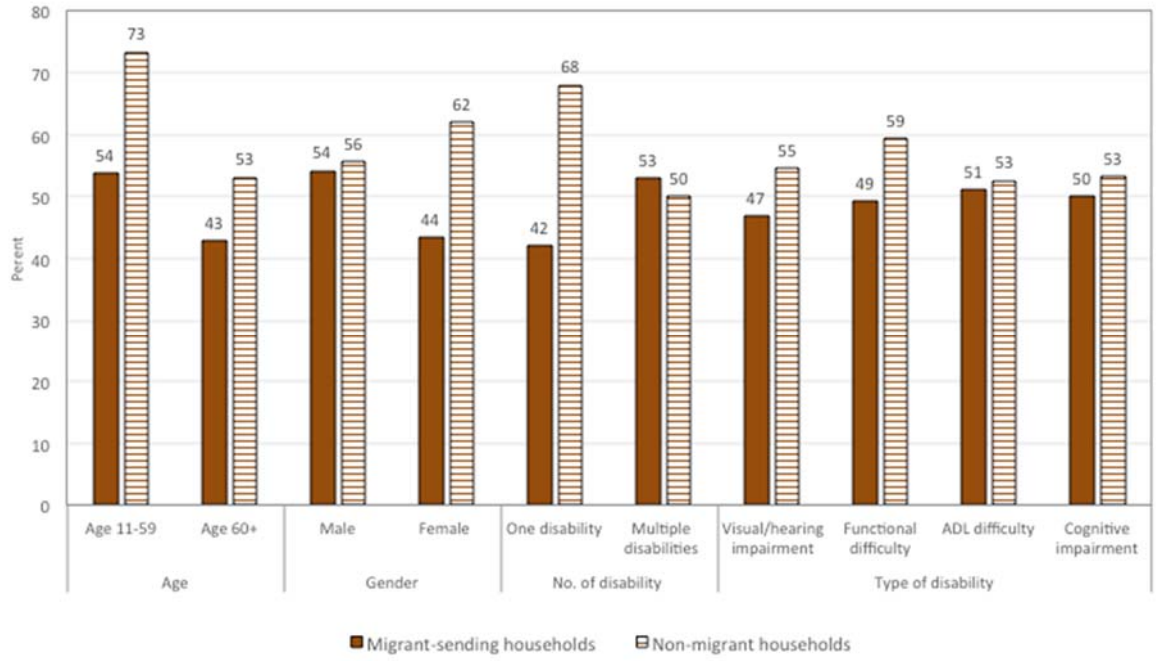


Figure 8.2 describes percentages of disabled household members that experience unmet need for care. In this study, we consider disabled individuals to experience unmet need for care if they need care but do not receive it or if they receive inadequate care. The main objective of this analysis is to investigate further whether the lack of negative migration impacts (shown in Table 8.5) holds when controlling for socio-demographic characteristics of disabled individuals as well as their number and types of disabilities.

Overall, results reveal that disabled individuals from migrant-sending households report lower percentages of unmet need for care than their counterparts from non-migrant households. The patterns are consistent across age groups, gender, and type of disabilities. The only exception is among those with multiple disabilities whereby disabled persons from non-migrant households demonstrate slightly lower percentages of unmet need for care.

Our findings reveal that migration of household members does not increase the likelihood that left-behind disabled members experience unmet need for care relative to those from non-migrant households. Based on findings reported in Section 5, migrant-sending households in the Dry Zone tend to be larger in size and also economically better off than non-migrant households. For this reason, they are perhaps better equipped to take care of disabled household members. Nevertheless, despite the lack of negative implications of migration for care provision, it is important to note that unmet need for care is high for disabled individuals in the Dry Zone regardless of their type of household. More than half of the sample reportedly experience unmet needs suggesting that disabled persons are a particularly vulnerable segment of populations in this region.

9. CONCLUSIONS

The analysis of the 2017 Dry Zone Migration Impact Survey is one of the first studies using a systematic survey approach to examine the impacts of migration on households and populations remaining in migrant-source areas in the Dry Zone of central Myanmar. We focus on recent migration that took place during the last five years to minimize recall errors. Since our main interest is migration impacts, we focus on migrants who moved beyond township for an extended period of time (at least one year) rather than seasonal, short-term, or intra-township migrants.

Our empirical results both confirm and extend previous research on migration in Myanmar. We find that migration is common in the Dry Zone. About two thirds of migrants are men. Migrants from the Dry Zone tend to first move at the ages of mid- and late-20s. They are usually either adult children of household heads or household heads themselves. A majority migrated because of economic reasons, particularly for employment opportunities in the non-agricultural sector. The migration decision was made by the migrants themselves usually in consultation with immediate family members such as parents and siblings. Nearly three quarters of migrants received at least some financial support from origin households to set up at the destination. Internal migration to another region or state in Myanmar is more common than international migration. Migrants from rural households more commonly move to another country, compared to their urban counterparts. It is also more typical for men than women and for migrants from households in middle wealth quintiles than those in the top or bottom wealth strata to participate in international migration. Remittances from international migrants tend to be significantly larger than those from internal migrants.

Our study examines various impacts of migration including those on household economy, intergenerational support system, and potentially vulnerable household members (e.g., young children, disabled and frail members). Several perspectives exist for interpreting the impacts of migration on origin households and their members.

- First, *the alarmist perspective* views that a large volume of migration especially from rural to urban areas tends to have adverse effects on households and populations remaining in sending communities. For example, rural households may experience labor shortages. Young children and older persons in rural areas are potentially deserted and left to fend for themselves.
- *The household strategy perspective*, on the contrary, views migration as a way to diversify economic risks for the origin households and as benefiting both migrants and family members who remain behind. According to this perspective, migrants in the non-agriculture sector are subject to different cycles of economic risks than their family members remaining in origin communities. Thus, each can

serve as a form of insurance for the other, while at the same time each can contribute to the material wellbeing of the other in its own way.

- Furthermore, *the modified extended family perspective* posits that while migration leads extended family members to be geographically dispersed, advances in transportation and communication technology that accompany development permit members to maintain relationships and continue to fulfill at least some of the associated obligations. Family ties and an intergenerational support system remain intact although in modified forms.

Our findings are least consistent with the alarmist perspective. We did not find migrant-sending households to be particularly disadvantaged due to migration. First, there is no evidence that migrant-sending households in rural areas (presumably in the agricultural sector) experience shortages of working-age adults. In terms of household size, migrant-sending households tend to be larger and have more working-age adult members than non-migrant households. This is consistent across urban and rural areas. Moreover, migrant-sending households are better off in terms of household wealth and size of land ownership. They are also less likely to report income inadequacy. It is plausible that migrant-sending households are selective of those that tend to be better off economically in the first place. Given the nature of our data source, we are limited in explaining causality between migration and household material wellbeing. Furthermore, we do not find any evidence that households in the Dry Zone are excessively dependent on remittances. Our results show that a majority of both migrant-sending and non-migrant households in the Dry Zone rely on work of household members as their major income source. At present, only a quarter of urban migrant-sending households and a third of their rural counterparts rely on remittances as their main source of income. This however may change in the future, as internal and international migration is likely to increase substantially.

In addition, other evidence also contradicts the alarmist perspective. We find that parental migration has limited adverse effects on dependent children under age 15 remaining in the Dry Zone. About one fifth of children in the study areas experience parental absence due to migration. Most of the absence is accounted for by father's migration. Adverse impacts of parental migration appear to be limited to a small number of children whose mother or both parents migrated beyond township. They tend to receive less instrumental support and report more unmet needs. Children with both parents absent are worse off than those with migrant mothers in these regards. On the contrary, children with migrant fathers usually have mother as their primary caregiver like their counterparts coresiding with both parents. These two groups of children are not distinctly different in the receipt of instrumental support. Children with migrant fathers are the least likely to report unmet financial needs for schooling perhaps benefiting from their migrant fathers' remittances. Furthermore, results also indicate that disabled members of migrant-sending households are not worse off than their counterparts from non-migrant households in

terms of care receipt and unmet need for care. Thus, migration of household members does not seem to have adverse implications for care provision for disabled household members.

The lack of (or very limited) negative impacts of migration on origin households and their members in the Dry Zone is possibly explained by the current patterns of migration. Since Myanmar's recent structural reforms that have propelled economic growth begun just over 5 years ago, the migration transition taking place in the study areas is arguably still in an early stage compared to trends in massive out-migration from rural to urban areas observed in neighboring Thailand. At the same time, the observed migration patterns lend some support to the household strategy perspective. We find that households with a larger size and those with some landholding and assets are more likely to have one of their members migrate for some substantial distance compared to those with smaller size and limited material resources. This is perhaps because they can afford to do so in terms of manpower as well as migration-related expenses. Evidence further shows that households tend to strategize in ways that not all adult members migrate elsewhere. They are more likely to diversify risks by having different members fulfil different functions of the household. This is evident in households with dependent children. Migrant-sending households with young children tend to involve only fathers. Women generally take a lion's share of care provision for the young, the old, and the disabled in the context of Myanmar. Thus it appears that female household members, particularly mothers with young children, are less likely to migrate than their male counterparts.

Additional support for the household strategy perspective is evident in the perception of origin households regarding migrants' wellbeing and future prospects as well as patterns of exchanges between origin households and migrants. While slightly over half of origin households expressed at least some worries about migrants' wellbeing, an overwhelming majority agreed that migrants would have a better life and that migration would benefit both the migrant and origin households. Our results further show that exchanges frequently take place between migrants and origin households. In general, migrants (particularly economic migrants) contributed more materially to their households of origin than they received. Nevertheless, origin households normally provide at least some financial assistance to migrants especially at the beginning of migration. For migrants who left behind young children, origin households tend to provide some care assistance and pay for some daily and school expenses for the children. This mutual dependence benefits both migrants and family members remaining in the Dry Zone.

While migration can serve as an important strategy for households in the Dry Zone to reduce poverty and improve livelihoods, pursuing these opportunities may pose certain risks for migrants and their origin households. This is particularly the case for poor households that are less able to absorb the shocks from failed migration attempts. Evidence from our survey shows that households in the bottom wealth quintile demonstrate

significantly more worries and concerns about the wellbeing of former members who are migrants. Attention thus needs to be paid to socio-economic disparities between economically well-off and poor households that participate in migration.

Importantly, the modified extended family perspective is consistent with our findings. The recent proliferation of cellular phone technology in Myanmar has greatly enhanced the ability for migrants and origin households to maintain social contacts and possibly other aspects of intergenerational support. Phones once were a rarity in Myanmar. According to the nationally-representative Myanmar Aging Survey conducted in 2012, only 10% of surveyed households have access to phones. Our 2017 survey shows that phone prevalence has skyrocketed. Nearly 90% of sampled households in the Dry Zone own at least one phone (either mobile or landline). Empirical findings further indicate that almost two thirds of migrants are in daily or weekly phone contacts with origin households. While the frequency of visiting is related to the destination of the migrants, phone contact is not particularly affected by distance of migrants. Slightly over half of international migrants talked daily or weekly to their origin households, while only 4% of them had less than yearly contacts including those that never had any phone contact. Regular phone contacts thus allow for maintenance of social support despite geographical separation. The greatly improved ability to communicate by phone also means that origin households can reach geographically dispersed migrants quickly when household needs for assistance arise. Further supporting the modified extended family perspective, results indicate that it is extremely rare (less than 1%) for economic migrants to desert their origin households completely by not providing regular financial support, visits, or phone contacts.

Overall, our analyses show that migration demonstrates multi-dimensional implications for origin households and remaining family members. Migration has both benefits and disadvantages for migrant-sending households and their members although as described above it appears that in most cases the former outweigh the latter. This in turn typically reflects the fact that sufficient agency exists among those involved to facilitate positive impacts of migration and minimize its negative impacts. Migrants also typically enjoy benefits from their households of origin. In numerous cases, they leave young dependent children in their origin households in care of remaining adult household members. Likewise, frail, elderly parents of migrants that need care assistance are also often cared for by siblings of migrants that remain in or near the parents' household.

Our study provides empirical evidence and new insights that allow policy makers to better understand the needs of populations remaining in the Dry Zone who are affected by migration. Nevertheless, it is not without limitations. First, given the nature of our dataset, we are restricted in addressing definitive causality between out-migration and various household-level and individual-level outcomes. Our study highlights the important need for more rigorous investigation of the causal links between these phenomena in future

research. Moreover, our analyses are limited by the study's relatively small sample size. For example, since we do not have enough observations of children whose parents are both migrants, we are unable to examine nuances related to their unmet needs in daily necessity and instrumental support. Having a larger sample would permit a more refined examination of correlates and determinants with unmet needs among these populations. Furthermore, information pertaining to social, economic, and emotional needs of household members is subject to knowledge and attitudes of key household informants. Future migration impact surveys can be improved by interviewing not only key household informants but also household members of interest (e.g., dependent children, disabled household members, returned migrants).

Looking ahead, migration flows are expected to increase in the near future as Myanmar becomes more developed and urbanized. The country's transition to even lower fertility levels can pose new challenges to families in migration-source areas. The smaller family size suggests that the current situation, in which some household members migrate while others remain with dependent children, frail household members, or elderly parents, will be more difficult to maintain. Unless the whole family moves, the lack of healthy working-age family members who are coresident or live nearby can significantly change the implications of migration for the wellbeing of migrant-sending households and members who remain behind (e.g., shortages in farm labor, lack of caregivers for frail household members). Our findings provide a useful baseline. Nevertheless, continual monitoring of migration trends and their implications in Myanmar's changing socio-demographic context is critical for developing informed policies and programs that address the needs of migrant-sending households and prepare them to confront risks associated with migration.

REFERENCES

Department of Population. (2014). *Population and Housing Census of Myanmar, 2014: Provisional results*. Nay Pyi Taw, Myanmar.

Department of Population. (2015a). *Population and Housing Census of Myanmar, 2014: Magway Region Report*. Nay Pyi Taw, Myanmar.

Department of Population. (2015b). *Population and Housing Census of Myanmar, 2014: Mandalay Region Report.* Nay Pyi Taw, Myanmar.

Department of Population. (2016a). *The 2014 Myanmar Population and Housing Census: Thematic report on migration and urbanization.* Nay Pyi Taw, Myanmar.

Department of Population. (2016b). *The 2014 Myanmar Population and Housing Census: Thematic report on population dynamics*. Nay Pyi Taw, Myanmar.

Filmer, D., & Pritchett, L. (2001). Estimating wealth effects without expenditure data—or teas: An application to educational enrollments in states of India. *Demography,* 38(1), 115–1332.

Griffiths, M. (2016). Gendered precarity and migration in rural Myanmar. In M. Griffiths & M. Ito (Eds.), *Migration in Myanmar: Perspectives from current research* (pp. 118–128). Yangon, Myanmar: Social Policy and Poverty Research Group.

Griffiths, M., & Ito, M. (Eds.). (2016). *Migration in Myanmar: Perspectives from current research.* Yangon, Myanmar: Social Policy and Poverty Research Group.

Gupta, S. (2016). Leveraging migration for development: A review of literature on patterns and movements in Myanmar. In M. Griffiths & M. Ito (Eds.), *Migration in Myanmar: Perspectives from current research* (pp. 17–44). Yangon, Myanmar: Social Policy and Poverty Research Group.

International Labour Organization. (2015). *Internal labor migration in Myanmar: Building an evidence base on patterns in migration, human trafficking and forced labor*. Yangon, Myanmar.

International Organization for Migration. (2015). *Assessing the impact of migration on children in Myanmar.* Yangon, Myanmar.

International Organization for Migration, & Asian Research Center for Migration. (2013). *Assessing potential changes in the migration patterns of Myanmar migrants and their impacts on Thailand.* Bangkok, Thailand.

Japan International Cooperation Agency. (2010). *The development study on sustainable agricultural and rural development for poverty reduction programme in the Central Dry Zone of the Union of Myanmar*. Yangon, Myanmar.

Knodel, J., Kespichayawattana, J., Wiwatwanich, S. & Saengtienchai, C. (2007). *Migration and Intergenerational Solidarity: Evidence from Rural Thailand.* UNFPA Country Technical Services Team for East and Southeast Asia, Papers in Population Ageing Series, Number 2. Bangkok: UNFPA.

Knodel, J. (2013). *The situation of older persons in Myanmar: Results from the 2012 Survey of Older Persons.* Yangon, Myanmar: HelpAge International.

Knodel, J., & Teerawichitchainan, B. (Forthcoming). Grandparenting in developing Southeast Asia: Comparative perspectives from Myanmar, Thailand, and Vietnam. In V. Timonen (Ed.), *Grandparenting practices around the world.* Bristol: Policy Press at the University of Bristol.

Maharjan, A., & Myint, T. (2015). *Internal labor migration study in the Dry Zone, Shan State and the southeast of Myanmar*. Yangon, Myanmar.

McCarty, A., & Whitehead, A. (2016). *Dry Zone Social Protection Project: Baseline report*. Yangon, Myanmar: HelpAge International.

Mercy Corps. (2015). *The Dry Zone of Myanmar: A strategic resilience assessment of farming communities.* Yangon, Myanmar.

Teerawichitchainan, B., & Knodel, J. (2015a). Economic status and old-age health in poverty-stricken Myanmar. *Journal of Aging and Health*, 27(8), 1462–1484.

Teerawichitchainan, B., & Knodel, J. (2015b). *Myanmar grandparents caring for grandchildren: Impacts of cross-border migration.* Research proposal submitted to Singapore Management University.

Teerawichitchainan, B., & Knodel, J. (In press). Long-term care needs in the context of poverty and population aging: The case of older persons in Myanmar. *Journal of Cross-Cultural Gerontology*. DOI 10.1007/s10823-017-9336-2

United Nations Children's Fund. (2012). *Situation analysis of children in Myanmar*. Yangon, Myanmar.

Vietnam General Statistical Office, & United Nations Population Fund. (2006). *The 2004 Vietnam Migration Survey: Internal migration and related life course events.* Hanoi, Vietnam.

World Bank. (2016a). A *country on the move: Domestic migration in two regions of Myanmar.* Yangon, Myanmar.

World Bank. (2016b). *Livelihoods and social change in rural Myanmar*. Yangon, Myanmar.

World Food Programme. (2011). Food *security assessment in the Dry Zone, Myanmar*. Yangon, Myanmar.

World Health Organization. (2000). *Turning the tide of malnutrition: Responding to the challenge of the 21st century*. Geneva.