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**Livelihoods on the Move: Understanding the Linkages  
Between Migration and Household Food Security in India**

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Thesis submitted in fulfilment of the requirements for the  
degree of Doctor of Philosophy

School of Geosciences

The University of Sydney

2015

**To the memory of my grandparents**

**Paribai & Tejumal**

# Declaration

I declare that this thesis is the result of my own independent research and that all authorities and sources that have been used are duly acknowledged.

Parts of Chapter 3 draw on the book I co-authored during my PhD candidature. The details of the publications are as follows:

Pritchard, Bill, Rammohan, Anu, Sekher, Madhushree, Parasuraman, S, Choithani, Chetan. (2014). *Feeding India: Livelihoods, entitlements and capabilities*. Oxon: Routledge.

Part of Chapter 6 has been published as a journal article, details of which are provided below:

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Chetan Choithani

25 March, 2015



# Abstract

This thesis examines the role of internal migration as a livelihood strategy in influencing food access among rural households. Internal migration has become a key component of livelihood strategies for an increasing number of rural households across many countries in the developing world. Importantly, unlike earlier periods when migration was often viewed as a problem, there is now a growing consensus among academics and policy makers on the potential positive effects of migration in reducing poverty and promoting sustainable human development. Concurrently, the significance of “food security for all” as an important development objective has been rising, particularly since the 2007-08 global food crisis. However, the academic and policy discussions on these two issues have largely tended to proceed in silos, with little attention devoted to the relationship they bear with each other. This thesis attempts to fill this gap in the specific context of India, the country with the most underfed people in the world and where internal migration has traditionally been central to rural livelihoods. Using a case-study approach, involving primary survey data collected from an equally representative sample of 392 migrant and non-migrant households from the high outmigration district of Siwan in western Bihar, this thesis provides empirical household-level insights on the interface between migration and food security. Contrary to conventional wisdom that posits migration as a household food security strategy only in times of food shortages, this thesis argues that the relationship between them is bidirectional. Food insecurity can be a critical driver of households’ migration decisions, and subsequent remittances can ease household food insecurity. The empirical evidence in this thesis asserts an appreciation of three key pathways that shape these forward-backward linkages: i) the role of food and livelihood safety nets in influencing households’ food security situation and their migration decisions; ii) the extent to which migrants’ remittances are received by households and the manner in which they are used; and iii) the ways that migration affects gender dynamics within households. The evidence presented in this thesis shows that these processes manifest at various levels, and hence produce complex outcomes with respect to the migration-food security relationship. In the wake of recent evidence on the rising significance of migration in rural livelihood systems in India, and indeed, across a number of developing countries, the findings reported in this thesis warrant a pressing policy need to better integrate migration in future food policy research and practice.



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# List of Acronyms

AAY	Antyodaya Anna Yojana
ABC	Achievement of Babies and Children
APL	Above Poverty Line
BIMAROU	Bihar-Madhya Pradesh-Rajasthan-Orissa-Uttar Pradesh
BIMARU	Bihar-Madhya Pradesh-Rajasthan-Uttar Pradesh
BMI	Body Mass Index
BPL	Below Poverty Line
CDPO	Child Development Programme Officer
DFID	Department for International Development
DLHS	District Level Household Survey
EAG	Empowered Action Group
FAO	Food and Agriculture Organisation
FPS	Fair Price Shop
FSOI	Food Security Outcome Index
GDP	Gross Domestic Product
GHI	Global Hunger Index
GP	Gram Panchayat
HDI	Human Development Index
HDR	Human Development Report
ICDS	Integrated Child Development Scheme
IFPRI	International Food Policy Research Institute
IHD	Institute for Human Development
IIPS	International Institute for Population Sciences
IOM	International Organisation for Migration
KBK	Kalahandi-Balangir-Koraput
MDERs	Minimum Dietary Energy Requirements
MDGs	Millennium Development Goals
MPCE	Monthly Per Capita Expenditure
MPCI	Monthly Per Capita Income
MSP	Minimum Support Price
NCHS	National Centre for Health Statistics'
NCPHS	Non Cultivating Peasant Households
NCR	National Capital Region
NELM	New Economics of Labour Migration
NFHS	National Family Health Survey
NFSA	National Food Security Act
NREGA	National Rural Employment Guarantee Act
NREGS	National Rural Employment Guarantee Scheme (NREGS)
PDS	Public Distribution System
PoU	Prevalence of Undernourishment
PUCL	People Union for Civil Liberties
SHI	State Hunger Index
SLA	Sustainable Livelihood Approach
SOFI	State of Food Insecurity in the World
SPSS	Statistical Package for Social Sciences
SR	Sex Ratio

TDPS	Targeted Public Distribution System
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
WFP	World Food Programme
WHO	World Health Organisation

**Others**

AU\$	Australian Dollar
US\$	United States Dollar
Rs/INR	Indian Rupees (conversion to AU\$/US\$ roughly works out as Rs. 50-55= US\$/AU\$ 1)
Lakh	A unit in the Indian numbering system, equivalent to a hundred thousand
Crore	A unit in the Indian numbering system, equivalent to ten million

# **1 INTRODUCTION**



## CHAPTER 1: INTRODUCTION

---

### Research synopsis

This research is guided by the pressing policy need to seek insights into the mechanisms governing access to food among rural populations of developing countries. Food insecurity is a key development challenge facing the world today. The Rome Declaration on World Food Security in 1996 and Millennium Summit in 2000 saw the international community pledging its support and commitment to halve, between 1990 and 2015, global levels of undernourishment.<sup>1</sup> Despite several international, regional and national level initiatives taken in this direction, the most recent estimates suggest that during 2011-13, a total number of 842 million people suffered from chronic levels of hunger (FAO, 2013b). A large majority of the food insecure population resides in the rural areas of the developing world.

At the global level, enough food is produced to meet the dietary requirements of the world's population adequately. However, not everyone has access to food, because people lack resources to either produce food or purchase food from the market. More than 70 percent of the world's poor live in rural areas of the developing world (World Bank, 2007), and these populations are highly prone to lack of access to sufficient and adequately nutritious food. As access to food is mediated by income, an important food policy agenda is to create decent and sustainable rural livelihoods (FAO, 2010a). Although a sizable proportion of the rural dwellers in much of the developing world still depend on agriculture sector (and hence improving agriculture-based livelihoods is considered to be a key to enhancing the food security outcomes of the poor rural populations), rural livelihood systems exhibit a marked shift away from complete dependence on farming. There is a growing body of research evidence suggesting that income from the non-farm sources is becoming increasingly central to the lives and livelihoods of an increasing number of rural households across the developing world (Barrett, Reardon, & Webb, 2001; Ellis, 1998, 2000b; Reardon, Berdegue, & Escobar, 2001;

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<sup>1</sup> It must be noted that while World Food Summit goal is to reduce by half the number of people who are undernourished, Millennium Development Goal (MDG) 1 seeks to halve the proportion of people who suffer from hunger (FAO, 2010).



Rigg, 2006; Scoones, 2009; Shariff & Lanjouw, 2004). However, given the low level of economic activity and imperfect labour markets in many rural areas, adequate wage income options are often not available throughout the year which compels poor households to seek employment opportunities elsewhere.

Migration constitutes a significant component of livelihood strategies among rural households lacking adequate means of income at their place of origin. Rural households in developing countries use migration as more than just an income generation activity. Migration represents a combined household strategy, aimed at livelihood portfolio diversification and risk aversion by households (Stark, 1978, 1981, 1991; Stark & Levari, 1985). While migration has traditionally been an integral part of rural livelihood strategies in most developing countries (Mcdowell & de Haan, 1997), recent years have witnessed an unprecedented surge in the mobility levels among rural populations. Thus, within livelihood debates, the question as to how rural outmigration impacts the livelihood outcomes of poor households has assumed significant importance (de Haan, 1999; Deshingkar & Farrington, 2009; Deshingkar & Start, 2003; UNDP, 2009).

Various forms of population mobility and their impacts on source and destination communities have been extensively studied. However, despite food security being a global concern, empirical evidence on how migration can influence household food security outcomes seems to be scanty in the existing literature. Most of the research thus far has invariably focused on the unidirectional relationship between the two i.e. food insecurity as a driver of distressed household migration (Corbett, 1988; Mosse et al., 2002).<sup>2</sup> Insufficient attention has been paid on the reverse causalities i.e. how migration can affect the food consumption patterns and nutritional wellbeing in source destinations. While distress situations may compel the entire household to migrate elsewhere, household migration is not a norm. The most dominant pattern of rural outmigration involves migration by relatively

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<sup>2</sup> Corbett's (1988) analysis of the sequencing of household strategies during famines in Africa revealed that food entitlement failures caused distress migration among African households, though household undertook migration as a last resort when all other options failed. Another study by Moose et al. (2002) observed two contrasting patterns of rural outmigration among tribal communities of Western India: i) short-term, short distance migration by young male members from the households having slightly better food security situation; and ii) household migration among families with least food security.

younger males while the other household members stay behind. This pattern of migration implies that there are several channels through which migration can have a potential bearing on household food and nutritional security. Remittances, alteration in household labour composition and resultant changes in time allocation for child care and household work, and changes in gender roles are some of the important factors that may have a significant impact on the food security outcomes of household members (Zeza, Carletto, Davis, & Winters, 2011).<sup>3</sup> Recent empirical studies using macro-level data have confirmed these links between migration and food security (de Brauw, 2011; de Brauw & Mu, 2011; Nguyen & Winters, 2011).<sup>4</sup> However, this research field is still at an infant stage and is currently in need of studies which, in addition to the quantitative evidence, provide qualitative insights into the complex interactions between livelihoods patterns and household food security. In other words, an extended understanding on the role of migrant members in contributing to food and nutritional security of the resident group is needed that can provide policy inputs to foster the international development objectives of promoting livelihood and food security among vulnerable rural populations.

Against this background, this thesis asks how migration as a rural livelihood strategy plays a role in influencing rural households' food security outcomes. Food security is a multidimensional concept that involves interplay of three key aspects of *food availability* (which refers to overall supply of food), *food access* (which asks questions around distributional aspects of food, and the ability of households to gain access to food by legal means within the prevailing socio-economic

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<sup>3</sup> Note these are some of the important migration-specific factors that have potential to influence household food security outcomes. However, cultural preferences on what to eat and what not are also important determinants of household food security. For example, many Hindu Brahmins in India do not consume meat owing to religion reasons, which is considered as one of the most vital sources of protein and consumed widely by other social groups, such as Muslims and Christians, both in India and elsewhere. This means that while remittances may equip the Brahmin households with purchasing power to consume meat, this may not necessarily lead to these households shifting to meat-based diets; however exposure to other cultures at migration destinations may bring about attitudinal shifts in dietary preferences.

<sup>4</sup> These studies attempt to highlight the linkages between migration and nutrition. While nutritional outcomes may be influenced by other factors such as disease, food insecurity is one of the principal causes of undernourishment and thus a strong link between food and nutrition may easily be surmised.

environment) and *food utilization* (which focuses on how wider environmental factors, such as disease, affect the conversion of food consumed to allow the body to perform its normal functions). The focus of this study is specifically on the food access, and accordingly food security in this thesis is defined as the ability of households to command access to food. In a broader sense, this research seeks to understand, i) whether, and to what extent, food needs act as a driver of household migration decisions, ii) and if so, how the act of migration by individual household member(s), affects the overall food security of the households, particularly of the left-behind populations in the origin villages, and (iii) given that migration often triggers fundamental changes in the social and economic relations at the community and village levels, to what extent does migration, with its bearing on broader village levels dynamics, impact upon the food security of those who stay put.

This research approaches these questions using the conceptual frameworks of “entitlements” and “sustainable livelihoods approach” (SLA). With the focus of this study being on “food access”, this research conceptualises the issue of food security through the lens of entitlements, and then uses SLA to understand the role of migration as one of the livelihood strategies in allowing rural households to gain access to food. Migration is a complex phenomenon and thus requires a deep investigation of the context-specific factors that explain household decision-making. The SLA framework provides an important means to understand the non-economic attributes embedded in rural livelihood strategies, including socio-economic and policy context in their co-produced institutional environments. Through SLA, this research attempts to understand and disentangle this under-researched relationship between migration and food security.

Methodologically, this research draws from the primary survey data collected from an equally representative sample of 392 migrant and non-migrant households in selected villages from one district of rural India which is district of Siwan in the eastern Indian state of Bihar. Located in western Bihar, Siwan is among the poorest districts of India, facing severe deficiencies in living standards, health, education and food security. And work migration has traditionally been an important component of local livelihoods, and it is one of the high outmigration districts of Bihar. These

considerations guided selection of Siwan as a case study site. Migration from the district is largely of less permanent nature involving seasonal and circular moves. In order to capture these short-term moves, in this study a migrant household is defined as the one with at least one migrant member who has stayed away from his usual place of residence for the period of 60 days or more during the last 365 days for employment reasons. On the other hand, non-migrant household includes the one without any member staying away from the place of usual residence. The sample of households with and without migrants was chosen in order to undertake a comparative assessment of dynamics and contextual correlates of migration and household food security.

In doing so, this thesis focuses specifically on internal migration. This is aimed to correct a bias in the recent literatures. Much of the recent research and debates on the development and livelihood impacts of migration has focused more on international migration. However, at 740 million (which is also a conservative estimate), the number of people moving from one area to another within their own country is nearly four times as much as the people migrating across national borders (UNDP, 2009, p. 1). It is rather unambiguous that a greater number of rural households resort to internal rather than international migration for employment reasons, given the importance of distance and relatively higher barriers to international mobility. The sheer volume of people moving within national borders suggests that the poverty-reducing and development-enhancing potential of the remittances from internal migration is no less significant, or perhaps more, than those from international migration (Deshingkar & Grimm, 2005, p. 8). It is important to note that internal migration can take various spatial forms which mainly include: i) intra-district migration (movement away from place of birth/usual residence within the district); ii) inter-district migration (migration from one district to another within the same state); iii) inter-state migration (movement from one state to another within the country). The focus of this thesis is on the all the moves from rural areas to other rural and urban regions within and across the state boundaries (see Appendix 1).

The selection of India as a broader research context is guided by the fact that India houses the largest pool of chronically undernourished population in the world (FAO,

2013b, pp. 42-45) and figures prominently in global debates on food and nutritional deprivation. Moreover, the existing development paradox of rising affluence among urban and middle-class populations but livelihood stagnation (and even deterioration by some measures) among a large proportion of rural population makes for an important study. Also, while national statistics and village-level case studies on migration reveal a steady expansion in the number of people migrating to other towns for employment reasons, suggesting the importance of mobility for an increasing number of households (Deshingkar & Farrington, 2009; Keshri & Bhagat, 2012), the pre-existing research on rural livelihoods does not provide answers to what extent migration is helping rural households attain food security in Indian context. This research attempts to fill this gap.

The following discussion contextualises the importance of understanding the connections between migration and food security in the case of India, which also serves as a justification for undertaking the present study.

### **Overview of food (in)security in India**

In India, despite the considerable increases in agricultural production following the Green Revolution in the 1970s, a bleak state of food security among a significantly huge proportion of its population still remains a challenge to be addressed. The adoption of Green Revolution technologies and resultant gains in the levels of food production has improved India's abilities to avert the large-scale recurring famines of the past, and in the post-independence era India has emerged as a major net exporter of food (in 2012, India became the world's largest exporter of rice: Chandrasekher, 2012). Nevertheless, it is still home to the most number of chronically undernourished people in the world. According to the most recent statistics by the United Nation's Food and Agriculture Organisation (FAO), during 2011-13, the number of undernourished people in India was estimated to be 213.8 million, representing a quarter of the total undernourished people in the world and 73 percent of the undernourishment burden of the South Asian region (FAO, 2013b, pp. 42-44). Thus, "if the undernourished people in India constituted a single country, it would be the fifth most populous country in the world" (Pritchard, Rammohan, Sekher, Parasuraman, & Choithani, 2014, p. 19). In relative terms, the

prevalence of food insecurity in India is worse than many countries in the Sub-Saharan Africa. In 2013, India was ranked 63 in the Global Hunger Index (GHI) of 78 highly food insecure countries, a rank which placed the country even below the extremely poor and politically highly unstable nations of Niger, Republic of Congo and Tanzania (Grebmer et al., 2013, p. 15).

Chronic food insecurity, which ultimately manifests into poor nutritional and health outcomes<sup>5</sup> with wider implications on nation's health and wealth (for example, see World Bank, 2006), remains a major public policy challenge in India. Indeed, with such a large proportion of the India's population being food insecure, the country faces what is generally viewed as a 'nutritional emergency' (Care India, 2012; Dreze, 2004; UNICEF, 2014). The prevalence of under-nutrition remains stubbornly high across the different population groups in India, in particular women and children. The anthropometric data from India's National Family Health Survey (NFHS) showed that in 2005-06, 42.5 percent of the all children below the age of five years were under-weight (a composite indicator of child malnutrition, reflecting both acute and chronic forms of nutritional deprivation) and 69.5 percent of them suffered from anaemia, with 40 percent of children having severe anaemia.<sup>6</sup> More than one-third (35.6 percent) of women of reproductive ages (15-49 years) had the below normal Body Mass Index (BMI)<sup>7</sup> of 18.5. Additionally, more than half of the women in the same age-group were also reported to be anaemic (all data, IIPS & Macro International, 2007b).

Food insecurity and undernourishment of such a magnitude in contemporary India persists despite the fact that nation's granaries bulge with the enough food stocks to adequately meet the food needs of the country's population. Furthermore, in the past two decades the Indian economy has grown at remarkable rates. And yet, contrary to the international experience, the impact of high economic growth in improving the nutritional wellbeing of a large majority of India's population has

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<sup>5</sup> Poor nutritional and health outcomes may also be a result of several non-food factors such as unfavourable hygiene and sanitation practices and resultant disease environment. However, lack of food often amplifies the effect of disease.

<sup>6</sup> Anemia figures quoted from NFHS are for the children aged 6-59 months.

<sup>7</sup> BMI is measured as weight (in kilograms) divided by height (in meters square). In other words, BMI= kg/m<sup>2</sup>.

been rather minimal, leading the analysts to describe the country as an “enigma” (see the discussion below). Although the answers to this enigma lie in a complex set of social, economic and political reasons (some of which will be discussed in subsequent chapters), it is clearly the case that the issue of food insecurity in India is not about the *food production* but *food access* i.e. the ways in which the country’s populations, particularly the rural poor with limited means, gain access to food. In turn, this is connected with the broader issue of livelihood security. Consistent with the approach developed by Pritchard et al. (2014, p. 144), this thesis emphasises that the issue of food insecurity in India is “situated in the broader set of livelihood circumstances of people” and thus, for the policy to redress the same requires a holistic understanding of those livelihood contexts.

### **Economic growth and nutrition disconnect**

Following the economic reforms since 1990s, the Indian economy has witnessed gargantuan leaps in terms of growth and has moved on to become the second fastest growing economy in the world after China. However, the rapid economic growth in India has contributed only marginally in improving the food and nutritional security outcomes of a large majority of country’s populace (Gillespie & Kadiyala, 2012; Gragnolati, Shekar, Das Gupta, Bredenkamp, & Lee, 2005; Headey, Chiu, & Kadiyala, 2011).

Although nutritional outcomes are affected by a range of factors other than a country’s level of income, the cross-country evidence suggests that economic growth and consequent rise in average incomes are negatively correlated with the rates of child under-nutrition. In quantitative terms, it has been observed that for most developing countries the decline in the prevalence of child under-nutrition tends to be nearly half the rate of growth of the Gross Domestic Product (GDP) (Haddad, Alderman, Appleton, Song, & Yohannes, 2003). Thus, for example, an annual per capita GDP growth rate of 5 percent would be expected to be associated with a corresponding decline in the prevalence of child under-nutrition by 2.5 percent annually. However, this relationship is virtually absent in India. Between 1990 and 2005, the per capita GDP in India grew at an average annual rate of 4.2 percent, which should ideally have resulted into decline in the childhood under-

nutrition prevalence by 27 percent during this 15-year period (Gillespie & Kadiyala, 2012, p. 173) Yet, not only has the pace of decline been sluggish, but recent years have witnessed virtual stagnation in the child nutrition outcome indicators in India. Between 1992-93 and 1998-99, the percentage of children below three years of age who were underweight declined by nearly 6 percentage points – from 52.8 percent to 47.1 percent. But in the period between 1998-99 and 2005-06, childhood underweight prevalence fell merely by 0.6 percentage points – from 47.1 percent to 46.5 percent (Pathak & Singh, 2011, pp. 4-5). This rather weak negative correlation between economic growth and food security in India has led the country be described as an “enigma” (Gillespie & Kadiyala, 2012; Headey et al., 2011; Ramalingaswami, Jonsson, & Rohde, 1996).

Moreover, there is evidence that in the post-reform period, disparities in child nutritional outcomes have widened between rich and poor and across the geographical regions and states of India (Pathak & Singh, 2011, p. 8). It is also important to note that in spite of a rise in average per capita incomes and indeed in per capita food availability in the country, the average calorie consumption intake is on a constant decline in India since the early 1980s (Deaton & Dreze, 2009). This deterioration of nutritional outcomes in the wake of rising affluence has raised questions about the ways in which economic growth has apparently bypassed a large proportion of the country’s poor population. Indeed, the net worth of India’s 56 billionaires is estimated to be USD 191.5 billion (Karmali, 2014), accounting for approximately 10 percent of the country’s overall GDP.<sup>8</sup> But at the same time, in 2009-10, close to 355 million people were estimated to be living below the official poverty line in India (Planning Commission, 2012), a line which is more “akin to a starvation line” (Mander, 2012, p. 13). Perhaps no other country in the world offers as much a contrast as India where the dire poverty of such a magnitude coexists with tremendous wealth. Noting the highly exclusionary nature of India’s economic growth, further widening the gap between the rich and poor, Dreze and Sen (2013, p. ix) even go to the extent of suggesting “that the growth process [in India] is so

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<sup>8</sup> According to the World Bank latest estimates, in 2012 India’s GDP stood at USD 1842 billion (World Bank, 2014). The same has been used as a denominator to arrive at this figure of 10 percent.



biased, making the country look more and more like *islands of California in a sea of sub-Saharan Africa*" (italics added).

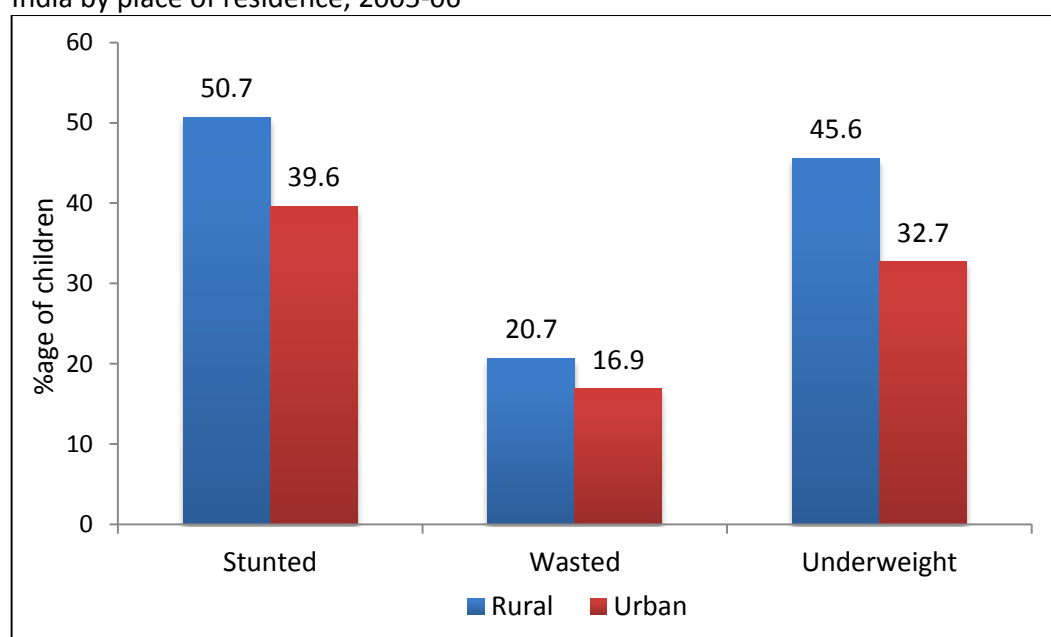
### **Rural-urban disparities in the nutritional outcomes**

Nearly 70 percent of India's population resides in rural areas, which are characterised by low levels of income, poor quality of life, and inadequate health and educational infrastructure. The relative neglect of rural areas in India's economic development planning is manifested in wide rural-urban disparities in the human development indicators of income, education, health and nutrition. Moreover, the disregard to the country's rural areas, and by implication the needs of rural populations, seems to have accentuated following the economic reforms since the early 1990s which have been highly urban-centric in their distribution of benefits. It is, therefore, no surprise that the character and incidence of food insecurity and deprivation in India is predominantly rural. The MDG Report 2011 noted that in South Asia "progress in combating child under-nutrition is bypassing the poorest and children are twice as likely to be underweight if they live in rural rather than urban areas" (United Nations, 2011, p. 14). Given that India accounts for the vast majority of childhood under-nutrition in the South Asian region, this observation is broadly reflective of the rural-urban disparities in the food and nutrition security outcomes in the country. The NFHS 2005-06 data on the nutritional status of children by the place of residence suggest that the prevalence of stunting, wasting and underweight among children under five years of age in rural areas were 50.7 percent, 20.7 percent and 45.6 percent, respectively. The corresponding figures for the children in urban areas were 39.6 percent, 16.9 percent, 32.7 percent, respectively (Figure 1.1).

Similarly, there is also a rural-urban divide in terms of the prevalence of under-nutrition among adults, as measured by the BMI status. Using the NFHS 2005-06 data, Guha-Khasnobis and James (2010) found that adult under-nutrition among the slum populations of eight Indian cities was 23 percent and the corresponding proportion for the rural areas of the same Indian states was nearly 40 percent. Additionally, even though large-scale famines have become history in India, deaths due to starvation and malnutrition continue to be reported even today, particularly

among the socially and economically disadvantaged rural populations (Jha, 2002; Mander, 2012; Parulkar, 2012). This apparent disconnect between buffer food stocks and surging economic growth on one hand and widespread incidence of nutritional deprivation on the other, has created the situation where the “right to food” has emerged as a new set of foundations to India’s approach to under-nutrition, as I now discuss.

Figure 1.1: Prevalence of under-nutrition among children aged under-five years in India by place of residence, 2005-06



Source: IIPS and Macro International (2007a, p. 270) (Table 10.1).

### **Right to food revolution in India: importance and challenges**

The right to sufficient food has long been recognised in various international treaties and instruments such as the Universal Declaration of Human Rights in 1948 and the International Covenant on Economic, Social and Cultural Rights in 1976. However, in principle, the right to food as a fundamental human right gained political significance only since mid-1990s. The second World Food Summit in 1996 in Rome, Italy, alternatively called the ‘Rome Summit on World Food Security’ which saw the participation of heads of the States and their representatives from more than 180 countries around the world, marked an important event in this regard. The Rome Summit, convened by FAO, occurred against the backdrop of persisting widespread hunger even despite an enormous surge in global food production levels in the preceding decades achieved through the widespread diffusion of GR

technologies. Although this paradox of “hunger amidst plenty” led to a considerable rethinking of what constitutes food security which, most importantly, involved a shift from a narrow production-orientated approach of *food availability* to a wider conception of food security involving issues such as *food access* and *food utilization* (I shall have more to say on this later), one of the most important aspects of the Rome Summit was the framing of food security through the paradigm of human rights. This conceptualisation of food security through a rights-based approach was in line with the growing importance of human-centered thinking since the early 1990s. By placing people at the center of development, rights and entitlements were placed at the core of new discourses and metrics (this is reflected in the United Nations Development Programme’s (UNDP) annual Human Development Reports, the first of which was published in 1990). The Rome Declaration, thus, recognized not only “the right of everyone to be free from hunger” but also the “right to have access to safe and nutritious food” (FAO, 1996).

The Rome Summit marked a significant event in terms of generating a global consensus on the right to adequate food. In order to monitor the compliance of the member countries on the Summit’s plan of action, in 2000, a Special Rapporteur on the Right to Food was appointed. Later, in 2004, the FAO’s council adopted a set of ‘Voluntary Guidelines’ to help member countries towards their efforts on the progressive realization of the right to food (FAO, 2005). Although the right to food still remains a distant reality for close to a billion people who go to bed hungry every night (FAO, 2013b), the framing of the food security through the prism of a rights-based approach has provided considerable impetus for public action, particularly in democratic settings with a strong, and widening, presence of civil society. As a result, recent years have witnessed many countries amending their constitutions or legal frameworks to incorporate the right to food as a legal right accorded to their citizens (Special Rapporteur on the Right to Food, 2012), including India which, following almost a decade-long debate on the issue, passed a legislative mechanism in August 2013 that provided a constitutional stamp to the right to food.

The origin of this recently passed right to food legislation in India lies in a “writ petition” filed in the Indian Supreme Court in April 2001 by the Rajasthan state arm of the India’s People Union for Civil Liberties (PUCL), an umbrella civil society

organisation working on a wide range of human rights issues in the country. The petition, officially known as *PUCL vs Union of India and Others, Writ Petition [Civil] 196 of 2001*, argued that because the Article 21 in the Directive Principles of Indian Constitution enshrined the right to life to the citizens, it was incumbent on the state to protect the citizens' right to food, which was fundamental to right to life. The trigger for this petition by the PUCL was a series of hunger and starvation deaths around the country, particularly in southern Rajasthan, which suffered from a severe drought for three consecutive years from 1999 to 2001. The main victims of starvation were the socially and economically marginalised Scheduled Tribe populations living in the remote villages in southern Rajasthan. These starvation deaths occurred even when India had a reserve foodgrain stock of 50 million tonnes, far in excess of the buffer stocks norms of 20 million tonnes (which in any case had the broader aim of dealing with crisis situations such as this one). Thus, invoking the Article 21, the PUCL sought the intervention of the Supreme Court to check this situation when "food stocks reached unprecedented levels while hunger in drought-affected areas intensified" (Patnaik, Reddy, & Singh, 2008, p. 6). Although this case has not yet been formally concluded, the Indian Supreme Court has passed several interim orders directing the federal and state governments in India to release foodgrains to the hungry and starving in order to protect their right to life. In one such interim order passed on May 02, 2003, the court observed:

...of utmost importance is to see that food is provided to the aged, infirm, disabled, destitute women, destitute men who are in danger of starvation, pregnant and lactating women and destitute children, especially in cases where they or members of their family do not have sufficient funds to provide food for them ... In case of famine, there may be shortage of food, but here the situation is that amongst plenty there is scarcity... The anxiety of the Court is to see that poor and the destitute and the weaker sections of the society do not suffer from hunger and starvation. The prevention of the same is one of the prime responsibilities of the Government – whether Central or the State.

(Supreme Court of India, 2003, p. 2)

Over the years, the scope of the petition filed by the PUCL, which initially sought mainly drought-relief to prevent starvation deaths among the poor communities, has expanded significantly. It has expanded to include a range of other issues, the most important of which has been the state-provisioning of (free and/or subsidised) food for the poor households on a continuous basis in order to deal with the problem of chronic malnutrition. Subsequent interim orders of the Supreme Court have correspondingly reflected PUCL concerns and directed the Government of India to take appropriate actions in this regard including providing free-cooked meals to school-going children, food rations for the pregnant and lactating mothers and so on (for a lucid account of the Supreme Court's interim orders on the right to food case, see Patnaik et al., 2008).

The sustained litigation by the PUCL and the Supreme Court's interventions put considerable pressure on the Government of India and in 2010, the incumbent ruling coalition led by the Indian National Congress party, carrying on its 2009 election manifesto promise, announced to implement right to food legislation. Intense debates then ensued for approximately two and half years between 2010 and 2013 over the provisions it ought to contain. The debates revolved mainly around two core issues pertaining to i) coverage of the legislation (what proportion of population should be provided subsidised food grains) and, ii) delivery mechanisms (e.g. food rations versus food coupons/cash transfers). In 2013, the Bill was passed by the Indian Parliament and turned into a constitutional act. The National Food Security Act (NFSA) 2013 provides legal protection against hunger and takes a gender-sensitive life-cycle approach to tackling the issue of food insecurity in India. The major provisions in the NFSA include providing food and cash benefits to pregnant and lactating mothers so that they and their new-borns are well-cared for, nutrition benefits for children aged between 6 and 59 months, free school meals for children attending schools, and importantly (something which has been the source of much debate), 5 kilograms of subsidised food ration per person to 67 percent of the country's population through the existing Public Distribution System (PDS) (Government of India, 2013a).

With such a huge proportion of India's population lacking access to adequate food, the right to food law, no doubt, holds utmost importance. Indeed, a decade earlier,

Dreze (2004) argued that pervasive under-nutrition in India seem to have been accepted as 'natural' with virtually no policy discussion on this aspect of human crisis. Seen in this light, the food security law certainly represents a major step forward. Yet, however, given the scale and multiple dimensions of food and nutrition insecurity in India (which will become clearer as the discussion proceeds), the NFSA is only a fraction of what is really needed to tame the problem. Moreover, most of the food safety nets, as mentioned above, that the NFSA covers have already been in place in India, with some of them such as the PDS existing since as early as the late 1960s. Thus, in key ways, the NFSA is a consolidation of the existing food safety nets which, although significantly important, remain beset with difficulties. For example, there is a wide body of evidence suggesting that vast amounts of food grains meant to reach the poor under the PDS get illegally diverted along the way (*inter alia*, Jha & Ramaswamy, 2008; Parikh, 1994; Planning Commission, 2005). And media reports abound on the large scale corruption and leakages in National Rural Employment Guarantee Scheme (NREGS)<sup>9</sup>, a scheme implemented in 2006 which promises 100 days to guaranteed manual labour employment to rural household at the legally stipulated wage rate. Nevertheless, recent evidence points to signs of improvements in the functioning of these schemes, seemingly in part because poor households are now becoming more assertive in claiming their entitlements (Dreze & Khera, 2014; Khera, 2011b, 2011c, 2012, 2014). However, by and large, the state of social provisioning in India continues to remain dismal. And it is a peculiar irony of social welfare system in India that the safety nets remain more dysfunctional in the poor regions or states where they are needed the most (for example, see, *inter alia*, the discussion in Bardhan, 2011; Dreze & Sen, 2013; Khera, 2011c, 2011d).

In such a situation whereby a large majority of the rural poor is left to fend for themselves, insights on the livelihood strategies devised by rural households to gain access to adequate food are of significant policy relevance. In particular, this research focuses on migration as a rural livelihood strategy for the reasons stated below.

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<sup>9</sup> NREGS emanated from the constitutional act of the same name, National Rural Employment Guarantee Act (NREGA). In 2009, it was renamed as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). In this thesis I use the old name, however.

## **Rural outmigration and food security: a pressing need for policy inputs**

In India, the agriculture sector has traditionally been the most important source of food and livelihood security for a large majority of the rural populations. Through own-account farming or wages obtained from farm work (and more often than not, through the combination of both), agriculture has provided an important means to meet the income and food needs of the rural dwellers. Although agriculture still remains the mainstay of rural populations, employing close to half of India's total labour force, the changes in the pattern of economic growth are rapidly altering rural livelihood trajectories in India. There is a continuing decline in share of agriculture sector in the national income – from 33 percent of the GDP in 1990-91 to 15 percent in 2009-10 (Mehrotra, Gandhi, Saha, & Sahoo, 2013, p. 87) – and with it, the fortunes of agriculture-based livelihoods. The statistics from the successive national Censuses and surveys highlight a gradual shift away from farm-based livelihoods, although there are wide regional level variations. At the national level, over 7 million people whose main occupation was cultivation quit farming during the inter-censal period 1991-2001. This trend accelerated in the following decade, with Census 2011 recording 8.6 million fewer main cultivators compared to the 2001 Census (Registrar General of India, 1991b, 2001c, 2011b). Furthermore, the data from India's National Sample Survey highlights a more rapid change in the employment patterns, suggesting that nearly 27 million people withdrew from agriculture between 2004-05 and 2011-12, and for the first time in the history of independent India the share of agricultural employment has fallen to less than 50 percent (Mehrotra et al., 2013).

Although the role of the agriculture sector in economic and human development remains highly contested, cross-country evidence across a range of low-income countries suggests that compared to the secondary and tertiary sectors of the economy, growth in agriculture has a highly significant impact on reducing the levels of rural poverty and food insecurity and raising the consumption levels among the poorest segments of the population (*inter alia*, Christiaensen, Demery, & Kuhl, 2010; Ligon & Sadoulet, 2008; World Bank, 2007). In India, the remarkable gains in the agricultural productivity following the GR in the 1970s not only helped the country achieve self-reliance in food production and thwarted the looming

possibility of mass hunger, but increased farmers' incomes, improved wages for the agricultural labourers and reduced prices of food, leading to overall decline in poverty (on the impact of agriculture on rural poverty reduction in India, see Ahluwalia, 1978; Bell & Rich, 1994; Ravallion & Datt, 1996). Subsequently, however, agriculture growth had made a far less impressive dent on food insecurity outcomes in India (FAO, 2013a; Headey, 2011). Furthermore, the rapidly changing sectoral composition of economic growth in India following the economic reforms of early 1990s, with much of the addition to the national income now emanating from the urban-based service sector to the disadvantage of the agricultural activities (as the data above shows), has led to a further weakening of role of agriculture in improving the food and nutritional well-being of Indian population. Consequently, the more recent research has pointed out that there exists an "agriculture-nutrition disconnect" in India (Gillespie & Kadiyala, 2012; Headey et al., 2011). On the other hand, the recent evidence suggests that in the post economic reform period, the urban economic growth has become a more important driver of rural poverty reduction compared to pre-reform period when the growth in urban sector had no discernable impact on rural poverty reduction, and it was the economic growth in rural sector from which both the rural and urban poor benefitted. This is not to suggest that growth of rural economy is not important. Indeed, with nearly 70 percent of India's population still residing in the countryside, rural economic growth holds an important key to improving the living standards of rural poor. At the same time the spillover effects of urban growth on rural incomes and employment seem to have become increasingly more crucial insofar as rural poverty reduction in the post-1990 period is concerned (Cali & Menon, 2009; Datt & Ravallion, 2009; Ravallion & Datt, 1996).

It is important to note that the highly fragmented pattern of agricultural landholdings in India implies that most rural households constitute smallholder farmers. According to data from the 2011 agriculture Census, 85 percent of landholdings in India are less than 2 hectare (Ministry of Agriculture, 2014b, p. 6). Furthermore, nearly 42 percent of households in rural India do not own any agriculture land (Rawal, 2008, p. 45). These patterns get compounded further by the fact that most Indian states officially prevent the renting or leasing of farm land.



Thus, for landless and land-poor households of India, wage income has traditionally been a central component of household income. However, the low level of economic activity with imperfectly operating rural labour markets means that more often than not, wage options are often pursued in the distant labour markets. Thus, migration has long been an essential component of rural livelihood systems in India.

The predominant stream of migration in India has involved rural to rural migration of labour. The systematic insertion of Green Revolution reforms in the Indo-Gangetic plains of Punjab and Haryana in northwestern India led agriculture labourers from the economically backward regions of eastern Uttar Pradesh and Bihar to migrate to these states. In fact, the success of GR in India is largely attributed to large-scale migration of these poor labourers. Writing of poor labourers from Bihar who migrated to Punjab for agricultural work during this period of farm intensification, Singh (1997, p. 518) suggests: “Punjab farmers know that green revolution would not have been as green right from the beginning in the late 1960s, as it is found today, had there been no use of migrant labour from Bihar.” However, the rising stress on the agriculture-based income and livelihoods<sup>10</sup> and urban-centric nature of economic growth is changing the patterns of migration, with rural to urban migration rising in significance. During 2007-08, migration to urban areas grew at the rate of 3.5 percent while the growth for rural areas was 2.6 percent (National Sample Survey, 2010, p. 22).<sup>11</sup>

An important characteristic of rural-urban migration in India is its seasonal and circular nature, which constitutes a significant bulk of migratory movements. It is for this reason that rural migrants in India are often described as “nowhere people” (Breman, 2010, p. 17). In fact, the embedded seasonality in migration is the reason which has kept the levels of urbanisation low in India (de Haan, 1997a, 2002; Kundu, 2003; Kundu & Saraswati, 2012). The official data agencies, however, barely capture the true extent of temporary migrants in India. The estimates derived by Keshri and

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<sup>10</sup> Between 1995 and 2010, a quarter million farmers committed suicides in India owing to debt and distress (Sainath, 2012). And according to the nation-wide survey of 51,770 farm households conducted in 2003, 40 percent of the surveyed households indicated that provided the choice, they would take up some other profession, with 27 percent out of the 40 percent citing lack of profitability as the main reason for this decision (National Sample Survey, 2005).

<sup>11</sup> The rate of migration in the survey report (full reference provided below) is expressed as migrants per 1000 population but here it is reported on per 100 people.

Bhagat (2012) using National Sample Survey data suggest that temporary migrants in India account for nearly 13 million people. Alternative informal estimates, however, indicate that between 40 million (Breman, 2010, p. 10) to 100 million (Deshingkar & Akhter, 2009, p. 3) people remain on the move for their livelihoods in any given year.

Despite the crucial role played by migration in the lives and livelihoods of the rural poor in India, rarely is its significance acknowledged among the policy-making communities. The policy neglect partly emanates from the fact that much of the rural outmigration characteristically takes the form of seasonal and circular mobility and does not fit into the 'officially structured' contexts. Contrarily, rural outmigration is often viewed by the policy-makers as a sign of distress and often evokes misguided images of disruption in the idealised conceptions of sedentary rural life (de Haan, 1999; McDowell & de Haan, 1997). Not surprisingly, as is the case in many developing countries, development policy in India has sought to control the flow of rural migrants even though it is rather unambiguous that "migration and rural livelihoods are falsely opposed" (Mosse et al., 2002, p. 60). For example, one of the primary objectives of the NREGS is to prevent the distress migration from rural areas. As briefly discussed above, by the means of guaranteeing 100 days of paid employment at legal minimum-wage (or unemployment allowance in lieu if the work is not provided), the scheme is of crucial importance to the rural poor. However, the research findings reveal that impact of NREGS on reducing rural migration has been minimal. For example, a study by Rao (2009) that evaluates the impact of NREGS on migration in the two states Andhra Pradesh and Madhya Pradesh found little impact of the job scheme on reducing migration, though participation rates in the job scheme varied between the two states. As Breman (2010, p. 21) notes: "It is still too early to tell whether MGNREGA will be able to stem the tide of circular migrants."

A related concern often expressed by scholars in the case of rural-urban migration is that most migrant workers get absorbed in the urban informal sector where average wages are low, working conditions deplorable and exploitation high, all of which does not help improve their (and the households they belong to) social and economic position (Breman, 1996, 2010; Srivastava & Sasikumar, 2003). Indeed, this

is a valid concern, particularly in the wake of signs of relocation of poverty from rural to urban areas (Ruel, Garrett, & Haddad, 2000). However, another pertinent question which ought to beg equal attention is “what these households and individuals would have done in the absence of the opportunity to migrate” (Deshingkar & Grimm, 2005, p. 40).

The growing importance of migration in the rural livelihood systems of India warrants a greater policy attention than it currently receives. Despite the concern around migrants’ vulnerabilities associated with urban informal jobs, the research evidence across a range of countries, including India, suggests that income from migration can provide a route out of poverty (Deshingkar & Grimm, 2005; Deshingkar & Start, 2003; DFID, 2007) and potentially contribute to enhanced human development outcomes (Deshingkar & Akhter, 2009; UNDP, 2009). Surprisingly, however, there is very little direct evidence on how migration as a rural livelihood strategy impacts food and nutritional security outcomes at household level. The lack of research is surprising because the connections between migration and food security are very obvious. The prevailing agriculture-nutrition disconnect in India warrants a need for a greater understanding of alternative mechanisms that may explain the food security outcomes among rural households. Drawing from primary field research, this research aims to highlight the often-overlooked connections between migration and food security.

### **The study area and rationale behind area selection**

As noted earlier, this study contextualises the link between migration and food security using a case-study research approach involving the collection of primary field-based household survey data from a sample of 392 migrant and non-migrant rural households. Although the problem of food insecurity is widespread across the different regions of India, it was not possible to undertake fieldwork in the whole of India due to time and budget constraints. Moreover, the incidence of food insecurity and migration, the two key variables considered in this study, is spatially uneven. It is for this reason that this study chose a select set of villages in a single district of Siwan in the eastern state of Bihar in India. As noted above, Siwan district was chosen as a case study site because of the high rates of food insecurity and

outmigration. I describe my methodology and discuss the research context more fully in Chapter 4 and Chapter 5, however, at this stage it is useful to provide a brief background of some of the strategic and statistical considerations which were taken into account in selecting Bihar as a broader study site. This brief discussion, thus, attempts to highlight how the selection of Bihar aligns with the broader objectives of this study.

India is a huge and diverse country with widespread intra-state and inter-state disparities in the levels of economic and human development. The existing patterns of migration are largely driven by these regional inequalities. The eight socio-economically backward states of Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Uttarakhand, Rajasthan and Odisha, commonly referred as Empowered Action Group (EAG) states, are among the worst performing large states in the country on the human development front, lagging far behind on social, economic, demographic, health, and epidemiological transitions compared to other states. The EAG states account for approximately 45 percent of India's population (Registrar General of India, 2011d) with a significant majority of population lacking conditions of a decent living. And the extent of food and nutritional deprivation is also rampant, with all states having alarming levels of undernourishment (Menon, Deolalikar, & Bhaskar, 2009).

On several counts, Bihar can be considered the worst performing of these states. Firstly, Bihar has the highest proportion of people living below the official poverty line, with more than half (53.3 percent) of the population officially classified as poor in 2009-10 (Planning Commission, 2012). Furthermore, it is not just poverty but on all the other measures related to education, health, mortality and hunger, most of the individual districts (and villages within them) in Bihar constitute "pockets of deprivation". A report that attempts to identify the most backward districts based on the human development deprivation indicators finds that 26 out of the 69 such districts of India are from Bihar (Debroy & Bhandari, 2003, pp. 49-50).<sup>12</sup> Given the link between poverty and food insecurity, the state accounts for a huge chunk of chronically undernourished people as reflected in the national statistics. Bihar ranks

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<sup>12</sup> For the details on the methodological aspects of identifying the most backward districts, see Debroy and Bhandari (2003, pp. 46-48).

15<sup>th</sup> in the State Hunger Index (SHI)<sup>13</sup> of 17 Indian states (Menon, Deolalikar, & Bhaskar, 2009).

Secondly, almost 90 percent of the Bihar's population resides in rural areas (Registrar General of India, 2011b) where lack of gainful employment opportunities and persistence of extreme poverty force a large majority of households to migrate to other states in search of livelihood. Additionally, out of 38 districts, 31 districts are flood prone and 11 districts are drought-prone (Deshingkar, Kumar, Choubey, & Kumar, 2009) and thus climatic challenges to agriculture-dependent livelihoods, coupled with rural poverty make migration for work an obvious choice for rural poor in Bihar. Migration has traditionally been a central component of livelihood strategies among rural dwellers of Bihar and some scholars have termed migrants from Bihar as "unsettled settlers" (de Haan, 1997a, p. 482), an apparent reference also to the circular or temporary nature of migration from Bihar. In fact, such is the magnitude of migration and dependence on remittance incomes that the economy of Bihar is called as 'the money order economy' (Deshingkar et al., 2009).

The Census 2001 migration data for Bihar reveal that in absolute terms, the state witnessed a second highest outflow of people to other states during the inter-censal period 1991-2001 with net out-migration accounting for 1.7 million people, only after Uttar Pradesh which had 2.7 million net out-migrants (Registrar General of India, 2001b).<sup>14</sup> However, this absolute number of out-migrants from Uttar Pradesh is due to the sheer size of the population of the state, which is almost double than that of Bihar. When looked into percentage terms (i.e. percentage of out-migrants to total population of the state), outmigration rates for Bihar and Uttar Pradesh stand at 2.1 percent and 1.6 percent, implying higher outmigration incidence in the former. By controlling the population size, the 'outmigration rate' provides a better

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<sup>13</sup> The SHI is a composite index that takes into account prevalence of calorie undernourishment, proportion of underweight children under age 5 years and under-five mortality rate. It is similar to the GHI used for cross-country comparison.

<sup>14</sup> It must be noted that while some data from the most recently concluded population Census 2011 is now available, detailed migration tables have not yet been put in the public domain. Moreover, as I describe in Chapter 4, when this study was conceptualised during April-September 2011, no data from the Census 2011 were available and the study had to rely on the Census 2001 data which was also used as a basis for the selection of study district (of Siwan) and villages within the district. Also, these figures are for the more permanent form of migration and do not include the short-term moves which are likely to be far greater in magnitude.

measure to gauge the true extent of outmigration scenario. Hence, the selection of Bihar over Uttar Pradesh is considered ideal for this study. Also, on the SHI mentioned above, Uttar Pradesh fares relatively better (ranks 9<sup>th</sup>) than Bihar with low hunger index value (Menon et al., 2009).

Given the magnitude of outmigration from Bihar, it is perhaps not surprising that studies on rural outmigration from Bihar abound in the literature. Nonetheless, significant scope for migration research still remains. As noted by Deshingkar et al. (2009, p. 139): “Despite numerous studies of migration in Bihar, aspects of its complexity, diversity and impact on different groups of people remain poorly understood.” Thus, Bihar provides an appropriate research setting to understand the linkages between migration and food security.

### **Thesis outline**

The remainder of the thesis is organised as follows. Chapter 2 seeks to contextualise the links between migration and food security. The discussion in this Chapter suggests that while the recent years have witnessed heightened importance of these two issues in the global, regional and national level development policy deliberations, there currently exists a huge disconnect between the two, and it also dwells on the possible reason for this disconnect. The Chapter also lays out the key conceptual framework of “entitlement” and “livelihoods” employed in this study to understand the connections between migration and food security. These frameworks provide the theoretical and analytical foundations to this research. Finally, the Chapter reviews the existing evidence on the type and nature of migration, role of migration in rural livelihoods and suggests the possible pathways of linkages between migration and food security.

Chapter 3 discusses the broad dynamics of food insecurity, migration and urbanisation in India. Beginning with an overview of the magnitude of the problem of food insecurity and undernourishment, the Chapter assesses India’s progress on the MDG target of hunger reduction. It then assesses the regional, social, cultural dimensions of food insecurity in India. Finally, it evaluates the recent trends in country’s rural employment landscape, and the linkages they bear with the patterns of migration and urbanisation. This evaluation attempts to understand the shift in

the rural livelihood patterns in recent years, with particular attention paid to rural-urban migration, and implications it may have on household food security in rural India. The overarching purpose of this Chapter is to set the scene for the empirical analysis that follows of migration-food security nexus, based on the field-research findings in the case study district of Siwan.

Chapter 4 outlines the research methods and methodology used to understand the relationship between migration and food security. The Chapter provides a description of strategic and statistical considerations adopted to select the study district of Siwan, survey villages within this district and sample households within the villages, as well as the data collection tools used in this study and the rationale behind using them. The Chapter also dwells on the issues of positionality and reflexivity in order to put the field research (findings) in perspective.

Chapter 5 sets out to provide the context of migration from Bihar and Siwan. It first places contemporary Bihar in the Indian map of development, and discusses the reasons for its backwardness. This discussion contextualises the political economy of underdevelopment in Bihar, and also traces the historical origins of state's contemporary problems. Then, it discusses the dynamics of food insecurity and migration in Bihar, and the possible linkages they bear with each other. Following on from this broad state-level discussion, the final major section of the Chapter, in a reverse step-migration (pun intended!), turns attention to the region of western Bihar in general and to the case-study district of Siwan in particular. Drawing on the historical and contemporary evidence, it provides an overview of the place, people and livelihoods in western Bihar, seeks to understand the importance of migration in the livelihoods of rural dwellers of the region, and discusses how the lives and livelihoods in the region compare and contrast with the 'immobile-peasant' characterisation of rural populations of the underdeveloped world that has dominated the academic and policy discussions. Finally, the Chapter emphasises on the two key features of migration from Siwan, namely, 1) circular mobility, and 2) male-dominated pattern of migration. The Chapter concludes by pointing out how they potentially interact with household food security outcomes, and the detailed empirical analysis of these linkages is carried out in Chapter 7 and Chapter 8.

Chapter 6 assesses the connections between food-based safety nets and migration. India operates an extensive set of food-based safety nets to provide food security to its most vulnerable citizens, and it would perhaps not be absolutely incorrect to state that no discussion on food security is complete without their detailed consideration (Pritchard et al., 2014). Moreover, the recently passed Right to Food Act (2013) has only increased their significance. Drawing on the field-based evidence from Siwan, this Chapter scrutinises, in particular, the three major food-based safety net programmes namely, 1) PDS, 2) NREGS and, 3) Integrated Child Development Scheme (ICDS) in their grounded contexts, and attempts to understand their linkages with rural households' food security situations and migration decisions, the two key themes that are at the heart of this thesis.

Chapter 7 asks whether and how migration by individual members of the household influences the food security outcomes of members in the origin villages in Siwan. Using a livelihood approach that brings together insights from the macro-level changes in India's economic and employment landscape in the post-reform period, and decision-making matrices of rural households at the micro-level, the Chapter appraises the changes in rural livelihoods trajectories, and the importance of non-local, migration incomes for food security of rural households in case-study district. In particular, the Chapter discusses the rural-urban, farm-non-farm, linkages that circular migration creates through remittances, and how these linkages in turn play out to influence food security outcomes of rural households. The Chapter also throws light on the role of migration in altering the local land and agrarian relations, and how they relate to the food security of the landless and land-poor households, and those without any migrant members.

Following on from this inter-household comparison, Chapter 8 seeks to look within the household in order to understand the impacts of migration on intra-household power dynamics and relations, and bearing of these impacts on food security outcomes in Siwan. As noted earlier, an important feature of labour mobility in large parts of the developing world is the male-dominated pattern of migration. Labour migration from Siwan (and Bihar more generally), is almost exclusively a male pursuit while women stay behind. Thus, the Chapter first sheds light on the gendered nature of migration and the factors underlying this pattern. Then, it



assesses the impacts on women's roles and responsibilities in household affairs and explores the female autonomy versus responsibility aspects of male migration. Thereafter, the Chapter provides evidence on the effects of migration in changing traditional familial arrangements. In the end, through the wider lens of gender, the interactions of each of these effects with household food security are discussed.

Finally, Chapter 9 brings together the key insights from each of these chapters, extrapolates the findings of case-study based research for their wider policy significance, and comments on the future direction of research on the links between migration and food security.

## **2 BRIDGING THE DISCONNECT BETWEEN MIGRATION AND FOOD SECURITY**



## CHAPTER 2: BRIDGING THE DISCONNECT BETWEEN MIGRATION AND FOOD SECURITY

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### Introduction

Migration, both internal and international, has become a key component of the livelihood strategies of increasing numbers of households in developing countries. The flow of migrants' remittances has expanded significantly over the past decade, and is now a major contributor to the national income of several countries (World Bank, 2011a, 2013a, 2013b).<sup>15</sup> This has promoted a spike in researchers' and policy makers' attention on the migration-remittance-development nexus. Importantly, unlike earlier periods when migration was often viewed as a problem with negative implications for development, there is now growing global consensus on its potential positive effects, both financial and social (for example, the transfer of migrants' skills and knowledge) (*inter alia*, Cohen, 2011; Connell & Brown, forthcoming; Connell & Conway, 2000; Ghosh, 2006; Gupta, Pattillo, & Wagh, 2009; IOM, 2013a). Leading international organisations have therefore lent an unequivocal institutional backing to encourage migration in the past few years (DFID, 2007; UNDP, 2009; World Bank, 2009). More recently, as the global development community gears up to set the post-2015 development agenda as a successor to MDGs, the International Organisation for Migration (IOM) has called for world leaders to integrate migration in the post-MDG development framework, reasoning that "migration is simply too important in scale to be ignored" (IOM, 2013b, p. 9; also see, IOM, 2013a; 2013c).

On the other hand is the rising significance of "food security for all" as an important development objective. Although the issue of food security has figured as a prominent development goal since the mid-1990s, as noted in Chapter 1, its significance has grown enormously in the past few years. The spikes in global food prices since 2006 stalled the progress on the World Food Summit and MDG goals on hunger reduction, and in 2009, for the first time in human history, the number of

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<sup>15</sup>For example, in 2013, international remittance accounted for 48 percent of the GDP of the landlocked nation of Tajikistan in Central Asia (World Bank, 2013b).

undernourished people crossed a billion people (FAO, 2009). The recent estimates suggest that access to adequate food remains a distant reality for nearly 842 million people who remain underfed, the large majority of whom reside in the rural areas of developing countries (FAO, 2013b, p. 42). The sheer magnitude of hunger has warranted calls for effective action on hunger reduction. At the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012, the UN Secretary General launched the “Zero Hunger Challenge” calling the member countries to work for a future where no one in the world goes to bed hungry (Ford, 2012). And in 2013, the report of the High-Level Panel on the post-2015 development agenda called for ending hunger from the face of earth (United Nations, 2013b, pp. 40-41).

However, as observed by Crush (2013) in an agenda-setting article, the discussions on these two issues have largely tended to proceed in silos, with little attention to the relationship they bear with each other despite the fact that linkages between the two are rather obvious, and there exists “a massive institutional and substantive disconnect between these two development agendas” (pp. 61-62). From the perspective of this present research (which focuses on understanding the role of internal migration as a household livelihood strategy in influencing food security outcomes among rural households at the origin, as noted in Chapter 1), the three possible reasons for this disconnect, as also highlighted by Crush (2013), are as follows.

First, discussions on the impacts of migration and remittances on poverty alleviation and economic development have tended to focus invariably more on the international migration than internal migration. For example, for South Asia, the region with most underfed people in the world (FAO, 2013b) and where internal migration is a central feature of lives and livelihoods, Gardner and Osella (2003, p. vi) observed a “resounding silence on internal migration” in the region. This bias towards international migration is further augmented in recent years by the efforts at systematic compilation of data on international remittances by the World Bank (although major gaps still remain: on this, see World Bank, 2011a), which show the continually rising flow of the international remittances to developing countries. International remittances to developing countries increased from US\$ 55 billion in 1995 to US\$ 389 billion in 2012, and current levels of remittances received by

developing countries is nearly three times as much as their receipts of official development assistance (World Bank, 2013a). The significance of these flows notwithstanding, the fact however remains that in addition to the high economic (as well as social) costs of migration across national borders, the increasingly selective immigration policies, particularly in the more developed countries of the world, favouring the educated and the skilled, mean that international migration as an option remains beyond the reach of a large majority of rural populations of the developing world. It is for this reason that much of the migration tends to occur domestically, and much of which is of seasonal and circular nature. As noted in Chapter 1, the number of people moving from one area to another within national boundaries is estimated at 740 million (which is also a conservative estimate), nearly four times as much as the international migrants (estimated at 200 million people) (UNDP, 2009, p. 1). Although comparable estimates on the flow of internal remittances are hard to come by because of the difficulties in measuring different types of migration, particularly the very short moves which account for a bulk of movements, the sheer volume of the people moving within national borders suggests that the poverty-reducing and development-enhancing potential of remittances from internal migration is more significant than the international migration (Deshingkar & Grimm, 2005, p. 8). The limited evidence available on the significance of domestic remittances also suggests the same. A recent study by Mckay and Deshingkar (2014) that utilised data from the nationally representative household-based surveys to compare the volume of internal and international migrants and remittances in six countries including Bangladesh, Nigeria, Rwanda, South Africa, Uganda, Vietnam showed in all countries internal migrants far exceeded international migrants in numbers. And although the average size of remittances from international migrants to their origin households tended to be higher than internal migrants, the higher magnitude of domestic migration caused the sum total of the internal remittance transfers to exceed that of international receipts; and because of the higher initial economic costs of international migration, domestic remittances were more likely to be received by poorer households. Another study by Castaldo, Deshingkar, and Mckay (2012) in India and Ghana also found that in both countries internal migrants and domestic remittances outnumbered international migrants and their total receipts, with potentially

significant human development impacts. For India, estimates derived by Tumbe (2011) from National Sample Survey data showed that in 2007-08, domestic transfers in the country amounted to US\$10 billion. From the specific perspective of the relationship between migration and household food security, internal migration is far more important than international migration because in many instances migration decisions by the individuals and/or households may be a direct response to meeting their food security needs. For example, for rural households engaged in small-scale agriculture, and whose already low income and output are subject to several shocks, internal migration provides an immediate and crucial strategy to cope up the shocks to their income and food security.

Second, the studies that give attention to migration and food security are often guided with concerns around urbanisation. In 2008, for the first time in history, more people lived in urban than in rural areas, and the urban population growth is expected to rise further in the coming years (UNFPA, 2007). Moreover, as (poor) populations move from rural to urban areas in search of employment, there is evidence of relocation of poverty and undernourishment from rural to urban areas, and this has called for the need to provide the urban populations with adequate food and nutrition (Crush, 2013; Ruel et al., 2000). Additionally, the increasing levels of urbanisation and peri-urbanisation and growing land demands for commercial and residential purpose are placing heavy pressures on rural land, with analysts arguing for fresh thinking on the links between livelihoods and food security; urban (and peri-urban) agriculture has emerged as one of the important topics within this discourse (Lerner & Eakin, 2011; Losada et al., 1998; Mougeot, 2000).

These are certainly important themes, and they need to be mainstreamed in the future migration and food policy agendas. The income and food needs of increasingly mobile rural populations at the urban destinations must inescapably figure on future urban development agendas. At the same time, it is important to note that the burden of chronic hunger and inadequate access to minimum food is disproportionately shared by the rural populations. Moreover, in many countries of Asia and Africa migration from rural to urban areas is not always a one-time, permanent move – far from it. The rural-urban transition in many low-income countries remains incomplete, and circular mobility dominates the migration

patterns (Breman, 2010; Potts, 2010), which commonly involves migration by one of more members of the household, usually males, while the other members stay behind (Desai & Banerji, 2008, p. 337). However, in migration studies there has been a shift away from researching communities and households in their origin places to studying them in their destination areas, and there has been tendency to treat migrants as a separate entities in the destinations (Hewage, Kumara, & Rigg, 2011, p. 203). This assumption ignores, and completely so, the origin-destination linkages created by circular forms of migration, and by implication, the food security of the household members in the origin. In India (where this research focuses), a bulk of labour migration is of seasonal and circular nature (Breman, 2010; Deshingkar & Akhter, 2009; Deshingkar & Farrington, 2009; Srivastava & Sasikumar, 2003), with migrants making periodic visits to the origin villages, maintaining close relations with family and sending remittances home which, as the field evidence gathered for this study suggest, are crucial for the food security of members at the origin (Chapter7). However, there persists a tendency to view households as located in singular space whereas the fact is that rural lives have traditionally been, and are becoming increasingly more, stretched across the rural-urban continuum. Thus, conceptualisations of households need to move from viewing them as homo-spatial units to multi-local/locational ones (Deshingkar & Farrington, 2009; Greiner, 2012; Schmidt-Kallert, 2009).

Relatedly, the third reason is the land and agriculture-focused notions of rural households at the level of food policy which means that prescriptions to improve rural poor's access to food have invariably tended to focus more on improving local, land-based livelihoods. The view that rural households are comprised of members who solely depend on farming, although fading, still remains widely prevalent in rural development thinking (Rigg, 2006). By extension, the problem of rural food insecurity is often viewed as a problem of land and agriculture and the solution, therefore, to strengthen food security of rural populace, it is held, lies in improving the gains of farm-dependent livelihoods. However, research across a range of countries suggests growing diversity of rural livelihoods, with non-farm, non-local, migration incomes becoming increasing central to rural lives and livelihoods (Barrett et al., 2001; Bryceson, 1997, 2002; Deshingkar & Farrington, 2009; Deshingkar &



Start, 2003; Ellis, 1998, 2000b; Foster & Rosenzweig, 2004; Reardon et al., 2001; Rigg, 2006; Shariff & Lanjouw, 2004). Moreover, the recent evidence suggests that although agriculture plays an important role in reducing poverty and improving food security (by increased farm productivity and incomes), it alone may be insufficient. The 2013 State of Food and Agriculture report of the FAO (2013a, p. 27) noted:

The available evidence shows that agricultural and economic growth is effective in sustainably reducing malnutrition in low-income countries where many people depend on agriculture, but the impact is slow and may not be sufficient. Therefore, additional complementary ways to reduce malnutrition are necessary.

This statement, when viewed in conjunction with other evidence on a shift in patterns of rural livelihood in the developing world, would suggest that not only income and output from land and agriculture are inadequate for household food security but in many cases their viability, and the extent to which they allow the rural households to meet their food and nutrition needs, may itself be contingent upon the income from non-agricultural sources.

With the reasons for the disconnect between migration and food security discussed, the remainder of the chapter is organised as follow. In the next section, I spell out the key conceptual frameworks of “entitlements” and “livelihoods” which provide theoretical foundations to link migration and household food security. I then provide an overview of different theoretical perspectives on migration, and assert the merit of livelihood approach to migration for understanding migration decisions and outcomes (food security in this context). In the final section, I discuss three pathways of linkages between migration and food security which have much significance in understanding the connections between the two more holistically.

### **Conceptualising food security through the frameworks of “entitlement” and “livelihoods”**

The past two decades have witnessed a significant shift in the way the issue of food security has been conceptualised and problematised. Up until 1980, global food security discourse predominantly stressed on the volume and stability of food

supplies as the only measure to ensuring food security for all. This was largely to the dominance of Malthusian perspective in food security research. In his “Essay on the Principles of Population”, first published anonymously towards the end of eighteenth century, Malthus (1798) postulated that population growth always outpaces increases in food production (which he termed as “means of subsistence”), and when this situation is left unchecked, this will potentially lead to acute food shortages. Thus:

...the power of population is indefinitely greater than the power in the earth to produce subsistence for man. Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. A slight acquaintance with numbers will shew the immensity of the first power in comparison of the second.

(Malthus, 1798, p. 4)

Although research by Boserup (1965), based on extensive fieldwork in Africa and Asia, showed that high population growth rates (may) stimulate innovative agricultural practices through factors, such as, use of improved agro-technologies, transition from long-fallow to short-fallow period, and thus boosting overall food production (also see, Boserup, 1981), this did not change global preoccupation with the issue of food availability. Malthusian concerns continued to be frequently echoed by international development agencies through the 1960s and 1970s. The food crisis of 1972-74 only served to accentuate these fears. In the aftermath of food crisis, the first-ever World Food Summit that took place in Rome in 1974 thus conceptualised the problem from the production-oriented perspective, reflected in definition of food security adopted in the Summit. Food security was defined as: “availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices” (FAO, 2003b, p. 27).

The official policy thinking on food security, however, witnessed a paradigm shift following the pioneering work by Amartya Sen in 1981 on the causes of starvation and famines. In a marked departure from the dominant, albeit reductionist, thinking based around food production, he argued that hunger and starvation are not always

caused by food supply shortages, and may persist even in the wake of abundant food supplies. Thus, Sen (1981b, p. 1) reasoned:

Starvation is a characteristic of some people not having enough food to eat. It is not a characteristic of there being not enough food to eat. While the latter can be a cause of the former, it is but one of many possible causes. Whether and how starvation relates to food supply is a matter of factual investigation.

The crux of his argument was that the availability of food does not necessarily translate in adequate access of all individuals to food, and one's ability to "command food" is contingent upon her/his position within societal and economic structures. Using empirical case studies of four major famines in Great Bengal, India, Ethiopia, Sahel and Bangladesh, Sen revealed that factors leading to widespread famine conditions in these countries extended beyond the lack of food availability and essentially represented entitlement failures, particularly of the vulnerable sub-populations who were least able to acquire food through any means and hence were hardest hit (Sen, 1977, 1981a, 1981b). He contended that the ways in which people are connected with society, patterns of ownership, modes of production and formal and informal institutional and legal structures determine their ability to gain access to food. He expressed these relationships in a wider framework of "entitlements" which "refers to the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces" (Sen, 1983, p. 754). He argued that the patterns of ownership of goods and assets form a chain relationship of legitimacy, with possession of a particular asset/good linked with, and legitimising, one's authority over another (Sen, 1981b, pp. 1-2).

Applied to the analysis of hunger and starvation, it is this chain of relations that determine one's entitlements to food. In order to simplify, Sen (1981b, p. 2) listed these entitlements as mainly including, 1) trade entitlement, 2) production-based entitlement, 3) own-labour entitlement, and 4) inheritance and transfer entitlements. The ownership and possession of assets, or endowment (eg. land, labour power, financial resources), determines how these entitlement relations are

structured. And it is the interactions of these entitlements, which he termed as “exchange entitlement” (p. 3), is what determines one’s ability to command food and avoid hunger. In other words, the combination of endowments(s) and exchange possibilities together determine a person’s overall entitlement (Sen, 1983, p. 754). Hence, given a fixed ownership bundle, a person’s exchange entitlement is influenced by several factors. For example, for a wage labourer with no land, his ability to command food depends on “whether or not he can find employment, and if so for how long and at what wage rate” (Sen, 1981b, pp. 3-4). If he is unable to sell his labour power for the time, and at the wage rate, needed to buy adequate quantities of food (as often happens in distress situations), he may suffer from food insecurity and hunger, even though the actual food supplies may be steady. Put simply, Sen’s work warranted attention to the fact that entitlement failures, and not food availability (although important), causes hunger; in fact, people may be subjected to hunger and starvation even during normal times.<sup>16</sup>

At a more immediate level, the empirical merit for viewing food insecurity through the prism of entitlement relations was provided by the concurrent evaluations of Green Revolution. The widespread diffusion of the Green Revolution since the late 1960s had boosted global food production levels. Yet, however, its gains were widely unevenly distributed among different population segments across landholding and income categories (on this, see Lipton & Longhurst, 1989), which, in Sen’s nomenclature, varyingly affected their exchange entitlements. A key policy prescription emanating from Sen’s approach thus involved expanding people’s entitlements, particularly for the economically disadvantaged populations who had greater vulnerability to, and indeed faced on a routine basis, entitlement failures (Sen, 1983, pp. 755-760; also see, Dreze and Sen, 1989).

Founded on the principles of social and economic justice, Sen’s subsequent writings extended the entitlement analysis in his now widely known “capability approach” (*inter alia*, Sen, 1984a, 1984b, 1985, 1993, 1999, 2009). The latter provided a framework for understanding how the entitlements translated into enhancing the capabilities of people. With reference to the example of own-labour entitlement

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<sup>16</sup> In fact, Sen describes the Great Bengal Famine of 1943 as a boom famine (Sen, 1977, 1981a, 1981b).

above, this meant, for instance, whether or not the (quality of) employment (regularity, wages, working conditions etc.) that the person is engaged in allow for her/his capability to avoid hunger, and to be well-nourished? The wider significance of capability approach was that it distinguished between the means (economic growth and prosperity) and ends (welfare of people) of development, and placed people at the center of the development. Contrary to the conventional approaches, Sen (1999, p. 3), contended that development must ultimately be viewed “as a process of expanding the real freedoms that people enjoy”, and “it requires removal of major source of unfreedoms: poverty as well as tyranny, poor economic opportunities as well as systematic social deprivation”. I shall not dwell much on specificities of this capability approach here (for which refer to Sen's original writings cited above; also see, among others, Alkire, 2002; Nussbaum, 2000, 2011; Robeyns, 2005). Nonetheless, it is important to note that Sen’s line of analysis placed rights and entitlements of people at the core of development discourse, and redirected the development policy and practice. This shift in thinking is reflected in the adoption of the wider concept of “Human Development”, promoted and advanced by the UNDP in its annual Human Development Reports since 1990. The UNDP defined development as a process of “enlarging people’s choices” (UNDP, 1990, p. 1).

At the level of food policy research and practice, Sen’s line of analysis led to reappraisal of the concept of food security. In 1983, the FAO, in its report entitled, *World Food Security: A Reappraisal of the Concepts and Approaches*, expanded its earlier definition and defined food security as: “Ensuring that all people at all times have both physical and economic access to the basic food that they need” (FAO, 1983 cited in FAO, 2006, p. 1). Then, in 1986, the World Bank’s report titled, *Poverty and Hunger* – highly influenced by Sen’s work – categorised food insecurity in “chronic” and “transitory” terms and acknowledged that food insecurity (primarily) results from the lack of access to food. Thus, the report defined food security as “access by all people at all times to enough food for an active, healthy life” (World Bank, 1986, p. 1). The report explicitly mentioned that the essential elements of food security are availability of food and ability to acquire it. The discourse thus

shifted from the mere availability of food supply at the national and international level to that one of access to food.

Accompanying this shift was the focus on the importance of food security at the individual and household levels. As more research evidence has become available on what causes food insecurity, and its wider relationship with individual health and wellbeing, there have been more reappraisals of the concept over subsequent years. In particular, persistently high levels of undernourishment have also led to a widespread recognition that meeting calorific needs does not necessarily result in the adequate nutrition required for leading a healthy life. Thus, the concept of food security has been widened into a more expansive notion of nutritional security. The nutritional status of individuals however is also contingent upon several public health issues including safe drinking water, health care and environmental hygiene. Also, dietary preferences are based on social and cultural norms about food. For instance, consumption of meat in many societies and cultures is common, whereas many social and religious groups, such as Hindu Brahmins and Jains in India, do not generally eat meat due to religious reasons. In the World Food Summit in 1996, the FAO therefore held that a holistic understanding of food security therefore requires interplay of three factors. These include: i) adequate availability of food; ii) physical and economic access to (socially and culturally acceptable) food; and iii) its effective utilisation in terms of bodily absorption of nutrient value of food (FAO, 1996). The latest and most acceptable definition of food security of the FAO, first adopted in 1996, thus puts it as: “Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 2010b, p. 8).

Using the notion of entitlements, the focus of this study is on the “access” aspect to food, for despite the fact that world produces enough food to meet the food and nutritional needs of everyone, inadequate access to food remains stubbornly high. As noted at the beginning of this Chapter, as per recent FAO’s (2013b, p. 42) estimates, during 2011-13 there were 842 million people globally whose dietary energy consumption levels were below the threshold required for the normal bodily

### Box 2.1: Indicators to measure food insecurity

The multi-dimensional nature of the concept of food security means that different concepts and criteria exist in terms of how food and nutritional security outcomes are assessed. These indicators could be clustered in two broad categories.

#### i) **Anthropometric indicators**

Food and nutritional insecurity signifies intake deficiencies in essential calorie, protein and micronutrients, and/or inadequate absorption of food consumed, resulting in weak physical and health status. The food and nutritional needs are contingent on person's age, body weight, height, physical activity levels. Additionally, environmental and health factors, such as prevalence of infection and disease, are also important determinants of food energy needs as they affect the conversion efficiency of food in the body (for instance, an individual suffering from diarrhea will likely excrete the food consumed more rapidly than those without this condition, and if the energy lost to diarrhea is not replaced, this would negatively affect her/his nutritional status). The food and nutritional deficiencies are manifested in poor physical growth outcomes, the degree of which depends on the extent of deficiencies. These outcomes are measured through different anthropometric indicators which commonly include, stunting (short for age), wasting (thin for height) and underweight (thin for age) for children, and BMI for adults (WHO, 2010).

#### ii) **Dietary-energy based indicator**

Based on the person's age, gender, BMI and activity level, the FAO calculates the Minimum Dietary Energy Requirements (MDERs), and using data from the national level data on food availability and consumption, it provides cross-country estimate of proportion of people whose energy intake is lower than their MDER energy threshold, expressed in terms of an outcome indicator of "Prevalence of Undernourishment" (PoU) (FAO, 2008).

However, PoU only measures the energy deficiencies (of macro-nutrients), whereas nutritional outcomes are also crucially influenced by consumption of essential micronutrients (dietary substances that the body need in small amounts that produce several enzymes and hormones for physical and cognitive growth and development). It is estimated that nearly 2 billion people in the world (30 percent of global population), mainly women and children in the developing world, suffer iron deficiency and are anemic (WHO, 2015). Seen this way, the PoU measure of FAO underestimates the actual magnitude of undernourishment in the world. At the same time, the sheer number of people unable to meet their basic food needs remains staggering.

functions, however it is important to note that this number does not include populations afflicted by essential micro-nutrient deficiencies (Box 2.1).

The second key conceptual framework employed in this thesis is the broadly-defined Sustainable Livelihood Approach (SLA). Complementing the notion of entitlements, the SLA provides a useful framework to assess the different livelihood strategies devised by people that either enable or restrict them to meet their livelihood goals and aspirations. From the specific perspective of food security is the question of how different livelihood strategies pursued by rural households impact upon their food security outcomes.

The concept of SLA officially emerged in rural development thinking in the early 1990s. It was formally laid out by Robert Chambers and Gordon Conway in an IDS discussion paper in 1991. Their working definition specified:

A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term.

(Chambers and Conway, 1991, p. 6)

Influenced in many ways, and building on, Sen's notions of entitlements and capabilities, the SLA sought to place the notions of "capability", "equity", and "sustainability" as the core principles of rural development practice (Chambers and Conway, 1991, pp. 3-4). In a marked departure from the earlier economic-centric approaches that revolved around "production thinking", "employment thinking" and "poverty-line thinking" (ibid, pp. 2-3), SLA argued for understanding the complex rural realities from the perspective of those involved. Building on Chamber's earlier work on "participatory rural appraisal", in terms of research practice SLA challenged the dominant paradigm of "rural development tourism" (the tendency of development researchers and policy-makers to understand



problems and causes of rural poverty and deprivation through brief visits to problem areas and through filling pre-structured quantitative questionnaires: Chambers, 1983, pp. 10-12), and stressed that insights on rural problems could (only) be gained by understanding the life and livelihood realities of the rural poor. It stressed, in particular, on the need for grounded research approaches in order to understand the dense social, cultural and institutional contexts within which peoples' lives and livelihoods were situated.

Within a few years, it was adopted as a key framework by leading international development agencies (Solesbury, 2003, p. 6). The wider backdrop for its quick adoption was provided by the disappointing results of the *top-down* approach to rural development practice that held sway in 1970s and 1980s. The idea that dominated rural development thinking at that time was that virtues of market-based economy were powerful enough to cure all the ills, and thus the prescriptions to tackling rural poverty inevitably involved achieving faster economic growth. By the early-1980s, the shortcomings of *trickle-down* logic of the market-driven policies became increasingly apparent. As Sen (1983, p. 754) suggested: "Not merely is it the case that economic growth is a means rather than an end, it is also the case that for some important ends it is not a very efficient means either." The extremes of poverty, hunger and deprivation persisted at unacceptable levels in too many rural regions.<sup>17</sup> Indeed, the field of economics, which ruled the roost, began to be increasingly seen as narrow and insufficient to provide explanation to rural poverty and deprivation. In its annual report in 1979, Sage Foundation, the leading publisher and supporter of social science research, lamented: "... the discipline [of economics] became progressively more narrow at precisely the moment when the problem demanded broader, more political, and social insights..." (cited in Hirschman, 1981, p. v). It was in this context that the growth-centered mode of thinking and doing development began to be challenged beginning from early 1980s. Important

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<sup>17</sup> This was also because of the urban bias in resource allocation and investment (Lipton, 1975, 1977).

changes occurred in the field of economic theory, and development economics in particular, with Sen, among others, leading the charge.<sup>18</sup>

The SLA's stress on grounded approaches to understand the contextual and institutional correlates of problems of rural poverty and underdevelopment meant that although the approach was flexible, the emanating framework of doing rural livelihood analysis rested on four-fold strategy. This included, i) charting the socio-economic and institutional context and policy setting, ii) assessing the resource endowments of people or livelihood assets (human, natural, social, physical, and financial capital; popularly referred to as 'five capital framework' which became synonymous with SLA) that shape their livelihood space and possibilities, iii) analysing how the livelihood space as shaped by the (five) capitals/assets translated in the different livelihood strategies (farm-nonfarm, local-nonlocal), and finally, iv) evaluating the impact of the livelihood strategies on the livelihood goals and aspirations in well-being outcomes, such as income, food security, health, education (Scoones, 1998, pp. 3-5; also see, Pritchard et al., 2014, pp. 9-10). A crucial aspect of SLA was that it sought to emphasise on the importance of "non-economic attributes" of livelihoods, such as, social relations (eg. caste, kinship, gender) and institutions, in mediating people's access to livelihoods assets and strategies (Ellis, 2000a, pp. 290-291) that were missing in the earlier economic-centric livelihood analysis.

From the perspective of the discussion in this thesis, a particular significance of SLA approach was increased recognition to the diversity of rural livelihood strategies. The DFID's (2001, p. 5) sustainable livelihoods glossary defined livelihood strategies as:

...the range and combination of activities and choices that people make in order to achieve their livelihood goals. Livelihood strategies include: how people combine their income generating activities; the way in which they use their assets; which assets they chose to invest in; and how they manage

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<sup>18</sup> The importance of development economics declined too. Albert Hirschman, an influential economist, even went on to read an obituary of development economics (Hirschman, 1981, pp. 1-24). While recognising the increasing reductionist nature of development economics in the 1960s and 1970s, Sen, however, regarded this obituary as rather premature (Sen, 1983).

to preserve existing assets and income. Livelihoods are diverse at every level, for example, members of a household may live and work in different places engaging in various activities, either temporarily or permanently. Individuals themselves may rely on a range of different income-generating activities at the same time.

While the diversity of rural livelihood and income streams is not a novel phenomenon (Barrett et al., 2001; Ellis, 1998, 2000a, 2000b; Scoones, 1998), the explicit recognition to livelihood diversity in SLA was crucial in reorienting rural development thinking and research. This was because up until the early 1990s, rural development policies tended to treat rural households as homogeneous units, focusing exclusively on farm related activities for their income and livelihoods (this view, as noted earlier, has not completely disappeared from rural development thinking). This inevitably meant that the solutions offered to reduce rural poverty revolved around land and agriculture (eg. facilitating land access, improving farm productivity and output through technology transfers such as irrigation and improved seeds, providing farm credit, and so on), whereas livelihoods based on land and farming, significant as they may be, represent one of the many livelihood avenues; and for land- and asset-poor households (the main focus of development interventions) diversification of income and livelihoods provided a means to cope up with seasonality and income shocks, and/or improve their livelihood prospects. As Ellis (2000a, p. 299) suggests: “Diverse livelihood systems are less vulnerable than undiversified ones.” The participatory nature of SLA meant that it stressed on involving the actors (rural populations) in setting and addressing their own livelihood priorities instead of imposing livelihood choices upon them.

The SLA categorises livelihoods strategies pursued by rural households in three important clusters. These include, i) agricultural intensification/extensification, ii) livelihood diversification, and iii) migration. Thus:

Either you gain more of your livelihood from agriculture (including livestock rearing, aquaculture, forestry etc.) through processes of intensification (more output per unit area through capital investment or increases in labour inputs) or extensification (more land under cultivation), or you diversify to a

range of off-farm income earning activities, or you move away and seek a livelihood, either temporarily or permanently, elsewhere. Or, more commonly, you pursue a combination of strategies together or in sequence.

(Scoones, 1998, p. 11).

As the quote above by Scoones suggests, many rural households combine the elements of all three livelihood strategies in order to attain an optimal balance of income that helps meet their livelihood outcomes. Also, not only does there exist significant overlaps between these livelihood strategies but their highly complementary nature means that the gains derived from one could be utilised to maximise the returns from the other(s). For instance, agricultural intensification in the form of on-farm diversification, with household growing cash crops instead of, or in addition to, subsistence agriculture could also fall under the broad domain of livelihood diversification, as the latter includes income from both on-farm and non-farm sources. Also, non-farm and migration income could boost investment capabilities of households for agricultural intensification. Indeed, this thesis argues that understanding these complementariness of different livelihood strategies provide a crucial foundation to understand the food security outcomes of rural households more fully.

That said, this thesis focuses, in particular, on the role of migration as a livelihood strategy in influencing the food access among rural households. This is because migration forms an important component of livelihood strategies of a large majority of resource-poor rural households in the developing countries. Entitlement and SLA frameworks hold that livelihood strategies and outcomes are shaped by endowment or assets at person's disposal. This means that for landless and landpoor households' entitlement and access to food crucially depends on their ability to find wage income. As Sen (1983, p. 755) suggests: "For most of humanity, about the only commodity a person has to sell is labour power, so that the person's [food] entitlements depend crucially on his or her ability to find a job, the wage rate for that job..." However, as noted in Chapter 1, the imperfect nature of rural labour markets compels a large majority of these rural households to seek alternative employment in the distant places. Migration is not always a response to distress or

lack of employment, and research evidence also suggests that it may represent a calculated strategy of rural households to allocate household labour more efficiently (Bigsten, 1996) in order to attain a diversified livelihood portfolio and reduce income risks (Stark, 1991). More recent evidence points to a growing importance of migration in the lives and livelihoods of rural poor households across a range of developing countries due to a complex set of distress-push and income-pull factors (Deshingkar & Anderson, 2004; Deshingkar & Grimm, 2005; UNDP, 2009). In turn, this implies that migration is also becoming increasingly crucial for the rural incomes and food security. However, as the discussion in the later section will reveal, although a range of studies across different country and contextual settings have highlighted the role of migration in rural livelihood security, the direct evidence on whether and how migration helps the rural households to attain food security remains scanty in the existing literature.

In the following section, I discuss the different theoretical perspectives on migration. A close scrutiny of different theoretical perspectives suggests that migration has often been perceived as problematic by academics and policy-makers, and rarely is its importance acknowledged from the perspective of rural livelihoods.

### **Moving beyond the binaries: a livelihood approach to migration**

There is no dearth of literature on migration. Broadly, migration refers to change in the usual place of residence on a permanent or semi-permanent basis from one geographically or administratively defined boundary to another. Migration can be a response to several push and pull factors relating to social, economic, environmental, political and cultural conditions and can take several forms from international to internal migration, from voluntary to forced migration, from permanent to temporary migration and so on.

Given this multitude of types, motives and reasons, it is no surprise that perspectives on migration abound. The present study focuses on domestic labour outmigration among rural households, which characteristically takes the form of seasonal and circular mobility in which one or more members, usually young male(s) (see below), of the household migrate out of the origin villages for part of the year.

And although this also involves migration from one rural area to another, more recent streams of migration involve heightened importance of rural to urban migration in rural households' livelihood across the developing world, particularly in several countries in Asia where urban areas have come to play a more central role in economic growth and returns from migration to urban areas have increased (Deshingkar & Grimm, 2005, p. 15). The centrality of economic motives in rural households' migration decisions notwithstanding, migration is a complex phenomenon and thus requires attention to the various social, cultural and institutional factors that both drive migration and shape migration outcomes.

The dominant economic explanations of rural outmigration have often tended to take a single-sided view of what drives migratory decisions. On the one hand, neo-classical economic models have tended to emphasise the rationality of individual actors. The much-cited dual economy model of wage differentials held that labour migration from rural to urban areas is a response to the (expected) rural-urban wage differentials, with individual migrants responding rationally to (perceived) higher urban wages (Harris & Todaro, 1970; Todaro, 1969). On the other hand, scholars rooted in structuralist and Marxist strands of thought have tended to view migration with respect to wider set of political-economic arrangements and modes of production. They argue that far from being a rational response to better wages, migration at best is the "survival strategy" forced upon the rural poor by the capitalist forces and structures which does not improve their lot in the long-run (Bremner, 1985, 1996, 2010).

This binary of rational choice versus compulsion is alternatively expressed in the literature in terms of structure-agency and push-pull approaches, the latter most notably in geography following the Ravenstein's Laws of Migration (Ravenstein, 1885, 1889). In rural economies, the common push to migration include factors such as poverty, (increasing) population pressures on land, seasonal nature of agriculture income, vagaries of environment, such as drought, floods etc., resulting in crop failure. On the other hand, the pull of migration often comprises factors such as better income and employment opportunities in destinations, reduced barriers on mobility (as in the case of relaxing of Hukou System in China that earlier controlled rural-urban migration) and the latest advancements in infrastructure and

communication networks (Deshingkar & Grimm, 2005). However, there is a very narrow line between these push and pull factors, making a clear demarcation between them virtually impossible. For instance, labour migration from rural to urban areas may be a response to both, crop failure at the place of origin and better income-earning opportunities in destination. Indeed, the field research carried out for this study also suggests the co-existence of these factors (Chapter 7). Moreover, the rural-urban dichotomy has become “obsolete” with increasing expansion of peri-urban regions worldwide which “encompass a fragmented mixing of rural and urban worlds” (Lerner & Eakin, 2011, p. 311). In turn, this has led to narrowing of the gap between push and pull factors even further.

More recent theoretical developments in migration research include “The New Economics of Labour Migration” (NELM) (Stark, 1978, 1981, 1983, 1991; Stark & Bloom, 1985; Stark & Levari, 1985). Influentially propounded and advanced by Oded Stark, NELM is rooted principally in neo-classical economics. Thus, it views migration decisions as being driven by imperfect rural financial, labour and credit markets, information asymmetries, and participants’ desires to maximise incomes in the wake of these conditions and constraints. Nonetheless, a useful starting point of NELM is the recognition that “there is more to labour migration than a response to wage differentials. Thus migration in the absence of (meaningful) wage differentials, or the absence of migration in the presence of significant wage differentials, does not imply irrationality” (Stark, 1991, p. 3). Of particular relevance to the subject matter of the present research is that a key feature of NELM is that, unlike the earlier individual-centric economic approaches to migration (eg. Harris & Todaro, 1970; Todaro, 1969), it places household at the heart of analysis. It views migration as a combined household strategy aimed at risk aversion and livelihood portfolio diversification. Stark (1991, p. 3) suggests:

...even though the entities that engage in migration are often individual agents, there is more to labour migration than an individualistic optimizing behavior. Migration by one person can be due to, fully consistent with, or undertaken in pursuit of rational optimizing behavior by another person or by a group of persons, such as family.

Stark (1991, p. 5) continues: “The family can be considered as a “coalition”, a group of players committed by choice to act as one unit vis-à-vis the rest of the world and migration by family members can be interpreted as a manifestation of the viability of the family.” According to NELM, the geographic dispersion of family members in different income activities provides one of the ways through which smallholder households in rural areas attain a diverse portfolio of livelihood that enable them to minimise income risks from a single source and maximise the insurance. “Migrants and their families enter into an inter-temporal contractual arrangement, in which the costs and returns are shared by all family members with the rule governing the distribution of both spelled out in this implicit contractual arrangement” (ibid, p. 25) The household bears the initial costs of migration in the expectation of remittances and on their part migrants, in turn, continue to maintain close association with the households with the expectation of returns, such as inheritance of land/property in the origin. The end result of is that of “both parties being better-off as a result of migration since, in this case, an exchange of commitment to share income provides co-insurance” (ibid, p. 26).

The NELM provides an important lens to understand the “economics” of migration more holistically, and the present research makes use of the theoretical foundations of this approach. At the same time, an obvious limitation of NELM is that it does not necessarily address the social, cultural and institutional factors that both drive migratory decisions and in turn get shaped by it. In arguing that migration represents more than just a response to income differentials, it falls short of addressing the non-economic aspects of migration. For example, how do households decide on who migrates out and who stays put? Do male and female members of the households have the same chance to be chosen as migrants? These are particularly pertinent questions. As the discussion below will reveal, in many countries of South Asia, a common pattern of rural labour migration involves male outflows while the women stay behind. In turn, this pattern of migration impacts on the household gender relations, with implications for food security.

Indeed, none of the approaches described above elucidates the dynamics of migration from the perspective of rural livelihoods. As Mosse et al. (2002, pp. 60-61) suggest, “a perspective on migration is needed which goes beyond dichotomous



Table 2.1: Different theoretical perspectives on migration: a summary

Perspective	Policy prescription
<p><b>Dual economy model:</b> Developed around 1970s to highlight the contradiction of high rural to urban migration in the less developed countries in spite of positive agriculture marginal products and high urban unemployment, this model recognised “the existence of a politically determined minimum urban wage at levels substantially higher than agriculture earning” (Harris &amp; Todaro, 1970, p. 126) as the reason for rural-urban mobility. According to the model, migration thus represents a response to not real but ‘expected’ rural-urban wage differentials.</p>	<p>This model viewed that the impact of higher urban wages is offset by the slower growth of urban employment which will exacerbate the problem of unemployment in the cities, with larger consequences for the social and political order of the less developed nations. The emanating policy prescription, thus, was to control migration by making rural areas attractive for stay and work.</p>
<p><b>Marxist perspective:</b> According to the Marxist perspective, transition from a “rural-agrarian to urban-industrial mode of life and work” (Breman, 2010, p. 1) is a result of capitalist forces pushing people out of agriculture. Marxist scholars contend that migration is not a rational response to wage-differentials but a “survival strategy”. It is forced upon the labouring poor to serve the interests of the capital, with little or no benefits and/or prospects for their upward mobility.</p>	<p>This line of argument sheds important insights on the deplorable work and living conditions of the unskilled rural out-migrants in the developing world. Although it calls for policy attention on addressing the structural causes of their deprivation, such as regulations related to minimum wages and working hours, it remains highly sceptical about policy action because of the lack of “agency” of the poor migrants and in the process, evokes a cautionary note on the gains of migration.</p>
<p><b>New Economics of Labour Migration (NELM):</b> The distinguishing feature of the NELM model is that places “household” at the centre of migration analysis, as opposed to earlier individual-centric economic models. According to the NELM, migration represents a combined household strategy aimed to livelihood portfolio diversification and risk aversion (Stark, 1991).</p>	<p>Unlike the earlier economic approaches, NELM views migration as a positive process which allows households to allocate its labour across activities and locations. This act of livelihood diversification by the means of sending member(s) to other places provides an insurance against income shocks from local sources. It argues that the overall aim of the policy should be to encourage migration.</p>
<p><b>Livelihood approach:</b> Livelihood approach to migration stresses on understanding the importance of social, economic, political and cultural contexts within which migration occurs. While acknowledging the importance of, and weaving the threads from, dichotomous migration perspective such as push-pull, structure-agency, it argues for moving beyond these binaries to be able to objectively analyse varied migration outcomes across contexts (Mcdowell &amp; de Haan, 1997; Mosse et al., 2002).</p>	<p>Livelihood perspective recognises the traditional importance of migration in the lives and livelihoods of the rural dwellers. It argues that there is nothing novel about rural outmigration and it has been a central feature of rural livelihood strategies since time immemorial which has allowed rural populations to meet their income and food needs during the agriculturally lean cycles. The overall policy message is to facilitate migration.</p>

models of push or pull, structure or agency, urban or rural, and allows labour migration to be seen as part of local and diverse livelihood strategies.” (See Table 2.1 for a summary of different theoretical approaches to migration.) It is for this reason that this study uses a livelihood approach to migration.

The advantage of livelihood approach is that, while weaving together the threads of different perspectives, it also stresses the institutional processes and vulnerability contexts within which migration occurs. It draws from NELM in terms of placing the household as the prime unit of analysis. Livelihood perspectives to migration state that migration has traditionally formed an integral part of rural livelihood strategies and not necessarily a response to shocks. Furthermore, alongside economic motives, it also views migration as a social process structured by the institutional and contextual factors such as gender, caste, class, social networks and relations which in turn affects these social structures (de Haan, 1999; de Haan, Brock, & Coulibaly, 2002; Mcdowell & de Haan, 1997; Mosse et al., 2002).

### **Role of migration in rural livelihoods: possible pathways of linkages between migration and food security**

In many countries of Asia and Africa, migration forms an integral part of livelihood strategies of the rural poor. Rural livelihoods in Indonesia involve a frequent engagement of farm families in urban labour markets (Elmhirst, 2002). A longitudinal study of 37 villages in Java carried out over the period of 1967-91 found that most of the landless rural families in Java have at least one person working outside of the village (Collier et al., 1993 cited in Deshingkar & Grimm, 2005, pp. 10-11). In some parts of India, three out of four households include a migrant (Srivastava & Sasikumar, 2003, p. 1). In a study of two villages in Mali, de Haan et al. (2002) noted contrasting patterns of migration, with migration in both villages nonetheless being a central feature not only of their local economies, but also of social networks and relations. While migration has traditionally formed a key component of rural livelihood systems, the evidence suggests that in recent years the levels of mobility among rural populations have increased significantly worldwide (Deshingkar & Grimm, 2005).

Given the centrality of migration in rural livelihoods, it is not surprising that the relationship between migration and rural development has been of long-standing research to academic and policy-making communities. However, in the wake of rising rural outmigration levels, the question of the potential role of migration in enhancing the rural income and livelihood security and promoting rural development assumes even more significance. That said, this relationship is very complicated. Thus, while research findings of some studies suggest that the selective nature of rural outmigration, often involving young and able-bodied males, deprives the rural economies of the already scarce productive human resources (Lipton, 1980), others find migration helps households to efficiently allocate their labour among activities so as to maximize the household utility (Bigsten, 1996). Also, while absence of quality educational facilities in rural areas of many developing countries often motivate families to migrate to urban centers to seek good education for their children (UNDP, 2009, p. 57) which potentially improves household earning prospects, household migration by poor also deprive the children of their basic education; for instance, a study on the migrant workers in the sugarcane industries in Maharashtra, India found that about two hundred thousand children of migrant sugarcane workers are bypassed by the education system, as many of them work alongside their parents in the fields, (Minwalla, 2003).<sup>19</sup>

For long, skeptical views that rural outmigration to urban towns and cities would create stress on urban resources, push urban wages down leading to conflict between native and migrant communities, saturate urban labour markets and raise unemployment rates and so on dominated the discourses on migration. In the academic literature, rural outmigration, more often than not, has been portrayed as problematic. For instance, the dual economy model of rural-urban wage differentials (Harris & Todaro, 1970; Todaro, 1969), cited above, while acknowledging the agency of individual migrants, argued against rural to urban migration. The main policy prescription thus included:

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<sup>19</sup> This study was conducted by Neeraj Hetkar from the University of Mumbai, Maharashtra, India. The research findings quoted above were obtained from an Indian daily, Times of India (full details are provided in the bibliography).

...instead of allocating scarce capital funds to urban low cost housing projects which would effectively raise urban real incomes and might therefore lead to a worsening of the housing problem, governments in less developed countries might do better if they devoted these funds to the improvement of rural amenities. In effect, the net benefit of bringing "city lights" to the countryside might greatly exceed whatever net benefit might be derived from luring more peasants to the city by increasing the attractiveness of urban living conditions.

(Todaro, 1969, p. 147)

Not surprisingly, development policies in many countries have often tended to control the flow of rural-urban migrants (de Haan, 1999). However, as Stark (1991, p. 19) suggests: "Good policies should employ effective means to minimize or eliminate the few (if any) undesirable consequences, but not eliminate migration itself."

These considerations have been crucial in reorienting the global development policy thinking on migration in recent years. For instance, the World Development Report 2009 noted: "The policy challenge is not how to keep households from moving, but how to keep them from moving for the wrong reasons"(World Bank, 2009, p. 147). Moreover, there is compelling evidence that despite the distress-induced nature of migration, not only can it provide a safety valve for poor populations but can also contribute to sustainable human development for the migrants and origin communities. And the international policy-making communities have increasingly argued that migration has several positive attributes and that the gains of migration far outweigh the losses, albeit varying by skills, resources and social network of the migrants (DFID, 2007; UNDP, 2009; World Bank, 2009). Recent empirical evidence across a range of countries highlights the positive impacts of migration on household welfare – income, health status, educational attainments, female autonomy and so on.<sup>20</sup>

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<sup>20</sup> See the Human Development Report 2009 for the extensive review of literature.

However, while various impacts of migration have been extensively researched and documented, very little attention has been paid on the relationship between migration and food security.<sup>21</sup> Nonetheless, the available evidence provides several possible pathways of interactions between migration and food security, and it points to a two-way relationship between these two phenomena. Thus, while risks to food security and local food entitlement failures (eg. poverty, lack of decent employment and wages, absence of social protection) often drive household migration decisions, the act of migration can in turn improved household ability to access food. The predominant pattern of rural outmigration involves circular moves, usually undertaken by the male member(s) of the household, as noted earlier. This means that through factors such as remittances, changes in gender roles, migration has the potential to influence household food security. As noted earlier, my focus is on the rural end of the household. Below I identify and discuss at least there direct pathways of the linkages between migration and food security which have immediate significance, and the three analytical chapters presented in this thesis (Chapter 6, Chapter 7 and Chapter 8), based on the field evidence from the case study site, also develop around these themes.

***Pathway 1: Entitlement and institutional failures and migration as a critical food security strategy***

The studies of household strategies during famines in Africa suggest that the poor rural households that face risks to their food security often plan strategically to minimise the negative impact of the distress situations, and outmigration of one or more of household members has been employed as one of the crucial strategies to prevent food entitlement failures (Corbett, 1988). Famines represent an extreme of distress, and are caused by, and cause, a collapse of wider set of institutions.

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<sup>21</sup> The exceptions include recent studies that attempt to link and provide some evidence on the interface of migration and food security. See the special issue in *Food Policy*, volume 35(4), published in 2011 (Azzarri & Zezza, 2011; de Brauw, 2011; de Brauw & Mu, 2011; Zezza et al., 2011), and the recent study by Crush (2013) which has a focus on urban food security. However, as noted in Chapter 1, the research on the relationship between migration and food security is still at an infant stage and in need of studies that could provide insights on the interactions between rural livelihoods patterns and food security.

Although a few countries in the Sub-Saharan Africa have not fully come out of the grip of famines (with the most recent famine reported in 2012 in Somalia), they are not common phenomena. Indeed, the large-scale famines have largely been eradicated in most countries in Asia and Europe (Devereux, 2009).

Yet, however, persistence of chronic hunger afflicts a sizable chunk of rural populations in the developing world, and many more face risks to food entitlement failures on a routine basis even during normal times. In many countries in Asia and Africa where the local rural institutions (land, labour, financial markets) to manage risks to income and food security are absent, rural households, particularly the landless and landpoor, often employ migration as a critical food security strategy. For example, research by Mosse et al. (2002) among the Bhil tribal villages in three western Indian districts in three Indian states of Madhya Pradesh, Gujarat and Rajasthan found that food insecurity was one of the important drivers of household migration decisions.

It is important to note that the rising political significance of right to food since the 1990s, as noted in Chapter 1, has led to many countries pledging to guarantee food security to their most vulnerable rural populations through in-kind or income support (Special Rapporteur on the Right to Food, 2012). There is a wide international consensus on the importance of social protection to achieve the objective of “food security for all” (HLPE, 2012). The issue of social protection is particularly important to understand the relationship between migration and food security, particularly in India (where this research focuses) which has recently passed a right to food legislation (Government of India, 2013a). If the institutional arrangements pertaining to income, livelihood and safety nets are robust, and insure the vulnerable rural populations against food entitlement failures and enable them to meet their basic food needs, this will have a positive impact on the food security of those covered under these nets, and may also reduce the need for the individuals and households to employ migration as an alternative risk-reducing strategy. Conversely, the failure of these institutions may force the populations to employ migration (often distress-induced) as a critical food strategy. Whether and to what extent the social safety nets help the rural poor avert the perennial risks to

their income and food security, and provide an alternative to migration as a risk-reducing strategy, are important questions and need empirical investigation.

In Chapter 6, I engage with these questions. Consistent with the SLA analytical framework of charting out the policy and institutional setting, the Chapter expresses these themes within the broader frame of role of institutional arrangements pertaining to food and livelihood security in influencing migration and food security.

***Pathway 2: Remittances, land and agriculture and food security***

Migration can also positively influence household food security. The most direct impact of migration on household food security outcomes may be felt through the remittances sent by migrant members. Income from migration can equip the households at the origin with cash that can not only help them prevent the food entitlement failures but also enhance the access to food by all household members.

In addition to providing money to maintain and enhance food consumption levels, remittances are found to have significant interactions with household food security through their impacts on supporting local livelihoods. In Mexico, remittances sent by migrants were found to relieve credit and risk constraints on farm production and thus had stimulating effects on farm production and income (Taylor & Wyatt, 1996). Similarly, a study carried out by Oberai and Singh (1983) in the Ludhiana district of Indian state of Punjab, one the Green Revolution frontiers in northwest India, found that outmigration of members from farm households led to improved land productivity, particularly in the long-run. In contrast to the earlier research findings of Lipton (1980) (drawing on multiple village-level studies by Connell, Dasgupta, Laishley, & Lipton, 1976) that suggested that investment in productive resources was a last priority by rural migrants, as paying-off debts, meeting daily needs and conspicuous consumption absorbed most of the village remittances, a study of migrant households in rural Egypt found that migrants spent a substantial proportion of remittances in productive resources such as housing and agricultural land (Adams, 1991). Similarly, de Haan's (2002) study of migration from the Saran district of western Bihar, India also found that migrants invested their savings and remittances in land and agriculture in the place of origin. If remittances are significant, they can also provide money for the modern farm inputs and agriculture

equipments (eg., pesticides, fertilisers, tractors) (Mendola, 2008) which will likely improve income gains from household-owned agriculture. These findings suggest that apart from the increased farm income, the rise in production also implies that food availability for household's own consumption improves as well which can enhance household food security.

For rural households with small and marginal landholdings (who constitute a bulk of farm households in the developing countries: World Bank, 2007), migration of one of more members may provide a way to reduce the pressure on land. The problem of underemployment in agriculture, commonly referred to in the economics literature as disguised employment, characterise the agriculture landscape of most low-income countries. In places where rural nonfarm sector does not offer adequate employment, which is often the case in many countries in Asia and Africa, migration of one of more members often provides a means to allocate the family labour among activities in order to maximise returns, as also suggested by NELM (Stark, 1978, 1981, 1991). From the perspective of food security, this means that on the one hand the remittances add up to the total household earnings, providing money to raise household food consumption levels. On the other hand, reduced household size as a result of migration by family member(s) may increase the per-capita availability of food from the land owned. However, this also means loss of labour for family agriculture which could either have countervailing effect on food production, or change the dynamics of household labour, often involving women having to work in farm (see below).

I explore the migration-remittance-food security nexus in Chapter 7, and compare and contrast the food security outcomes of households with or without migrant members.

***Pathway 3: Male migration, changes in intra-family power dynamics and gender relations and food security***

Mobility levels among women for employment reasons, both within and across the national borders, are on the rise, owing to reasons varying from local livelihood failures leading to attitudinal shifts towards female migration to more demand-driven responses to better-paying employment opportunities outside the places of



origin. Furthermore, an increasing number of women is now also migrating independently, and indeed as the “principal breadwinners” (Martin, 2004; Neetha, 2004). Notwithstanding this increasing “feminisation of migration”, as more recent articulations of the phenomenon put it (United Nations, 2007), in many societies social and cultural norms about the role and responsibilities of women still restrict the participation of women in the distant labour markets. The clear demarcation of the gender based societal roles that exist in many societies, particularly in rural regions in much of South Asia, is reflected in the male-dominated pattern of migration. Females are confined to agricultural related activities and household chores, while men assume more obligations on them in terms of ensuring social and financial security to the family members. This single male pattern of migration however, carries several implications on the left-behind family members, particularly women. Thus far, the research findings on the how women cope with male migration and its impacts on the stay-behind women have been mixed. In her research on the Sylhet region in northeastern Bangladesh, Gardner (1993, p. 1) notes a popular song sung by women which translates as:

How can I accept that my husband has gone to London? I will fill up a suitcase with dried fish / All the mullahs – everyone – have gone to London / The land will be empty – what will I do? When my brother goes to London, he will give orders at tailor’s / He will make a blouse for me / How can I accept that my husband has gone to London?

Though Gardner’s work focused on the ethnographic constructs of localities in terms of images of homeland and abroad and thus goes beyond the subject under discussion in this section, the beginning phrase of the song highlights the unwillingness of the women to accept migration by their men. On the other hand, in the case of male migration from the southern state of Kerala, India to Middle-East countries, women are found to aid their sons and husbands in migration (Gulati, 1987). However, male migration raises a range of issues for the left-behind women in terms of role of women in the family, their need for support, dependence and protection, their autonomy in social and financial affairs, work burden, all of which have implications for the household food security.

The persistence of widespread gender inequalities and discrimination is a key feature of most of the rural societies in developing nations. Not only women's say in everyday household affairs is minimal, but decisions about their own reproductive and sexual health, education, consumption etc. are made by the male members of the households. However, findings of several studies reveal that that male migration improves the autonomy of women who stay behind with women having greater say in the day-to-day household decisions in the absence of their men (Gulati, 1987, 1993; Hadi, 2001; Paris, Singh, Luis, & Hossain, 2005), and the autonomy effects may prevail even after the man's return (Yabiku, Agadjanian, & Sevoyan, 2010). The structure of family plays a critical role with women in the nuclear households enjoying more independence than their counterparts in the extended families (Desai & Banerji, 2008). The remittances sent by the male migrants often enhance women's standing in the household, improve child education, and boost investment for quality health services. A study on the male-migration from Kerala, India to the middle-east also observed that remittances received by the left-behind women also broadened their vision of managing the household finance matters efficiently, aside from its positive impact on the child education and women and child health (Gulati, 1987). Findings from another study from Nepal showed that as a result of male migration, women deepened their engagement in the rural society, though the autonomy and empowerment outcomes were not the same for all women, and they were, among other things, crucially contingent on, the flow of remittances (Maharjan, Bauer, & Knerr, 2012).

Increased autonomy of women as a result of male migration can produce several household welfare impacts. The available research suggests that "as compared to men, women are more likely to utilise the resources they control to promote the needs of the children in particular and of the family in general" (UNICEF, 2006, p. 23). When looked from the perspective of household food security, this efficient allocation and utilisation of household food resources may enhance the access to food of household members, particularly women and children. It may also produce more gender-balanced food security outcomes, as it is less likely that women will discriminate between boy and girl child during household food allocation.

On the other hand, male-only pattern of migration is also found to result in the added burden of production and reproduction responsibilities on women. Indeed, when remittances are not adequate enough to support the household, women may have to assume the role of bread-winner to meet the household needs. Village level case studies on labour migration in reveal that absence of men meant that women had to take over tasks that were traditionally performed by men in household agriculture (Jetley, 1987; Maharjan et al., 2012; Paris et al., 2005). This increasing workload on migrants' wives may also alter the dynamics of family labour, which oftentimes demands children having to compensate for the labour of male migrants; young children, particularly girls, may be adversely affected by migration as they have to bear additional domestic responsibilities and take care of younger siblings, which often reduces the chances of girls receiving education (Jetley, 1987; Srivastava, 2001; Srivastava & Sasikumar, 2003). In terms of impact of these outcomes on household food security, this means that in cases where remittances are low, positive impacts of women autonomy may be offset by increasing burden of production and reproduction responsibilities. And when women also have to assume the role of breadwinner, this may mean less time for child care and child health issues, which could have negative impact on household food security outcomes, particularly of children. Moreover, and this is important, the pervasiveness of gender-based discrimination, particularly in societies with patriarchal structures, in accessing various services (eg. agriculture extension services, government benefits like cash transfers) may mean that the sheer fact of being a women may undermine the total gains of rising women autonomy which may adversely affect the food security.

Using the lens of gender, in Chapter 8, I look within the household to understand the impacts of male migration on family power dynamics and gender relations, and how they correlate and interact with household food security.

## **Conclusion**

The Chapter has attempted to contextualise the linkages between migration and food security. Beginning with the discussion on the importance of these themes in the global development agenda, the Chapter has argued that there currently exists

a huge disconnect between the two despite the obvious and two-way relationship between them, discussed the possible reasons for this disconnect, and suggested the need to bridge this gulf. The discussion in this Chapter has also attempted to set forth the key conceptual and theoretical ideas that underpin this thesis, and guide the analytical strategy. With the main focus of this thesis being on food access among rural households, this thesis conceptualises the issue of food security through the prism of entitlements, and building on the SLA, it argues that a livelihood approach to migration provides an important framework to understand the linkages between migration and food security. The discussion above makes it clear that these frameworks are highly complementary. In the final section, drawing the existing evidence from a range of countries, the Chapter has pointed out the lack of direct empirical evidence on the relationship between migration and food security, and attempted to tease out three important pathways of linkages between the two. These include: i) role of institutional arrangements, pertaining to food and livelihood safety nets, in influencing household food security outcomes and migration decisions; ii) effect of migrants' remittance on food security of household members at the origin; iii) the interaction of gender with household food security outcomes. Using the primary, field-based data collected from the case-study district of Siwan in western Bihar, India, these linkages are empirically tested in Indian context in the later chapters. In the next Chapter, I examine in detail the broad dynamics of migration, urbanisation and food (in)security in India in order to provide a wider perspective on the patterns of rural livelihoods and their significance for food security in the country.



### **3 DYNAMICS OF FOOD INSECURITY, MIGRATION AND URBANISATION IN INDIA**



## CHAPTER 3: DYNAMICS OF FOOD INSECURITY, MIGRATION AND URBANISATION IN INDIA

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### Introduction

At the global level, India has more undernourished people than any other country in the world. During 2011-13, the most recent period for which comparable cross-country data is available, the number of chronically undernourished people in India was estimated to be 213.8 million, representing 17 percent of the India's total population. To put this figure in perspective, the absolute number of people suffering from undernourishment in India is only slightly lower than the number of undernourished persons in 49 countries of Sub-Saharan Africa combined.<sup>22</sup> Seen in percentage terms, this figure is equivalent to approximately a quarter of the world's undernourished and represents 38 percent of the total burden of undernourishment in the whole of Asia and 73 percent of the South Asian region. Furthermore, a cross-country trend analysis of undernourishment reveals that during 1990-92, the baseline period used by the FAO in order to track the progress of the countries on the World Food Summit and MDG target on hunger and undernourishment, India's neighbouring countries in the South and South-East Asia such as Bangladesh, Pakistan, Sri Lanka, Cambodia, Thailand and Vietnam had higher percentage of their population who suffered from hunger. And yet, over the years these countries have seen a faster decline in the levels of undernourishment than India, despite the fact that Indian economy has performed much better than most of these countries. And thus, while India seems off the track to meet the MDG target of halving the proportion of the undernourished people by 2015, these South and South-East Asian neighbours of India, with the exception of Sri Lanka and Pakistan, are within the reach of this goal (all data, FAO, 2013b, pp. 42-44). Clearly, the sheer magnitude of the number of undernourished persons in India suggests the wider significance of the country from the perspective of global progress on hunger reduction.

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<sup>22</sup> In FAO's 2013 report, country-wise data is provided for 41 countries of Sub-Saharan Africa but the total figure on the number of undernourished people in the region, estimated at 222.7 million individuals, includes 8 other countries for which separate data is not provided. This interpretation is based on the total figure.



The aggregate figure on the number of undernourished persons, however, conceals several regional and social aspects of the problem. In India, the prevalence of undernourishment varies significantly across the different Indian states and rural-urban areas within the states. Furthermore, there are marked asymmetries in the levels of undernourishment among the different social groups, with Scheduled Castes and Scheduled Tribes faring the worst on this front. Indeed, although India has been fairly successful in averting the large-scale recurring famines of the past in the post-independence era, incidences of deaths due to starvation and child malnutrition among the lower caste and tribal communities continue to be reported (Jha, 2002; Mander, 2012; Parulkar, 2012) even in the more developed states such as Kerala (Manikandan, 2014). Additionally, and this is an important point to emphasise, the persistence of widespread gender inequalities in many parts of India means that women and girls are more prone to hunger and undernourishment as compared to their male counterparts. This has severe implications from the perspective of intergenerational transfers of health and nutrition outcomes as ill-nourished mothers are more likely to have unfavourable pregnancy outcomes, passed on through poor childhood nutritional and health outcomes.

Cutting across these inequalities is the problem of rural-urban disparities in food and nutrition security in India. As noted in Chapter 1, the prevalence of food insecurity and undernourishment is much higher in rural than urban areas. Moreover, the urban-centric nature of economic growth since the early 1990s is throwing down a new set of challenges for rural food security. One outcome of these processes is growing significance of rural-urban migration for work. However, the nature and patterns of urban employment growth, with much of the growth created in the informal sector of the urban economy means that labour migration is predominantly of circular character, keeping the overall levels of urbanisation relatively lower than other countries (de Haan, 1997a, 2002; Kundu, 2003, 2009; Kundu & Saraswati, 2012). Not all moves are characterised by the push of rural distress however, and the pulls of better urban incomes and improved transportation system are also propelling short-term mobility (Deshingkar & Anderson, 2004). From the perspective of food security, these processes imply that

the sources of rural food security are changing, which requires understanding of these changes.

Against this general background, this Chapter discusses the various facets of undernourishment in India. It first establishes India in the global debates on the hunger, with particular reference to country's progress on the MDG goal on hunger. Then, it highlights the regional and socio-economic disparities in the hunger and undernourishment. In the third major section, the discussion focuses on the changing character of rural livelihoods and broad dynamics of migration and urbanisation in India. This section also attempts to highlight the rising significance of migration within rural livelihood systems in India, and what this would seem to imply for rural food security. This discussion on broader trends of rural livelihoods, migration and urbanisation aims to set the scene for the empirical household-level analysis of linkages between migration and food security that is presented in later chapters. The last section concludes.

### **Assessing India's progress on the Millennium Development Goal on hunger reduction**

The Millennium Development Goals (MDGs) represent a blueprint consisting of a set of time-bound development goals, agreed by the world nations in September 2000 at the Millennium Summit held in the United Nation's headquarters in New York. MDGs consist of a total of 8 goals and 21 targets, country-wise progress on which is measured through 60 quantitative indicators with the baseline year of 1990 and endline year of 2015 (United Nations, 2013a, p. 58). MDG goal 1 was to 'Eradicate Extreme Poverty and Hunger', and target 2 within this goal was to halve, between 1990 and 2015, proportion of people who suffered from hunger.<sup>23</sup> India, among other countries, was signatory to these goals which, while not binding, reflected the

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<sup>23</sup> Originally, the MDGs consisted of 8 goals, 18 targets and 48 indicators. However, over time new targets and indicators have been added. In 2007, a new target, which was to 'achieve full and productive employment and decent work for all' was added to MDG goal 1. The assessment of progress on this new target was first reported in 2008 (United Nations, 2008) and this has figured in the annual MDGs reports since then. This has altered the numbering of the targets, and in the most recent annual MDGs report, the targets on poverty, decent employment and hunger have been reported as 1.A, 1.B and 1.C, respectively (United Nations, 2013a).

country's commitment to broad-based inclusive development alongside the economic reforms initiated since early 1990s.

Poverty is the significant cause of hunger and undernourishment around the world. In fact it is this connection that guided the official policy thinking to tie up the MDG goal on halving hunger with that of reducing poverty. In other words, the grouping of these MDG goals was based on the logic that decline in poverty will have an automatic dent on hunger prevalence. In the case of India, the macro-economic reforms since early 1990s and ensuing economic growth were believed to set the preconditions for reducing poverty and food insecurity in the country. In particular, parallels began to be drawn between China and India. Rapid economic growth in China since mid-1980s witnessed concomitant improvements in food security. India was expected to follow the same path (FAO, 2000). The progress in these two countries was considered crucial because, by the sheer size of their population, the fate of global progress on hunger, in a broader sense, hinged upon them. However, whereas China continued to make progress, the narrative about India changed quite dramatically within a few years. As early as 2003, India began to be seen as a worrying case. Thus, in its year 2003 edition of the *State of Food Insecurity in the World* (henceforth SoFI), the FAO observed:

These numbers and trends are dominated by progress and setbacks in a few large countries. China alone has reduced the number of hungry people by 58 million since the [1990] ... At the same time, India has shifted into reverse. After seeing a decline of 20 million in the number of undernourished between 1990-1992 and 1995-1997, the number of hungry people in India increased by 19 million over the following four years FAO.

(FAO, 2003a, p. 6)

By the year 2005, India began to be characterised as a “paradox” where economic growth did little (or nothing) in the way of improving the food and nutrition security outcomes for a large majority of country's population. The international scepticism that India will falter on its MDG goal of hunger reduction grew further with the visit to the country in 2005 by the United Nations Special Rapporteur on Right to Food. Using the catch phrase “hunger amidst plenty” (Special Rapporteur on the Right to

Food, 2006, p. 5), he raised apprehensions about the country's ability to honour its MDG commitments:

Despite the progress made in the progressive realisation of the right to food in India since independence, the Special Rapporteur is concerned that there are signs of regression, particularly amongst the poorest. In monitoring progress towards the Millennium Development Goals (MDGs), the Planning Commission has noted that India was not currently on track to achieve the goals set in relation to malnutrition and undernourishment.

(Special Rapporteur on the Right to Food, 2006, p. 15)

This paradoxical narrative of disjuncture between economic growth and food security about India continues to be echoed in the global discourse on food security. Over the years, India has been slipping behind the reach of MDG goals on hunger. In order to quantitatively assess how India has fared on its MDG commitments, it is necessary to understand the benchmark indicators used to evaluate the country-wise progress on MDG goal of hunger. Although undernourishment has various facets and thus methodological debates continue on how it should be defined and measured, two measures are commonly used. These include:

- i) Proportion of underweight children aged 0-59 months, expressed in terms of under-five children whose *weight-for-age* is minus two standard deviations from the median of international reference population.
- ii) Proportion of population who suffer from the dietary energy deficits

Before assessing the MDG progress of India on reducing the proportion of underweight children, it is important to note that there are two other anthropometric indicators for assessing child nutrition outcomes. These include: a) stunting (expressed as height-for-age) which captures height/growth retardation among children with respect to age and is an indicator of chronic malnourishment; b) wasting (expressed as *weight-for-height*) which measures body mass in relation to height and represents acute undernourishment. Although these indicators are also sometimes used in the United Nations annual MDG reports, prevalence of underweight (*weight-for-age*) is most preferred indicator, for it is a composite

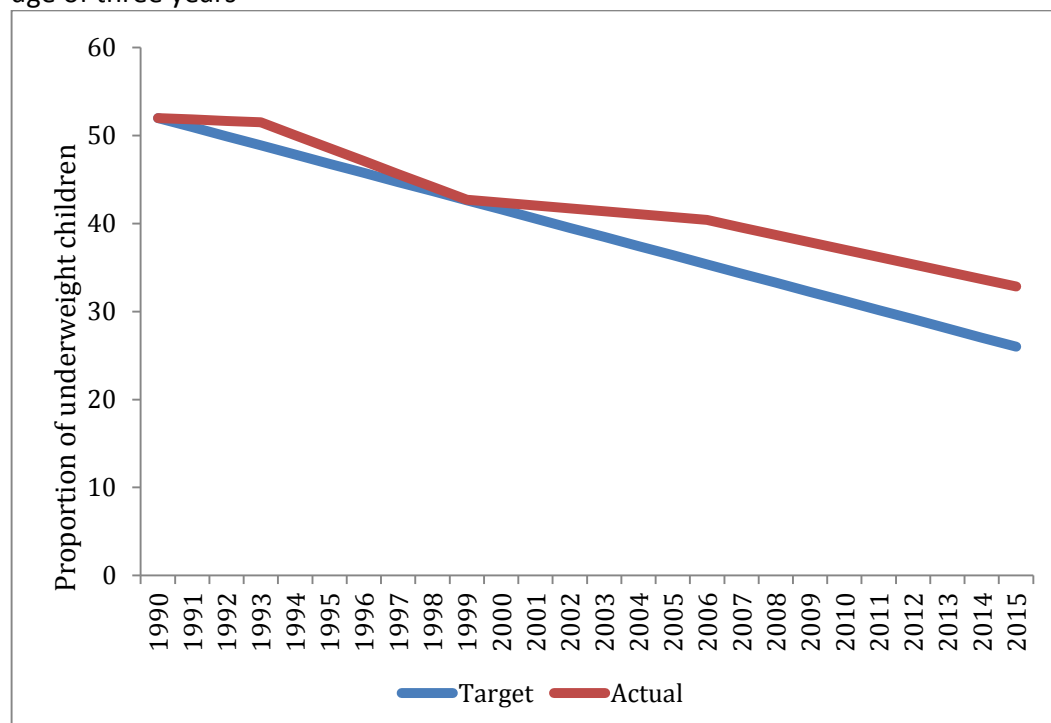
measure of stunting and wasting and takes into account both chronic and acute forms of childhood malnourishment (IIPS & Macro International, 2007b, pp. 268-269). Since the Government of India also uses this indicator in its India-MDG reports, the same is used here for consistency purpose.

It must be added that although the MDG target indicator refers to the proportion of underweight children in the age-group 0-59 months (or children aged under-five years), the MDG indicator in India includes children under-three years of age. This is because in the three successive rounds of NFHS (conducted in 1992-93, 1998-99 and 2005-06, respectively), which is the main source of data on child nutrition outcomes, the age group of the children whose height and weight were measured varied. The height and weight were measured for children below the age of four years in NFHS-I, for children below the age of 3 years in NFHS-II and for children below the age of 5 years in NFHS-III. Thus, to ensure consistency over the period, children below 3 years are considered (Ministry of Statistics and Programme Implementation, 2014, p. 30).

Using this measure, the most recent India MDG 2014 report estimates that the proportion of under-three underweight children in the country was 52 percent in the 1990. Thus, in order to achieve the MDG goal, this should decline to 26 percent by 2015. Although the progress on this indicator closely followed the MDG target value up until 1998-99, it has virtually stagnated since then. According to the NFHS data, in the six-year period between 1992-93 and 1998-99 the proportion of underweight children below the age of three years declined by close to 9 percent at an average annual rate of 1.5 percent – from 51.5 percent to 42.7 percent. In fact, this rate of decline was higher than the average annual expected decline of 1.04 percent over the 25-year period, from 1990 to 2015. However, the pace of improvement in child underweight prevalence witnessed a sharp deceleration afterwards, and between 1998-99 and 2005-06, it decreased by merely 2.3 percentage points. This provided a major setback and put India off track its MDG target. Based on these trends, the Government of India projects that by 2015 the prevalence of underweight among children below 3 years will come down to 32.85 percent, missing the MDG target by 6.85 percentage points (Figure 3.1). According to the Census 2011, India had approximately 89.01 million children below three

years of age (Registrar General of India, 2011h). Thus, in absolute terms, the MDG shortfall of close to 7 percent translates into a little more than 6 million children remaining underweight.

Figure 3.1: India's progress on MDG indicator of the underweight children below the age of three years<sup>24</sup>



Source: Ministry of Statistics and Programme Implementation (2014, p. XXVI), Table 4 in Appendix 6.

There is substantial international evidence on the huge social and economic costs of child under-nutrition. The lack of adequate nutrition at the early stages of life leads to poor cognitive development, which has wider implications on the productivity in adult ages and economic growth as a whole (*inter alia*, Strauss & Thomas, 1998; Thomas & Frankenberg, 2002; UNICEF, 2012; World Bank, 2006). It is estimated that more than 200 million children around the world fail to reach their full cognitive potential due to inadequate nutrition and health care (Grantham-McGregor et al., 2007). The economic costs of malnutrition amount to nearly 10 percent of the lifetime earnings of the malnourished individuals and the overall losses to the

<sup>24</sup> 'Actual' figures from 2007 onwards are the projected estimates. According to the Government of India's projections, between 2005-06 and 2014-15 the prevalence of under-three underweight children will decline from 40.4 percent to 32.85 percent. This translates into the overall decrease of 7.55 percentage points at an average annual decline at the rate of 0.83 percent. This average annual rate of change has been linearly distributed for each year since 2007 to obtain the 'actual' curve.

national income can be as high as two to three percent of countries' GDP (World Bank, 2006, pp. 1-2). For India, productivity losses due to malnutrition and micronutrient deficiencies were estimated to cost the country around \$114 billion between 2003 and 2012 (World Bank, 2006, p. 26). Not only does child under-nutrition affect cognitive development but is also a significant predictor of infant and child mortality. Poor nutrition weakens the resistance of children to several life-threatening infectious diseases and thus increases the risks of mortality among children (for an extensive review, see Pelletier, 1994). In India, 54 percent of the deaths among children below the age of 5 years are attributed to poor nutrition (Arnold, Parasuraman, Arokiaswamy, & Kothari, 2009, p. 14). Thus, the failure of India to reduce the levels of child nutrition as per its MDG commitments will likely have long-lasting impacts on its other development outcomes. This calls for urgent and effective policy action to attend to early life needs of children in India. As the Chilean Nobel-laureate Gabriela Mistral notes:

We are guilty of many errors and many faults, but our worst crime is abandoning the children, neglecting the foundation of life. Many of the things we need can wait. The child cannot. Right now is the time his bones are being formed, his blood is being made and his senses are being developed. To him we cannot answer "Tomorrow". His name is "Today".

(cited in Mamata & Sarada, 2009, p. 14)

The second indicator related to the proportion of people who suffer from the dietary energy deficits has had a rather controversial place in the Indian policy scene. In its first-ever MDG country report in the year 2005, it was estimated that at the base year of 1990, 62.2 percent of Indian population was undernourished by this measure. According to this baseline estimate, the MDG target value of 31.1 percent was set for the year 2015 (Ministry of Statistics and Programme Implementation, 2005). However, in the subsequent MDG reports published every alternative year in 2007, 2009, 2011, and then in 2014, no proper estimates on this indicator were provided. The reasons for this are hard to understand as the data on the dietary energy consumption for Indian population are collected periodically through the countrywide National Sample Surveys. One plausible explanation why

this indicator was dropped is that up until 2009, the calorie energy formed the sole basis of determining the poverty line in India. The individuals whose per capita daily expenditure was lower than what it took to meet the “minimum needs” of 2,400 and 2,100 calories in rural and urban areas, respectively, were classified as poor (Planning Commission, 1979, 1993). However, since the 1980s there has been a constant decline in the average calorie consumption across the different incomes classes, and both in rural and urban areas, even though poverty has declined and incomes have improved over the period (*inter alia*, Deaton & Dreze, 2009; Patnaik, 2004; Radhakrishna, 2005; Radhakrishna, Rao, Ravi, & Reddy, 2004; Rao, 2000; Sen, 2005). The recent evaluation of declining trend of calorie consumption in India for the period from 1983 to 2004-05 by Deaton and Dreze (2009) also suggests a striking fact that calorie consumption has declined despite the fact that the relative prices of food have remained unchanged. There is no single explanation for these trends, however, the plausible hypotheses include: i) improved epidemiological and health environment improving the conversion-efficiency of food (Deaton & Dreze, 2009); ii) increasing mechanisation of Indian agriculture as well as shift in the workforce structure from farm to non-farm sector, reducing the need for hard manual labour, and in turn, the calorie requirements (Deaton & Dreze, 2009; Rao, 2000); iii) voluntary move away from calorie-dense diets to better-tasting food with lesser calories (Banerjee & Duflo, 2011); iv) involuntary reduction in food expenditure in order to accommodate the non-food needs, such as increased education and health expenditure (Basu & Basole, 2012; Sen, 2005) and; v) increase in out of home eating, the extent of which is not covered in the national surveys (Smith, 2015).<sup>25</sup>

From the policy standpoint, however, the downward sloping calorie curve is subject to being interpreted as a sign of rising incidence of poverty in the country even though that may not be the case. In fact, this anomaly was highlighted in the India-MDG report for the year 2009 which suggested that while India was on track to reduce the people living below the poverty line (although this claim remains highly contested due to the low cut-off used to estimate the poverty line), the proportion

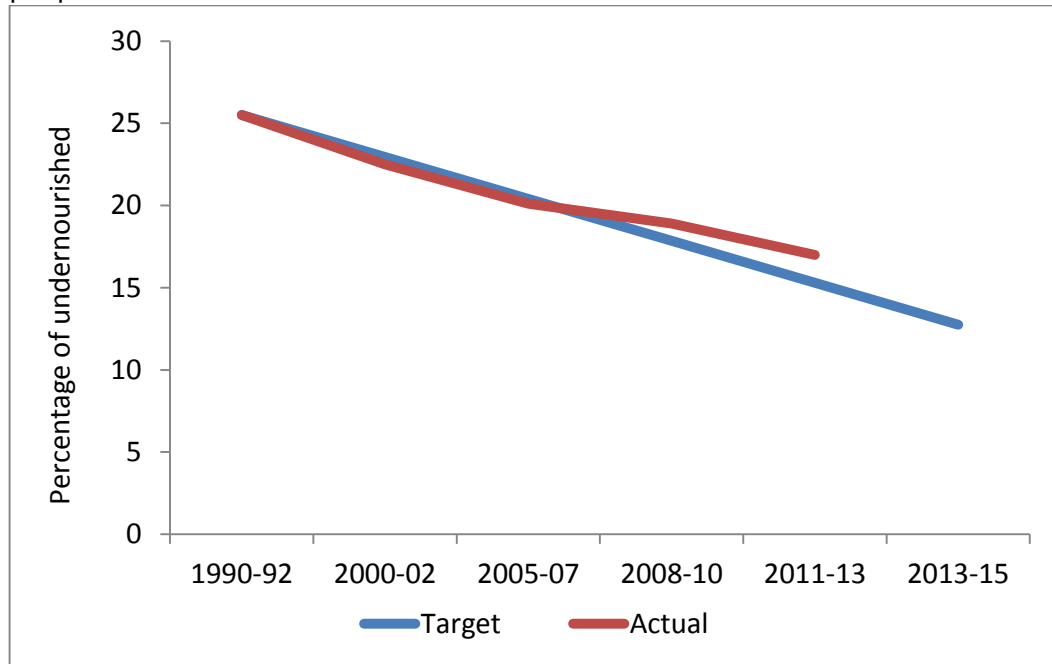
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<sup>25</sup> For a useful synthesis of calorie consumption, see Pritchard et al. (2014, pp. 34-39)



of population with dietary energy consumption below the norms was on the rise – increasing from 64 percent in 1987-88 to 76 percent in 2004-05 (Ministry of Statistics and Programme Implementation, 2009, p. 30).

Figure 3.2: India’s progress on MDG indicator of the proportion of undernourished people<sup>26</sup>



Source: FAO-SoFI (2013, p. 44)

On the other hand, the FAO, in its annual SoFI reports, provides the cross-country estimates on this indicator to assess the progress of world’s nations on the MDG goal target on hunger. In these reports, the prevalence of undernourishment is measured as a proportion of population whose actual dietary energy consumption is lower than the minimum dietary energy requirements (MDERs). The MDER norms vary by person’s age, sex, body weight, and level of physical activity and are calculated accordingly. Using these MDERs norms, the most recent estimates suggest that the proportion of undernourished people in India in the baseline period of 1990-92 was 25.5 percent of the total population. By these yardsticks, this should come down to 12.75 percent in 2015 if India is to meet its MDG goal. However,

<sup>26</sup> In the annual SoFI reports, FAO usually only provides the actual estimates on the proportion of undernourished people from the baseline year to the current period (which in SoFI 2013 was 2011-13). Since the MDG target is to halve the proportion of undernourished people in 2015 from the baseline figure, the target curve has been plotted using this logic. The purpose here is to not assess time trends in divergence but overall progress till date. Therefore, this graph must be interpreted in the same light.

during 2011-13, the proportion of undernourished people in India stood at 17 percent of the total population, indicating slow pace of decline (FAO, 2013b, p. 44). Given these trends, it is likely that India will fall short of achieving this MDG target by the year 2015 (Figure 3.2).

Additionally, in 2005-06, one-third of the Indian women of childbearing ages (15-49 years) had below normal BMI (IIPS & Macro International, 2007b, p. 309). The sheer magnitude of the undernourishment in India is reflective of the lack of policy attention given to attending the basic needs of country's population. Indeed, a decade ago, Dreze (2004, p. 1729) described the country's nutrition situation as a "silent emergency". Although recent years have witnessed reinvigoration of political interest on food and nutrition issues in India, with right to food now recognised as the constitutional right, much remains to be done. Moreover, the policy neglect of the past will take many years to make up for the current shortfalls. Not only will India falter on the MDG target on halving undernourishment, but given that poor nutrition has the potential to aggravate other outcomes such as increased risk of morbidity and mortality, it is likely that it will severely hamper India's progress more broadly. In fact, there are signs that India will not be able to achieve other MDG targets related to infant and child mortality and maternal health (Ministry of Statistics and Programme Implementation, 2014).

As the global development community gears up to set the post-2015 development agenda, food and nutrition security for all has emerged as the prominent goal within the wider post-MDG framework (United Nations, 2013b). With India accounting for nearly one-sixth of the world's population, and by recent FAO's estimates published in SoFI-2013, an equal proportion of world's undernourished people (Figure 3.2), India's progress will be crucial for the global attainment of any post-2015 development goal of hunger elimination.

### **Social, cultural and regional dimensions of food insecurity and undernourishment in India**

The discussion in the preceding sections has attempted to highlight, in a broad sense, the overall magnitude of the problem of undernourishment in India. However, India is a huge and diverse country with widespread interstate and

intrastate disparities, including in food insecurity and undernourishment. Moreover, the widespread gender inequalities in the country mean that women are more prone to food insecurity. Indeed India's failure to achieve the MDG targets on hunger is, in many ways, intimately related to these inequalities. The following discussion, therefore, discusses these social, cultural (gender) and regional dimensions of food insecurity in India.

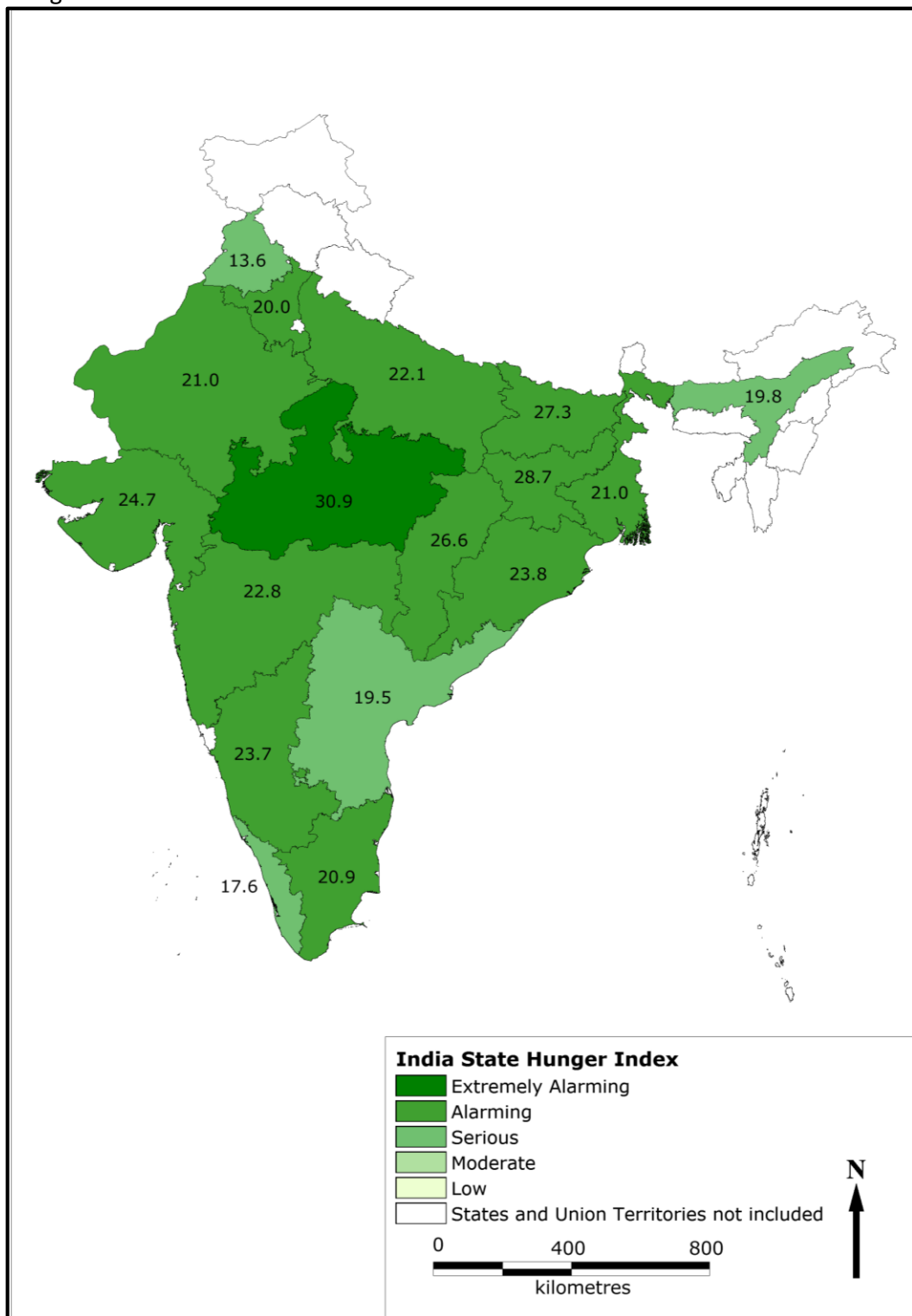
### ***Regional dimensions of food insecurity and deprivation***

Although the overall magnitude of undernourishment remains widespread in India, there is a substantial variability in the prevalence of food insecurity and deprivation across the different states, districts within states, and villages within districts. The past few years have, therefore, witnessed enormous research attention on identification of the "geographies of deprivation" in India (*inter alia*, Bakshi, Chawla, & Shah, 2015; Borooah & Dubey, 2007; Chaudhuri & Gupta, 2009; Debroy & Bhandari, 2003; Drèze & Khera, 2012).

At the state-level, the recent mapping of food insecurity by the International Food Policy Research Institute (IFPRI) provides important insights on the broader regional geography of undernourishment in India. Similar to GHI, IFPRI's assessment uses the SHI – a composite indicator that measures the performance of individual Indian states on three interlinked indicators of proportion of population with inadequate calorie intake, proportion of underweight children below the age of 5 years, and under-five mortality rate – to map the prevalence and severity of hunger in 17 large states of India. These states account for 95 percent of the country's total population. The SHI assigns equal weights to all three indicators, and based on their average score, ranks the states into 5 categories that reflect the severity of hunger. These include i) low (score of below 5), ii) moderate (5 to 9.9), iii) serious (10 to 19.9), iv) alarming (20 to 29.9), and v) extremely alarming (30 and more). The standardisation of indicators (and criteria) in SHI with those used in GHI is useful, for not only does it provide an inter-state comparison of hunger but also allow comparison of Indian states with other countries in the world (Menon et al., 2009).

Based on SHI values, Figure 3.3 presents the state-wise prevalence of undernourishment in India. As is evident from the data in the map, not a single state

Figure 3.3: State-wise prevalence of undernourishment in India according to State Hunger Index



Source: Own map using data from Menon et al. (2009)

falls in either 'low' or 'moderate' hunger category. Furthermore, barring four states of Punjab, Kerala, Andhra Pradesh, Assam that are in 'serious' category, the

remaining have 'alarming' levels of hunger, with situation in Madhya Pradesh in central India being 'extremely alarming'.

It is important to note that the overall high scores for most Indian states are largely because of the high prevalence of child underweight (Menon et al., 2009, p. 18). Despite this, a clear pattern of relative disadvantage emerges. In particular, the bottom four states (with SHI scores of above 25) include Madhya Pradesh, Jharkhand, Bihar and Chhattisgarh. These Indian states are among the most economically backward states, and form part of the undivided BIMARU states. (BIMARU is a Hindi acronym which means 'morbid', and was originally derived from the first letters of the four most socio-economically and demographically backward states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh; in 2000 Jharkhand and Chhattisgarh were carved out of Bihar and Madhya Pradesh respectively, and included as independent states in the Indian union. Later the state of Orissa was also added to the list and the acronym became BIMAROU. As noted in Chapter 1, these states are the priority states and are thus also known as EAG states.) In a recent exercise by Planning Commission that ranked the districts and sub-districts (or district blocks) of the country in order of their backwardness, 35 of 50 most backward districts were from these four states (and the number increased to 47 districts when the adjacent states of Odisha, Rajasthan and Uttar Pradesh were included) (Bakshi et al., 2015, see Annexure A). With the exception of Bihar, all these states have a significantly large proportion of Scheduled Tribe (Advasi) populations who, having suffered a historical neglect, remain extremely marginalised. Indeed the Planning Commission study quoted above finds a strong correlation between concentration of tribal population and backwardsness of the region (Bakshi et al., 2015, pp. 48-50).<sup>27</sup> The reasons for the backwardsness of Bihar, the broader case-study setting for the present study, are somewhat different and lie

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<sup>27</sup> To rank the districts and sub-district in order of their backwardness, the authors used population Census 2011 data on seven indicators. These indicators included: i) agriculture workers as a proportion of total workers; ii) female literacy rate; iii) households without access to electricity; iv) households without drinking water and sanitary latrine within premises; v) households without access to banking facility; vi) percentage of Scheduled Caste population; and vii) percentage of Scheduled Tribe population. Given the availability of data at the sub-district levels, these indicators best captured three components of backwardness, including economic development, human development and infrastructure development. These indicators were assigned equal weights to compute the ranking (Bakshi et al., 2015, pp. 46-48).

in the slew of problems including the burden of faulty colonial land settlement and revenue policies, historical caste-based inequalities in land and asset ownership (also a perennial cause of tensions and occasional violence), high demographic pressures and governance deficits (*inter alia*, Mukherji & Mukherji, 2012; Sharma, 2005; Singh & Stern, 2013; I discuss the reasons for Bihar's backwardness in details in Chapter 5).

Seen in international perspective, India ranked 66<sup>th</sup> out of the 88 developing and least developed countries of the world on GHI index for 2008.<sup>28</sup> And the hunger index scores of all bottom four states are comparable to some of the worst performing countries in the world. Thus, the severity of hunger in the worst performing state of Madhya Pradesh is greater than Chad (ranked 81 in the GHI), Mali (ranked 73 in GHI) outperforms Bihar and Jharkhand, and Chattisgarh is below Mozambique which is ranked 72 in GHI (Menon et al., 2009, p. 18, Table 4).

The SHI index is useful in that it points to the high inter-state disparities in the prevalence and severity of hunger in India. However, the prevalence of hunger and deprivation also varies across the different districts within the state. Indeed, pockets of backwardness and deprivation exist even in India's most developed states. As the Planning Commission study by Bakshi et al. (2015, p. 46) found: "...the remarkable characteristic of regional disparities in India is the presence of backward areas even within states that have grown faster and are at relatively high income levels on average." In terms of hunger, the authors noted:

Intrastate disparities are not just in terms of income, but also non-income indicators such as hunger... India's richest states include some of our "hungriest" districts. These include East Godavari, Khammam and Mahbubnagar in Andhra Pradesh, Fatehabad and Hissar in Haryana, Gulbarga in Karnataka, Malappuram, Palakkad, Thiruvananthapuram and Thrissur in Kerala and Kolhapur, Ratnagiri, Satara and Sindhudurg in

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<sup>28</sup> Note that since the GHI was first published in 2006, it has been annually updated. The most recent GHI is available for 2014. However, because the India-specific SHI has been, at the time of writing, published only once in 2008, rankings from GHI 2008 are used here for cross-country comparison.

Maharashtra. This is also true of other indicators such as infant mortality and literacy.

(Bakshi et al., 2015, p. 46)

The undivided BIMAROU belt states (including Jharkhand and Chhattisgarh), however, remain the bigger problem zone in terms of hunger and deprivation. Indeed, in a recent district-wise mapping of rural food insecurity in India by World Food Programme (WFP) and Institute of Human Development (IHD), India, seven of the eight states in which this exercise was performed were from the BIMAROU group, suggesting their significance (WFP & IHD, 2008a, 2008b, 2008c, 2008d; 2009a, 2009b, 2010).<sup>29</sup> Indeed, 89 of the 100 most backward districts identified by Bakshi et al. (2015) are also from the undivided BIMAROU states. A similar assessment by Drèze and Khera (2012) on the district-wise patterns of human and child deprivation using two composite measures of Human Development Index (HDI) and Achievement of Babies and Children (ABC) Index also finds the similar patterns of deprivation, with most of the districts in the seven states falling in the bottom and second bottom quintile of the HDI and ABC indices.<sup>30</sup>

It is also important to note that some of the districts within the BIMAROU group are intensely backward and most hunger prone regions of India. In particular, the Kalahandi-Balangir-Koraput (KBK) region of eastern Indian state of Odisha, and Baran district in Rajasthan, are the places where hunger and starvation deaths, particularly among the lower backward caste and tribal communities, continue to be reported (Banik, 2007; Dutta, 2014; Mishra, 2010; Nayar, 2014). The low caste and tribal status makes these communities even more vulnerable to the hunger and starvation, an issue to which I now turn.

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<sup>29</sup> The other state was Maharashtra. On the other hand, this was not done in Uttarakhand, a state which was carved out of Uttar Pradesh in 2000.

<sup>30</sup> HDI index measures the average performance in three indicators of income, education and health. District-level HDI index computed by Drèze and Khera (2012) uses three indicators. These include: i) child mortality; ii) adult female literacy; and iii) standard of living (p. 43). ABC index uses four indicators of child survival and well-being that include: i) probability of surviving until age five; ii) proportion of children fully immunised in the age group of 12-23 months; iii) proportion of children aged 12-35 months who are not underweight; and iv) female literacy rate in the 10-14 age group (p. 44).

### ***Social correlates of poverty and food insecurity***

In India, remarkable disparities exist in the levels of food and nutritional deprivation across different social groups. In particular, Scheduled Caste and Scheduled Tribe populations face a disproportionately higher burden of hunger and undernourishment. Although Scheduled Castes and Scheduled Tribes have been accorded special status in the Indian constitution and the post-independence development planning in India has sought to uplift their social and economic standing, a significantly large majority of them continue to be at the lowest rung of economy and society. Poverty, hunger, illiteracy and landlessness among Scheduled Castes and Scheduled Tribes remain exceptionally high (Planning Commission, 2013). Indeed, to bridge this gap, the Government of India operates several social support programmes such as income support in the forms of pensions, scholarships for children etc. However, their implementation on the ground remains ineffective. By the virtue of their low social and economic status, they often lack the voice and representation to claim what is rightfully owed to them and are cheated frequently (I discuss this in Chapter 6 based on my field research findings in rural Bihar).

Table 3.1: Percent of undernourished children and adults by social groups in India, 2005-06

<b>Social groups</b>	<b>Under-nutrition among children aged 0-59 months<sup>1</sup></b>			<b>Under-nutrition among adults aged 15-49 years<sup>2</sup></b>	
	Stunted	Wasted	Under-weight	Women with BMI>18.5	Men with BMI> 18.5
Scheduled Tribe	53.9	27.6	54.5	46.6	41.3
Scheduled Caste	53.9	21.0	47.9	41.1	39.1
Other Backward Caste	48.8	20.0	43.2	35.7	34.6
Other	40.7	16.3	33.7	29.4	28.9

Source: IIPS and Macro International (2007b, pp. 270, 304-306).

<sup>1</sup>Children with height-for-age, weight-for-height and weight-for-age two standard deviation below the median of WHO international reference population.

<sup>2</sup>BMI is measured as weight (in kilograms) divided by height (in meters) square (or, BMI = kg/m<sup>2</sup>).

Table 3.1 presents the NFHS data on the differentials in the nutritional status among



under-five children and women and men aged between 15 and 49 by social groups in India. Although the prevalence of under-nutrition remains high among all the social groups, compared to 'other' castes (a residual category comprising all non-backward caste groups), a significantly higher proportion of children, women and men belonging to Scheduled Caste and Scheduled Tribe groups are undernourished. For example, at 55 percent, the proportion of under-five underweight children among Scheduled Tribes is 20 percent higher compared to other groups. Similarly, 47 percent of Scheduled Tribes women of childbearing ages have a below normal BMI of 18.5 whereas the corresponding proportion of the women in the other category is 29 percent which is 17 percent lower than the former.

The NFHS's categorisation of social groups in India, useful as it may be in understanding the health and nutrition disparities across the different social groups in broad terms, does not however provide insights into the within caste and tribe inequalities in the levels of nutritional deprivation. Indeed, within Scheduled Castes and Scheduled Tribes, some communities are more disadvantaged than others. As an example, one such caste group is Mushahars who live in the parts of backward Indian states of Uttar Pradesh and Bihar. Known as the 'rat eaters', Mushahars are undoubtedly one of the most resourceless and disadvantaged caste groups in India. In an important book that brings together the stories of persistence of hunger and destitution among the most marginalised communities in India, Mander (2012) provides a gut-wrenching narrative on the life circumstances of the Mushahars living in eastern Uttar Pradesh and argues that hunger is an inseparable part of their lives which they have come to embrace it as their life-long companion. The children in the Mushahar households are taught to live without food from the early ages. Citing his conversation with the Mushahar womenfolk who told him what they do when their children cry for food, Mander (2012, p. 6) notes:

It is difficult for us to bear their weeping. When the wailing of infants gets too much, we lace our fingertips with tobacco or natural intoxicants and give our fingers to the babies to suck. We give them cannabis or khaina (local tobacco for chewing) or cheap country liquor. It helps them sleep even with nothing in their stomachs. If they are small, we sometimes beat them until they sleep. But as they grow older, we try to teach them how to live with

hunger. We tell them this lesson will equip them for a lifetime. Because we know that hunger will always be with them. It'll be their companion for the rest of their lives.

Similarly, the Sahariya tribe in the Baran district of Rajasthan is another case. Since 2002, the tribe has witnessed a wave of deaths among children due to starvation and undernourishment (Dreze & Khera, 2014; Dutta, 2014; Nayar, 2014). Reporting on the severity of undernourishment among Sahariya children in a recent piece in a popular Indian daily, Dutta (2014) described the situation of these tribal children as follows:

Two-and-a-half-year-old Prince Sahariya cries uncontrollably as his grandmother Shanti tries to make him stand but gives up as his weak and spindly legs refuse to cooperate. *“Hamara Prince bahut kamzor hai”* [my grandson Prince is severely undernourished], the doting grandmother offers apologetically, having brought him to the community health centre in Shahabad block in Baran district, Rajasthan... There are 18 other children with Prince in the 12-bed malnutrition ward, most exhibiting signs of severe malnutrition – from bloated stomachs to stunted growth. Without adequate medical staff, the health centre clearly has more than its fair share of young patients it can look after. Some children have even been accommodated in the entrance gallery, where they are being given nourishing food supplements to get them back on their feet. It's a scene that repeats itself across other health centres in the district, their malnourished children's wards filled to capacity, and then some more.

Not surprisingly, nutritional and health deficits remain a perennial feature of the lives of a majority of India's socially disadvantaged communities, stretching from one generation to another. In addition to the categories of caste and tribe, the other social markers of vulnerability to hunger include factors such as old age, widowhood, and gender. And when combined with low socio-economic status, these factors can further exacerbate one's proneness to poverty and food insecurity (Figure 3.4).

Figure 3.4: An old, widow woman from lower caste: multiple layers of vulnerabilities



Source: Picture taken during fieldwork in Siwan.

### ***Gender and food insecurity***

The aggregate caste and class differentials in food and nutrition deprivation need a further assessment by within-class gender categories. Within the household, differentials in food and nutritional outcomes of men and women can and often do exist. In many parts of the world the weak social and economic status of women often makes them more vulnerable to food insecurity. Indeed the evidence suggests that women are overrepresented among the food insecure people (Asian Development Bank, 2013). Although these differences may be in part due to the varying biological needs of men and women, more often than not they reflect the societal construction of gender and varying bargaining position of different sexes within the household (Sen, 1987).

The pervasive gender inequalities in India mean that the issue of sex differentials in food and nutrition has particular relevance in the Indian context. A range of studies have pointed out that the widespread persistence of son preference, particularly in the northern part of India, often manifests into intra-household distribution of food favouring males over females, and it has been invoked as the possible reason for

explaining relative survival disadvantage of females vis-à-vis males (Bardhan, 1974; Das Gupta, 1987; Miller, 1981; Sen, 1987, 1990; Sen & Sengupta, 1983).

However the relationship between gender, undernourishment and excessive female mortality often take differentiated and complex forms and is influenced by a range of other intersecting variables such as level of household wealth, landholdings and inheritance rights and cultural norms around the participation of women in the economic activities and their economic worth vis-à-vis men and so on. For example, in her study in rural Punjab, a state with strong son preference and excessively skewed sex ratios in favour of males, Das Gupta (1987) found that while girls fared worse than boys in the allocation of expenditure on food, clothing and health care, there were differentials across the households by landholding status (a proxy of household wealth in rural India) and girl children among landless households fared worse than the households with land (pp. 86-88). In other words, even though the girls got a disproportionate share in household wealth vis-à-vis boys in overall terms, the bigger resource pie worked to the advantage of the girls in the intra-family distribution of resources. As Bardhan (1974, p. 1301) suggests: "Where there is more food to go around in the family, the female may have better chances." On the other hand, other researchers suggest that because the patriarchal norms related to intergenerational land transfers favour men over women, the landed families may have an added pressure to favour sons over daughters to inherit property (Kishor, 1993, p. 249; Miller, 1981). Using the nationally representative NFHS-III survey data, Arokiasamy and Goli (2012, p. 89) found that the likelihood of women having an ultrasound test (sought mainly for sex-determination and female foeticide), induced abortion as well as female child mortality increased with the increase in size of landholding. Indeed, the sex ratios are much more masculine in Punjab, a state with higher average landholding sizes and per capita incomes compared with other states. As Das Gupta (1987, p. 89) also noted:

...female children may be neglected because their parents are poor, and, faced with difficult choices in allocating resources among their children, they give priority to children of the preferred sex. This does not tally, however, with the fact that the marked regional differences within India in sex ratio

imbalances in no way correspond to regional differences in per capita income.

Similarly, Rosenzweig and Schultz (1982) also found these discrepancies between micro and macro level data on the linkages between wealth and sex differentials in child survival rates. While their analysis of the household-level data involving 1331 rural households suggested that increase in household wealth positively influenced the survival prospects of girls, the district level data on landholding showed quite opposite results; female children relative to males were higher in districts where a greater proportion of population was landless.

These contrasting findings make it difficult to ascertain the extent to which gender-based discrimination in intra-household allocation of food leads to excessive female mortality. Indeed some researchers have questioned this claim. Drawing on the primary survey data on anthropometrics of children belonging to Uttar Pradesh and Tamil Nadu - two culturally diverse states with different gender norms – who lived in a slum in Delhi, Basu (1993) found no clear gendered pattern of undernourishment. The author argued that attributing gender imbalances in food distribution to survival disadvantage of female children is a hastily arrived conclusion, and is often a product of an assumption that “if women do badly on one count, they must do badly on all other counts as well” (p. 35). Another study by Griffiths, Matthews, and Hinde (2002) on child under-nutrition (under five children) in the three states of Maharashtra, Tamil Nadu and Uttar Pradesh found no differences by gender in underweight prevalence (weight for age z scores) by gender. However, as Udry (1997), Rose (1999), and Maitra and Rammohan (2011) have suggested, the failures to statistically unpack the gendered basis of undernourishment could be due to the fact that gender-based discrimination is manifested in higher mortality rates among girls during infancy, and that for surviving girls, there are no substantive gender differences.

Although whether or not treatment differentials in the intra-household allocation of food between boys and girls exist in India, there is no dispute, and much evidence, that female undernourishment has substantial intergenerational costs. When the undernourished women reach their reproductive ages, as mothers, they are likely to

bear the ill-nourished children. Indeed it has been invoked as one of the possible explanation for the South Asian enigma – the fact that the region fares worse on child nutritional outcomes than the Sub-Saharan Africa which has considerably higher levels of poverty and deprivation than the former (Ramalingaswami et al., 1996). Over the period, other countries in the region, such as Bangladesh, have improved their position on the gender-based indicators much faster than India (Dreze & Sen, 2013). Indeed, gender inequalities are more pervasive in India than most countries in the South Asia, and on the United Nations Gender Inequality Index 2014, India fared worse than all countries in the region, except Pakistan and Afghanistan (UNDP, 2014, pp. 172-175). And India's laggard performance vis-à-vis other South Asian countries on curbing the widespread gender inequalities mean that over the period the South Asian enigma has become increasingly more of an Indian enigma.

### **Agrarian stress, changing rural livelihood trajectories and dynamics of migration and urbanisation in India**

Accompanying these inequalities is another important issue – and one that cuts across these dimensions – of rural-urban disparities in food insecurity and undernourishment. As noted in Chapter 1, the problem of food insecurity in India is characteristically rural in nature. One important driver of this is the progressive fragmentation of landholdings over this same period. Between 1970-71 and 2010-11, the average landholding size in the country declined by more than half – from 2.28 hectare to 1.15 hectare (Ministry of Agriculture, 2014b, p. 14). These developments have profound implications for the rural livelihood systems, and by implication, for the food security of the rural populations. Indeed, the recent research by IFPRI has suggested that there exists an agriculture-nutrition disconnect in India (Gillespie & Kadiyala, 2012; Headey, 2011; Headey et al., 2011).

Not surprisingly, these processes are leading to restructuring of rural livelihood trajectories. As a consequence of the stress on the farm-dependent livelihoods, the significance of work migration, mainly to urban areas, has grown over the period. The national population Census data on employment trends provides some evidence in the regard, though recent trends remain confusing.

Using the data from the last two decennial population Censuses conducted in 2001 and 2011, Table 3.2 shows the number of main and marginal cultivators and agricultural labourers in rural India. The Indian Census enumerates the population in the two main employment categories of main and marginal workers, based on their duration of work. The ‘main workers’ are defined as those who worked for a period of 180 days or more in the year preceding the Census enumeration. And as a residual category, the workers enumerated as ‘marginal workers’ are those who worked for less than 180 days in the past year. These workers are then classified by the type of employment activity, such as cultivators, agricultural labourers, household industry workers, and so on (Registrar General of India, 2011a).<sup>31</sup>

Table 3.2: Cultivators and agricultural labourers in rural India, 2001-2011

Census year	Cultivators		Agricultural labourers	
	Main	Marginal	Main	Marginal
2001	101,345,252	23,374,495	60,517,788	41,913,430
2011	92,737,696	22,230,802	80,958,300	56,036,151
Absolute change during 2001-2011	-8,607,556	-1,143,693	20,440,512	14,122,721
% change during 2001-2011	-9.28	-5.14	25.25	25.20

Source: Registrar General of India (2001c, 2011b). The decadal %age change calculations are my own.

The analysis of this data suggests that during this inter-censal period the main cultivators declined by over 8.60 million and marginal cultivators decreased by 1.14 million. In percentage terms, the decline in the main cultivators was of over 9 percent, and marginal cultivators declined by 5 percent (Table 3.2). The data from

<sup>31</sup> It is important to note that while this classification of workers in the Census provides a good measure to assess the broader occupational structure in the country, because it enumerates each person in a single category it does not fully capture the occupational diversity for each individual. For example, the workers who report their main occupation as agricultural labourers may work in non-farm activities, either within or outside their village, for part of the year but Census does not capture their ancillary add-on activities.

the National Sample Survey suggest even more profound shift. According to this data, between 2004-05 and 2011-12, workers engaged in farming declined by 27 million (Mehrotra et al., 2013).

On the other hand, the Census data also shows that in the past decade the number of agricultural workers increased steeply by over 20 million in the main worker category and 14 million in the marginal category – an increase of over 25 percent in both categories. This increase in the agricultural labourers in rural India is rather puzzling. It does not reconcile with the evidence on shrinking of agriculture-dependent livelihoods. Thus while there were over 8.5 million less main cultivators in 2011 compared to 2001 which would generally be expected to be associated with decline in agricultural employment opportunities for the landless and land-poor populations, the number of main agricultural labourers has increased by more than twice as much. This increase could plausibly be explained by two inter-linked reasons.

Firstly, it is perhaps the case that increasing land fragmentation and the concomitant decline in the average landholding sizes is pushing the land-poor rural households to supplement their agricultural income by allocating household labour in wage work on others' land locally. Secondly, it may be that with the decline in land sizes, cultivator households are moving away from direct farming, and leasing it out to the landless and land-poor households for sharecropping farming. The household survey data collected for the present study confirms the intensification of land leasing and sharecropping arrangements in the case study district of Siwan (Chapter 7). At all-India level too, there is evidence that land-leasing in Indian agriculture has increased over the period which has given rise to a new category of farm households in rural India, labelled as “non-cultivating peasant households” (NCPHs). Using the nationally-representative National Sample Survey data, a recent study by Vijay (2012) estimates that between 1981 and 2002, the proportion of NCPHs doubled, and they now account for around 20 percent of rural households in India (p. 40). Although Census definition classifies an agricultural labourer as “a person who works on land owned by another person for cash or in-kind wages, with no right of lease or contract on land on which she/he works” (Registrar General of India, 2011a), the informal nature of much of the land leasing arrangements in India



means that Census enumeration is inadequately equipped to capture the nuances of these arrangements. It is, therefore, not inconceivable (and perhaps likely) that sharecropper farmers are classified as agricultural labourers in the Census. This also means that those who are leasing out land to pursue non-farm jobs are not classified as cultivators anymore, as they are no longer engaged in direct farming, and hence the drop in the number of cultivators.<sup>32</sup> In any case, the decline in the number of cultivators and a surge in the agricultural workers points to rising pressure on the agriculture-dependent livelihoods.

An expected manifestation of these developments in the country's rural employment landscape would be the rise in rural-urban migration for employment. Do national statistics indicate increasing levels of rural-urban mobility? At the outset, it is important to note that in India labour migration among the rural poor characteristically takes the form of seasonal and circular mobility, and the national-level data are ill-equipped to capture these flows in their entirety. The two major sources migration data at the national level include the decennial population Census, and the quinquennial rounds of National Sample Surveys. However, they usually cover the long-term movements, and severely under-estimate the temporary migration flows (Breman, 1996, 2010; Deshingkar & Akhter, 2009; Deshingkar & Start, 2003).<sup>33</sup> Nonetheless, the findings from the recently concluded population Census suggest a significant rise in the urban population growth in India over the last decade compared to previous decades. Whether or to what extent this can be attributed to the rural-urban migration is a question that deserves attention.

In an insightful analysis of urbanisation trends in India, a recent study by Bhagat (2012) shows that for the first time since independence, population increase in urban India was higher than rural areas of the country (p. 27). However, the urban

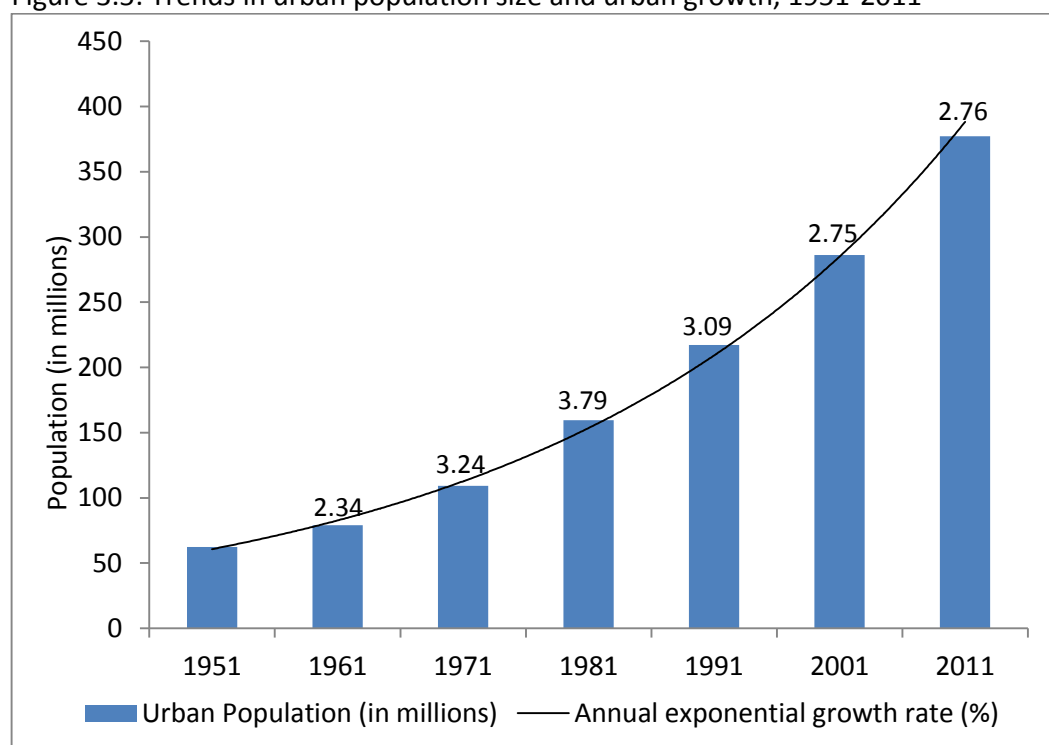
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<sup>32</sup> It must be noted that these emerging land-labour dynamics may have positive impact on the food security of the land-less and land-poor households, as by allowing access to land, land-leasing may reduce the dependence of poor household on market purchase of food and, in turn, protect them from the food price volatility that has characterised the global food markets over the recent years. I discuss this empirically in the specific context of case study district of Siwan in Chapter 7.

<sup>33</sup> More recent survey rounds of National Sample Surveys (55<sup>th</sup> and 64<sup>th</sup> rounds, conducted respectively in 1999-2000 and 2007-08) have, however, attempted to capture the extent of short-term migration in India.

population growth is not just the product of rural-urban migration but several other factors as well. The four important components of urban population growth include: i) natural increase (births minus deaths); ii) rural to urban migration; iii) classification of rural areas as urban towns;<sup>34</sup> and iv) changes in jurisdictional and municipal boundaries. Of all these factors, the natural increase has always played the most significant role in urban population growth in India (Bhagat, 2012; Bhagat & Mohanty, 2009).

Figure 3.5: Trends in urban population size and urban growth, 1951-2011



Source: Bhagat (2012, p. 28; Table 21).

Note that the annual exponential growth rates are based on the decadal Census data, with 1951 as the starting period. Thus, the annual growth rate of 2.34 percent in 1961 refers to the growth rate during 1951-61, 3.24 percent in 1971 for the decade of 1961-71, and so on.

<sup>34</sup> Based on the pre-determined definition, the Census classifies areas as either rural or urban. Since 1981, the definition of “urban” followed in the Census include the following criteria, a) All places with a municipality, corporation, cantonment board or notified town area committee, etc.; b) All other places which satisfied the following criteria:  
i) A minimum population of 5,000; ii) At least 75 per cent of the male main working population engaged in non- agricultural pursuits; and iii) A density of population of at least 400 persons per sq. km (Registrar General of India, 2011e, p. 1).

Figure 3.5 shows the trends in urban population growth from 1951 to 2011, and Table 3.3 present the population growth in rural and urban areas during the recent inter-censal period. As is evident from the data, the total urban population has grown steadily since 1951, and in 2011 it accounted for 377 million people. When the long-term urbanisation trends are compared with the data on population size and growth rate in rural and urban areas pertaining to the most recent inter-censal period of 2001-11, important findings emerge.

Table 3.3: Population size, distribution and growth by rural-urban residence in India, 2001-2011

Census year	Rural	Urban
2001	742,490,639	286,119,689
2011	833,463,448	377,106,125
Population increase during 2001-2011	90,972,809	90,986,436
Average annual exponential growth rate during 2001-2011 (%)	1.16	2.76

Source: Registrar General of India (2001c, 2011f). The growth rate calculations are my own.

Thus, between 2001 and 2011, urban population increased from 286 million to 377 million, whereas the population in rural areas grew from 742 million to 833 million. Although this difference in the population increase between rural and urban areas may not appear much (90.98 million in urban areas versus 90.97 million in rural areas) (Table 3.3), it is very significant when considering the fact that in the preceding decade (1991-2001), rural population increased by 113 million, whereas urban population grew by 68 million people (Registrar General of India, 1991, 2001c). It is important to note that 2011 Census data also suggests that there has been a reversal of trend of declining urbanisation growth of the last three decade of 1980s, 1990s and 2000s. The annual exponential rate of urban population was 3.79 percent during 1971-81 (the highest since 1951-61), which declined to 3.09 percent in 1981-91, and then further to 2.75 percent in 1991-2001. However, during the past decade, the average annual exponential population growth rate was 2.76 percent, thus reversing the past trend (Figure 3.5). Importantly, this annual exponential growth rate of urban population was also more than double than that

of rural population growth. This is despite the fact that natural increase in population (births minus deaths), which, as noted earlier, has always played the most dominant role in urban population growth (Bhagat, 2012; Bhagat & Mohanty, 2009), was slower in urban than rural areas. The data from Sample Registration System show that in 2001, the natural growth of population in rural India was 17.3 persons/1000 population which declined to 15.9 persons/ 1000 people in 2011, a decline of 1.4 persons/1000 population in 10-year period. Whereas the natural increase in urban population was 14.4 persons/1000 population in 2001 which reduced to 12.2 persons/1000 people in 2011, a drop of 2.4 persons which is almost double that of rural population (Registrar General of India, 2001e, 2011g). In the context of falling fertility, the pace of which is faster in urban than in rural areas, does this phenomenal rise in the urban population growth in the past decade indicate the rising rates of rural-urban migration?

The decomposition of incremental urban population by the relative contribution of its components by Bhagat (2012) suggests that of the 91 million people added to urban population during 2001-11, 43.8 percent (39.9 million) was from natural increase (of initial population plus inter-censal migrants), 20.6 percent (18.7 million) from the net rural-urban migration, and the remainder 35.6 percent (32.3 million) was contributed by the net rural-urban classification. This latter factor contributed most significantly to the reversal of trend of deceleration in urban population growth that characterised India's urbanisation story in the previous decades. Thus, whereas during 1991-2001, net rural-urban classification contributed 21.5 percent (14.5 million) to the total urban population growth, its share jumped dramatically to 35.6 percent (32.3 million) during 2001-11 (all data, Bhagat, 2012, p. 32, Table 5). Indeed, the increase in the number of urban towns during the last decade was greater than the last century; during 1901-2001 the urban towns increased by 2541 in all, whereas during 2001-11 a total number of 2774 new towns were added (Kundu, 2011, p. 15). The absolute share of net rural-urban migration in urban population growth also increased from 14.2 million during 1991-2001 to 18.7 million during 2001-11 (adding 4.5 million in total), though in percentage terms the share declined moderately; it was 20.8 percent during the previous decade, and 20.6 percent during 2001-11 (Bhagat, 2012, p. 32). In a nutshell, the evaluation of recent

migration and urbanisation trends in India suggests that while the urban population growth has accelerated in the recent decade, the share of rural-urban migration in urbanisation has moderately slowed.

The population Census data, however, captures the more permanent form of migration and severely underestimates the short-term mobility, as noted earlier. There is evidence that rural livelihoods are becoming increasingly multi-locational, and seasonal and circular migration has grown in recent years (Deshingkar & Anderson, 2004; Deshingkar & Farrington, 2009). Recent estimates by Tumbe (2011) from National Sample Survey data show that between 1993 and 2007-08, household dependency on remittances, as measured by the proportion of remittance-receiving households, increased significantly in India. In particular, significance of domestic remittances rose considerably, and in 2007-08, the internal domestic transfers amounted to US\$10 billion; and 30 percent of all household expenditure among the remittance-receiving households (estimated at 10 percent of all rural households in India) was financed by the remittances from migrants to their families. The rising significance of migration incomes can also be surmised from the data in Table 3.2 on the decline in cultivators and surge in agricultural labourers. In particular, the addition of 14.1 million agricultural labourers in the marginal category (those worked for less than 6 months in the year preceding Census enumeration) in the last decade warrants attention. It would perhaps not be absolutely incorrect to state that a majority of these workers engaged in supplementary income activities to make up for the employment deficits in farm sector for the remainder of the year. And although the employment in rural non-farm sector has also grown in recent years (Binswanger-Mkhize, 2013) acting as a buffer, urban areas have become more crucial in the overall framework of economy and job creation. Furthermore, the dominance of push factors notwithstanding, the more recent streams of temporary migration also involves new pulls, such as better urban incomes and improvements in infrastructure and communication networks (Deshingkar & Anderson, 2004; Deshingkar & Farrington, 2009). Using the recent round of National Sample Survey 2007-08 that sought to capture temporary migration, Keshri and Bhagat (2012) estimate short-term migrants to be around 13 million in India. Other informal estimates peg the number of people on the move in

any given year as between 40 million (Breman, 2010, p. 10) and 100 million (Deshingkar & Akhter, 2009, p. 3). Indeed, as noted earlier, circular migration has dominated the mobility streams in India since the beginning of twentieth century, and is an important reason which has kept the overall levels of urbanisation low in the country (de Haan, 1997a, 2002; Kundu, 2003, 2009; Kundu & Saraswati, 2012). Thus, the decline in the relative share of net rural-urban migration in Indian urbanization during the past decade, on the other hand, may be indicative of rising circular migration.

The reasons for high circular labour mobility are highly complex, however, based on the available evidence and literature there are three main explanations for this. Firstly, the economic development trajectory in India has prevented more permanent form of mobility. The structural transformation in India is characterised as “stunted” (Binswanger-Mkhize, 2013). In particular, while the informal sector already accounts for a vast majority of employment in India (more than 90 percent), in the period following the liberalisation reform most of the jobs have been created in this sector of the economy. The estimates derived by the National Commission for Enterprise in the Unorganised Sector (NCEUS) based on National Sample Survey data suggested that out of the total increase in employment from 397 million to 457 million between 1999-2000 and 2004- 05, informal employment increased by 61 million (from 362 million to 423 million). In contrast, employment in the organised sector witnessed a marginally negative decline, from 35 million to 34.9 million during the same period (NCEUS, 2007, p. 4). Urban employment in the lower echelons of the economy, which employs the poor and unskilled populations, has been almost exclusively in the informal sector. This has augmented circular mobility, for precariousness is one of the principal features of informal sector (Breman, 1985, 1996, 2007, 2010). It must be noted that even the urban incomes from informal jobs are often higher than the rural wages. Indeed, the urban informal employment still provides a valuable means of employment to a vast majority of poor and unskilled populations to make up for the livelihood deficits they face in the rural areas. Moreover, more recent evidence shows increase in the regular/wage salaried employment as opposed to casual employment (Mehrotra et al., 2013, p. 88).

The second issue pertains to the exclusive nature of Indian urbanisation in the post-reform. According to (Kundu, 2003, p. 3085), the low rates of permanent rural-urban migration are because of the changing urban milieu which has become increasingly hostile for rural-urban migrants. The new urban governance agenda, involving increasing privatisation of land and civic amenities and consequent increase in the cost of living in urban areas, is what has prohibited the rural populations to settle in the urban areas on a more permanent basis and slowed down the tempo of urbanisation. On top of it is the increasing hostility of the urban residents to accept the rural poor in urban areas. For instance, in Mumbai, many citizen groups and resident organisations, such as Bombay First, CitiSpace, Khar Residents Association, Association of Clean and Green Chembur, have active and vociferous campaigns against the street hawkers, most of whom are migrants from the poorer Indian states of Bihar and Uttar Pradesh (Balakrishnan, 2003; Choithani, 2009).

These structural fissures that have come to characterise the contemporary Indian economy notwithstanding, a range of individual and social and cultural reasons also explain the low rates of permanent rural-urban migration. As explored in the work of Munshi and Rosenzweig (2009), the local, caste-based networks in rural India play an important role in restricting the permanent mobility. The permanent change in residence implies less frequent interactions with natal villages and community. However, the absence of either comparable or more efficient insurance mechanisms acts as an incentive for the rural populations to stick to these networks for social insurance. This is particularly significant in the context of increasing employment informalisation in India, as noted earlier. Secondly, the social and cultural conventions in India pose restrictions on female mobility for work. In particular, in much of north India, labour migration is an exclusive preserve of men while the women stay in the origin place. In turn, this provides an incentive for men to return (Chapter 5 and Chapter 8).

## **Conclusion**

This Chapter has highlighted the broad dynamics of food insecurity, migration and urbanisation in India. Beginning with the assessment of country's progress on the

MDG goal target of hunger and undernourishment, the discussion has pointed out that India's performance has been highly dismal on this front. Undernourishment remains highly pervasiveness in India, and the rapid economic growth over the past two decades has not made any significant dent in curbing the levels of hunger, as experienced in other countries, such as China. Indeed, India's experience has been crucial in triggering a shift in the official policy thinking that earlier rested on the assumption that economic growth will lead to an automatic decline in hunger and food insecurity. This shift in stance is reflected in FAO's SoFI-2012 which bore the subtitle that read as "economic growth is necessary but not a sufficient to accelerate reduction of hunger and malnutrition" (FAO, 2012). For the economic growth to reduce undernourishment, it has to be inclusive and pro-poor which is far from true in the case of India. As the assessment of the factors underpinning India's laggard performance in reducing undernourishment has shown, the faltering progress of India in meeting the MDG goal on hunger is, in many ways, linked to the uneven distribution of benefits of economic growth across the lines of geography and socio-cultural groups, mainly including the Scheduled Caste and Scheduled Tribe populations and women. The states in the undivided BIMARU belt still remain economically backward vis-à-vis other Indian states, with most districts in these states having poor showing on food insecurity and key human development indicators; the impact of economic growth on improving the living standards of the country's marginalised social groups has been extremely slow; and the subjugated position of women within the household has resulted in continuation of poor nutritional outcomes in an intergenerational fashion.

In the final major section, the Chapter has pointed out that the problem of food insecurity in India is largely rural in nature. Moreover, the changing contours of the economic growth over the recent period, in which the overall significance of agriculture as a source of livelihood and food security has declined, is changing the sources of food security. Rural-urban migration for work is becoming increasingly significant in the lives and livelihoods of an increasing number of India's rural dwellers. An evaluation of the recent urbanisation trends, however, indicate low levels of permanent migration to urban areas, and increased circular mobility because of the growth in the urban informal employment, changes in urban



governance including factors such as the privatisation of basic civic amenities. The low incomes from the urban informal sector jobs and prohibitively high costs of living in the cities have kept the labour migration flows circular. These processes have also led to urbanisation becoming more exclusionary in nature. At the same time, it is also true that urban informal sector provides a refuge to the millions of migrants who come to cities for work; without it, the migrants and their families at the origin would be much worse off.

This begs the question of whether and how migration relates to household food security outcomes, the main objective of this research. In the next two chapters (Chapter 4 and Chapter 5), I outline the methodology and provide the research context before presenting my empirical findings on the linkages between migration and food security.

## **4 RESEARCH METHODS AND MATERIALS**



## CHAPTER 4: RESEARCH METHODS AND MATERIALS

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### Introduction

Systematic evidence on the connections between migration and household food security remains scarce in the Indian context. In the three analytical chapters that follow, an attempt is made to tease out the interdependencies between these two variables. However, beforehand, this Chapter provides an overview of the methods and materials used to generate these insights. As noted earlier, this research uses the case-study approach, primarily involving data collected through *household surveys* of 392 rural households, including 197 migrant households and 195 non-migrant households. In this study, a migrant household was defined as one with at least one migrant member who stayed away from his usual place of residence for employment reasons for the period of 60 days or more during the last 365 days (Appendix 1). Households were strategically selected from 10 villages of the western district of Siwan in Bihar. The selection of Siwan district, villages within this district and households within the villages was done on the basis of strategic and scientific considerations, as the discussion in the later section of this Chapter reveals. Primarily, this selection involved using key migration and food security indicators.

Additionally, two other research methods were used in the study. These were: i) *key-informant interviews* with the members of the local village councils, known as Gram Panchayats (GPs), and other village residents, who were deemed to possess knowledge on village affairs; and ii) *unstructured interviews with migrant members* (a total of 10 migrants were interviewed) of the rural households at their destination places (where they were working at the time of interview). The village household surveys and key-informant interviews were conducted during April-May 2012 and interviews with migrants were carried out in June 2012. Following a little more than a year of analysis of the household survey data, the case study villages were visited again (during September-October 2013) to obtain more qualitative data.

With this brief overview, this Chapter discusses each method of data collection separately and what they sought to achieve for the purpose of this study. Firstly,

however, I address the sampling design and discuss the considerations and steps involved in selecting the case-study district, study villages and sample households as well as the individual migrants belonging to the surveyed migrant households. Key definitions of concepts used in the methodology (for example, migrant and non-migrant households), food security indicators, survey reference period etc. are discussed in Appendix 1.

### **Sampling design for household surveys**

As has been noted earlier, migration has traditionally been a central component of livelihood strategies of rural households of Bihar. However, currently there are 38 districts, 534 sub-districts (called 'blocks' in local parlance) and more than 44,000 (revenue) villages in which the state's over 100-million people reside (Government of Bihar, 2014e). Given the scope of this PhD research, covering this vast geography in its entirety was obviously not possible and thus the study required devising a sampling strategy which allowed the main objective of this research to be fulfilled. Since the study focused on rural households, a *three-stage sampling* procedure was adopted to select the household sample which is described as follows:

#### ***District selection***

The first stage of the sampling involved narrowing the geographic focus down to a single district within Bihar. The selection of study district was guided by the logic of choosing a district with a high incidence of inter-state outmigration. Using the Indian Census 2001 data on migration<sup>35</sup>, the district-wise outmigration rates were calculated for the all the districts of Bihar. The Census D-series, which is migration data series, provides data on both the inflow and outflow of migrants till the district

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<sup>35</sup> When this study was conceptualised in the year 2011, data from the most recent decennial population Census of India, conducted also in 2011, was still being compiled and thus was not available in the public domain. Hence, the migration statistics pertaining to 2001 were used. It is important to note that although some data pertaining to the 2011 Census is made now made available to the public for research and analysis purposes, detailed migration data tables have not yet been released. Given the complexity of the migration flows, it usually takes a longtime to compile the migration tables. For example, migration data pertaining to 1991 population Census was released only in 1997 (Bhagat, 2005, p. 9).

level. This data was used to compute the district-wise outmigration rates for Bihar.<sup>36</sup> The outmigration rate was computed by dividing the 'total number of outmigrants' from the district to the 'total district population'. It is important to note that although this study focused on rural outmigration, the outmigration was calculated for the districts as a whole and not by rural-urban residence separately. This was done considering the fact that most of the 38 districts of Bihar had less than 10 percent of the population living in urban areas and thus the combined rural-urban district-level figures on outmigration were largely reflective of the rural outmigration scenario. According to these computations from the Census 2001 statistics, the southeastern district of Munger had the highest outmigration rate, with 5.2 percent of the total population classified as inter-state migrants in 2001.

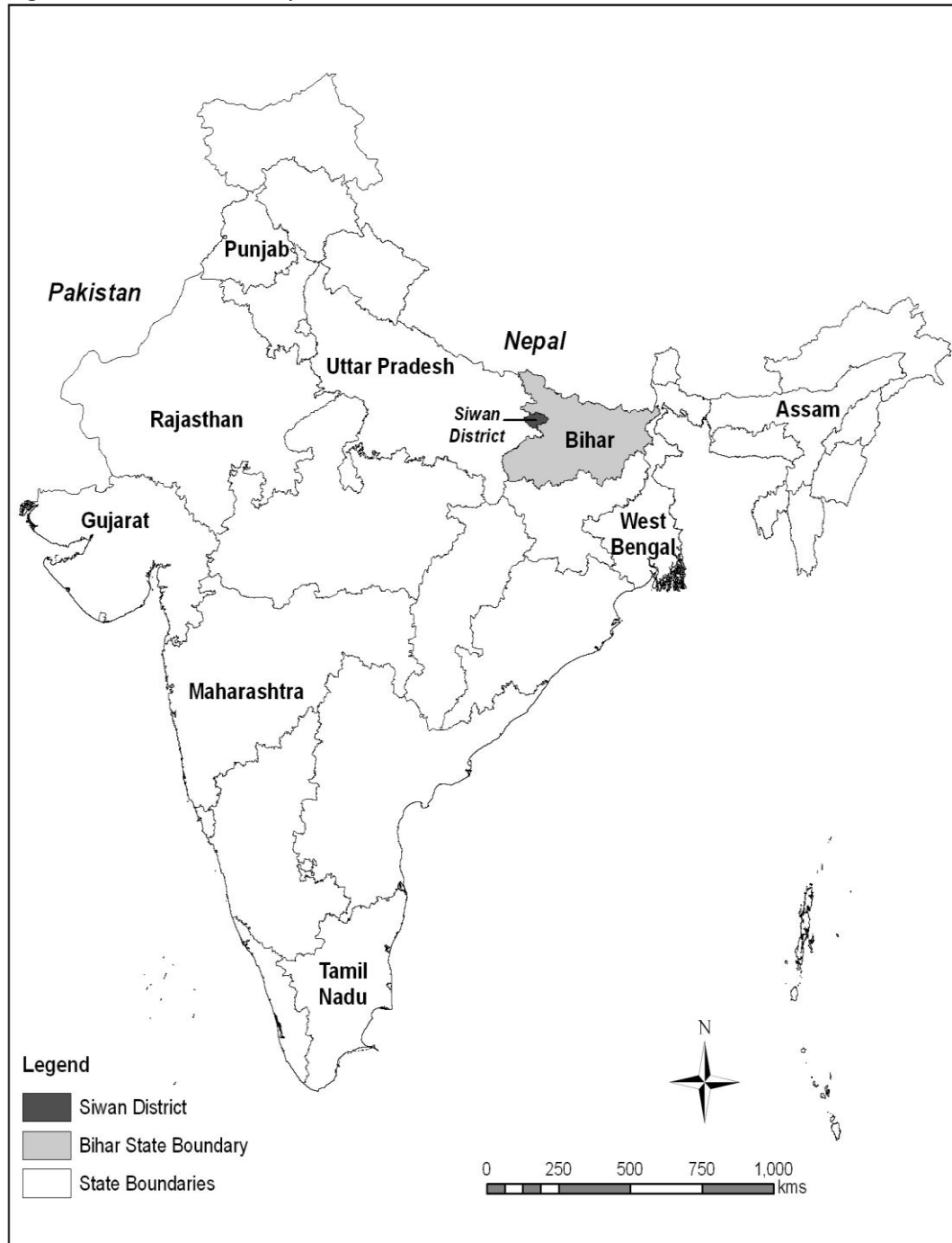
However, this district is one of 106 districts of India affected by the left-wing extremism<sup>37</sup> (Ministry of Home Affairs, 2013) and due to the safety reasons, in accordance with the safety protocols of the Human Ethics Research Committee at the University of Sydney, Munger District was not selected. Instead, the western district of Siwan in Bihar (Figure 4.1), which had the second highest inter-state outmigration rate of 4.9 percent, was chosen as a case-study site. Consistent with the overall levels of urbanisation in Bihar, 94 percent of Siwan population lived in rural areas in 2001 (all data, Registrar General of India, 2001b).

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<sup>36</sup> Note that because the Census data provides in-migration and outmigration from each of over 600 districts, these computations are rather cumbersome and require tallying in-migration and out-migration figures from all these districts. (Other categories include male/female, and rural-urban.)

<sup>37</sup> The phenomenon of left-wing extremism in India is considered as a serious security threat to the country. It is premised on the indifference of the political class to the plight of India's most disadvantaged groups, mainly the tribal populations of the country. The extreme-left movement in India seeks to overthrow the current rule which it considers unjust and consequently, the instances of violent clashes between extreme-left foot soldiers, known as Naxalites or Maoists and India's security forces are not uncommon. The left-wing extremism prevails in several parts of India in varying degree and parts of Bihar, particularly the southern part of the state which also includes Munger, is also affected by it. Recently, in the first phase of independent India's 16th general elections conducted in 91 constituencies on April 10, 2014, the Maoists ambushed the security force personnel in Munger district, killing two government soldiers (The Hindu, 2014).

Figure 4.1: The case-study district of Siwan, Bihar



Source: Own work.

Note: The borders of this map do not purport to be the official borders of India.

### ***Selection of villages***

Since this study focuses on rural households, the second stage of sample selection involved the selection of villages within the study district. According to Census 2001, the district of Siwan had 1438 villages (Registrar General of India, 2001c). Out of this gigantic number, 10 villages spread across 9 blocks were chosen. The selection of

villages was undertaken randomly (as discussed below), however, of beneficial relevance to this study, these 10 villages provided large within-district geographic heterogeneity for the household sample finally selected.

In broad terms, the selection of villages in Siwan was based on the pattern of migration from the district. A living standard survey conducted in the states of Uttar Pradesh and Bihar in 1998 by the World Bank revealed that 95 percent of labour migrants from Bihar were males (cited in Deshingkar et al., 2009, p. 142). Given the male dominated pattern of migration in Bihar, it was considered pertinent to use the sex ratio for the population aged 6 years and above (hereafter  $SR^{6+}$ ) as a parameter to choose the villages using the Census 2001 data. The  $SR^{6+}$  in this study was computed as number of females aged 6 years and above per 1000 males of the same age group [or,  $SR^{6+} = 1000 \times (\text{Females}^{6+} / \text{Males}^{6+})$ ]. The  $SR^{6+}$  was used considering the fact that population under the age of 6 years is not exposed to labour migration. (Taking the sex ratio of population aged 10 years and above would have been ideal, however, the village-level Indian Census data do not provide single year age-returns and thus data constraints did not permit the same.)

The use of  $SR^{6+}$  was guided by the fact that villages having high  $SR^{6+}$  (more females than males) will likely have high outmigration rates. Thus, as per the statistics all the villages were sorted out in descending order of  $SR^{6+}$ , from highest to a lowest minimum of 1000 females per 1000 males.<sup>38</sup> This  $SR^{6+}$  cap of 1000 provided a list of 1061 villages. However, the number of households varied significantly from one village to another – from 1 household in Mirzapur village of Raghunathpur Block<sup>39</sup> in the south-west of Siwan to 2220 households in Sarari village of Goriakothi Block located in the north-eastern part of the district. Hence out of these 1061 villages, all the villages with less than 200 households were removed. This was done to facilitate

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<sup>38</sup> In almost all countries, sex ratio at birth tends to be biologically slightly skewed in favour of men over women. In other words, males tend to outnumber females at birth. Although this sex ratio at birth varies, it has generally been observed that for every 100 female births, there are 105 male births (or 1000 female births per 1050 male births). However, this gap in the sex ratio tends to equalize at the advanced age groups with women having higher survivorship rates than men, all other things being equal (see, *inter alia*, Anderson & Ray, 2010; Sen, 1992; Visaria, 1967; Waldron, 1976, 1983). And since this study uses the sex ratio of population aged 6 years and above,  $SR^{6+}$  should ideally be close to 1000 and hence the same is assumed.

<sup>39</sup> Three villages of the same name i.e. Mirzapur within the Raghunathpur Block were recorded in the Census 2001 data, which had different household and population sizes.



the selection of sample households from fewer large villages rather than going around the whole district which would have been too time-consuming for this PhD research. With the help of this household-number filter, a total number of 497 villages was obtained. These 497 villages were assigned numeric codes in descending order of the  $SR^{6+}$  and 10 villages were finally chosen using a random number selection process.<sup>40</sup> The list of villages chosen is provided in the Table 4.1.

Table 4.1: List of sample villages in Siwan, Bihar

S. No.	Block Name	Village Name	No of Households in the village	Total Population of the village	Village $SR^{6+}$ [1000*( $F^{0-6}/M^{0-6}$ )]
1	Maharajganj	Chak Mahmuda	208	1407	1170
2	Barharia	Jagarnathpur	203	1370	1154
3	Siswan	Gayaspur	1138	7866	1153
4	Basantpur	Kanhaul	425	2884	1137
5	Daraundha	Satjora	383	2696	1136
6	Hussainganj	Baghauni	403	3033	1121
7	Hasanpura	Gay Ghat	638	4557	1096
8	Goriakothi	Karanpura	255	1701	1073
9	Maharajganj	Gaur	248	1613	1071
10	Darauli	Punak Buzurg	304	2334	1071

Source: Primary Census Abstract for Bihar, 2011 (Registrar General of India, 2001c).

Note: The villages are arranged by high to low sex ratio order.

It is important to note that SR is not just affected by migration alone, but also by a wide range of socio-cultural factors. Indeed SR serves as an important parameter to assess the overall status of women in the society. This is particularly relevant in India. As already noted in Chapter 3, a number of studies have highlighted that the phenomenon of strong son-preference, particularly among the Hindu caste groups

<sup>40</sup> For this purpose, the Statistical Package for Social Sciences software was used.

in the northern India, often manifests into household distribution of resources, such as food and health care, discriminating against females, and it has been invoked as a possible reason for skewed sex ratio in favour of males (Das Gupta, 1987; Miller, 1981; Sen, 1987, 1990; Sen & Sengupta, 1983). Son preference is deeply entrenched in the rural society in Siwan, and indeed in Bihar as a whole. In terms of the methodology employed in this thesis, this means that in the presence of widespread discrimination against the females, female-male sex ratio at parity and above point to the importance of migration. Indeed, this was the overall logic for choosing the villages with SR<sup>6+</sup> of 1000 or above.<sup>41</sup>

### ***Selection of households***

The selection of surveyed households in the study villages involved two major stages which included: i) determining a sample size of number of households to be interviewed; and ii) identifying the households to be included in this study.

### **Sample size determination**

With the list of 10 villages finally selected on the basis of sex ratio and number of households, the third stage was to select the households. Following the district selection (described above), a sample size of 400 households was statistically determined to be adequate for this study. While the identification and selection of case-study sites, both district and villages, was done on the basis of indicators of migration (as the main objective of this study is to understand the impact of migration on food security), the number of households to be interviewed was arrived at using the data on the prevalence of food insecurity, the second key (and main dependent) variable, in the district. The prevalence of underweight among children below the age of 6 years, as estimated by India's District Level Household Survey (DLHS) II, 2002-04, was used as a proxy indicator for food insecurity.

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<sup>41</sup> Note that the sex ratios among tribal populations of India tend not to be as heavily skewed in favour of males as those among Hindu caste groups. Thus, by the same token, a sex ratio of closer to parity in villages with a high concentration of tribal populations would not necessarily indicate a high incidence of outmigration. It is only when the sex ratio in favour of females is higher than parity that migration becomes important. This does not, however, apply to study villages as almost 80 percent of the households in the surveys were Hindus.

Matching this with other appropriate indicators helped to scientifically determine the sample size of the households to be included in this study. The sample size was arrived with the *standard error* (expressed as  $\alpha$  below) of 10 percent which means that the differences in the estimates obtained from the sample of households are likely to be within the 10 percent range (positive/negative) of the characteristics of the true or whole population. The formula with which the sample size was determined is as follows:

$$n = \frac{z^2 * p * q * m * d}{(\alpha * p)^2 * \text{Average HH size} * \text{Proportion of under 6 children}}$$

where,

n = sample size

z = 1.96 (95 percent confidence co-efficient)

m = 1.1 (non-response adjustment or 10 percent oversampling for non-response)

p = 55.8 (proportion of underweight children below 6 years of age in Siwan district, as estimated by DLHS II, 2002-04).<sup>42</sup>

q = 1 – p

d = 1.701 (child underweight design effect<sup>43</sup>, as used in NFHS III, 2005-06)

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<sup>42</sup>This figure on the underweight prevalence among children refers to the children in the age group of 0 to 71 months whose weight for age was minus two standard deviation below the growth standards developed by the National Centre for Health Statistics' (NCHS), alternatively known as the NCHS/WHO growth standards. For the district level figures on under-weight prevalence among children (as well as the methodology used to arrive on these figures), see the national nutrition report based on the DLHS 2002-04 survey by Ladu Singh, Bhat, Ram, and Paswan (2006). It should also be noted that a more recent round of DLHS survey was conducted in 2007-08. However, it did not collect information on the child nutritional indicators.

<sup>43</sup>The design effect refers to the standard error arising from a given sampling design (in this case, sampling design opted for this study) to the standard error that would result if a simple random sample had been used (IIPS & Macro International, 2007a, Appendix C, p. 1). The NFHS-III has calculated design effect for different variables and in determining the sample size for this study, the design effect value for under-weight children below the age of 5 years, as calculated by NFHS-III, was assumed (for the design effect values for different variables, see IIPS & Macro International, 2007a, Appendix D, pp. 25-29)

$\alpha = 0.1$  (10 percent significance level)

Average household size = 7.1 person (computed using the 2001 Indian Census data on 'total population of Siwan district' and 'total number of the household in Siwan').

The formula used is:

$$\text{Average household size} = \frac{\text{Total population of the study area}}{\text{Total number of households in the study area}}$$

Proportion of under 6 children = 20.25 percent (calculated using 2001 Indian Census data for Siwan district on the number of 'children aged 6 years or below in Siwan' and 'total population of Siwan'). The formula used is:

$$\text{Proportion of under 6 children} = \frac{\text{Total children below 6 years in study area}}{\text{Total population of the study area}}$$

Putting the corresponding values of factors, we get:

$$n = \frac{(1.96)^2 * .558 * .442 * 1.1 * 1.701}{(0.1 * .558)^2 * 7.1 * 0.2025} = 396 \text{ households}$$

Hence, the total sample size for this study was taken as 400 households, with an equal representation of migrant and non-migrant households. It must be mentioned that the sample size of 400 households also includes the non-response rate of 10 percent. This means that interviews with a sample of approximately 360 households would satisfy the study objectives to be adequately fulfilled. However, in total 392 surveys were conducted, a response rate of 98 percent which was 8 percent higher than expected.

After the sample size for the household surveys was determined, the next step required ascertaining which households from the case-study villages should be interviewed. Preliminary visits in the study villages suggested that even though the villages varied in terms of number of households and population size, as is evident from the Census data presented in Table 4.1, they represented a homogenous group insofar as some of the characteristics relevant to this study were concerned. For example, all the villages had defunct infrastructure such as roads, transport, electricity (electrical poles in the villages generated some future hope!) and the

government-operated food and livelihood safety net programmes were dysfunctional. Secondly, though agriculture was the main source of local livelihoods, most households possessed unusually small landholdings and thus depended on either local or migratory or a combination of local as well as distant, non-farm sources to supplement household incomes.<sup>44</sup> At the individual level, migration was highly gender segregated, with the vast majority of migrants being males.<sup>45</sup> Given this homogeneity, it was considered that a uniform sample of 40 households, including 20 migrant and 20 non-migrant households, from each of the 10 case-study villages would be drawn, given a total sample size of 400 households.

It is important to note that even though scientific sample selection methods form a key component of the overall research methodology employed in this study, this thesis does not attempt at *mere* quantification. The aim of this study is *not* to generate statistics on, say, the extent of migration or the prevalence of food insecurity in Siwan (for which ‘Probability Proportion to Size’ (PPS) method is probably better suited: Deaton, 1997). Rather, this research seeks to understand the links between migration and food security using empirical data. A uniform sample design served this purpose well. One advantage of this uniform design was that it also helped to obtain in-depth qualitative narratives on households’ food security situation and migration decisions from each of the villages in a balanced manner, which, in turn, lent methodological merit to this study. As the analytical chapters will show, the statistical data obtained through household surveys is used in conjunction with the qualitative insights collected through the same household surveys, and numerous other informal discussions. By its very nature, the PPS method would have given more weight to larger villages for eventual household sample. In effect, this would have meant spending more time in bigger villages at the expense of smaller units which were equally important in terms of qualitative data. In any case, the quality and representativeness of the survey estimates is also

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<sup>44</sup> The household survey data captures this fragmented pattern of agriculture landholdings in Siwan. More than 80 percent of the surveyed households had landholding sizes of less than one acre.

<sup>45</sup> All the sample migrant households in this survey had male migrant members. Village-level investigations, however, revealed that there were a few exceptions to this broad pattern in which female members of the households joined their male counterparts, though due to the preponderance of the households with male migrants, the latter did not form part of the sample.

contingent upon a range of non-sampling errors (e.g. errors arising because of respondents' ability to comprehend the survey question, errors during data processing) and because of this, some commentators have raised questions on the *absolute* value of probability sampling (Ward, 1983). As for the household selection in villages of varied size, larger villages were segmented into smaller units through mapping and house-listing exercise, to which I now turn.

### **Mapping and house-listing**

Data from the Census 2001 provided information on the number of households in each of the selected villages, however, information on whether or not the households had member(s) who engaged in work migration was not available in the Census data. Thus, in order to select the survey sample of 40 households from each of the case-study villages, the migration status of the household needed to be ascertained beforehand. To do this, a *mapping and house-listing* exercise, similar to the one carried out in India's NFHS and DLHS, was performed (for example, see the mapping and houselisting manual for DLHS-III by IIPS, 2007). This exercise involved three steps to select the household survey sample which is described as follows:

#### *a) Segmentation of villages into smaller units*

Firstly, as is evident from the Table 4.1 above, the 10 case-study villages had 4205 households in total in 2001 (and the number of households at the time of survey was much greater, given the present study was conducted more than 10 years after Census 2001). Understandably, it was not possible to go door-to-door to ascertain the migration status of all households in the case-study villages for sample selection. Therefore, villages with more than 300 households were segmented in smaller units with each of the segment typically comprising of between 100 and 150 households. The segmentation criterion of 300 households was guided by the fact that from each village, irrespective of the number of households, two segments were to be included in the sample frame. This meant that there needed to be at least three segments to choose two from and with the segment size pegged at 100 to 150 households, this arithmetic suited the methodological plan. This segmentation process followed already existent natural boundaries or demarcations in the village so long as each segment yielded a size of 100 to 150 households. This

included, for example, hamlets of households from different social/caste group (Yadav hamlet and/or Dalit hamlet etc.) or households living on two/opposite sides of common village property such as temple/mosque or village school. In cases where such already existent demarcations did not satisfy the segment size norms, small segments were merged into large ones. This was done to have a large enough sample universe to choose the sample of households from. This exercise was done in 7 of the 10 case-study villages.<sup>46</sup>

The main aim of the village segmentation was to provide an organising rationale for selection of the household sample from the bigger universe of households scattered across a large geographical area<sup>47</sup>, but in a manner that yielded an unbiased and representative sample. The settlement patterns in the Indian villages are often based on caste i.e. members of one caste tend to live close to each other and rural Bihar is no exception to this norm. Although high population densities and resultant pressures on land in most parts of Bihar<sup>48</sup> often blur these caste-based settlement patterns, they are still prominently visible. In the case-study villages in Siwan, in particular the households belonging to low caste groups (Scheduled Caste/Scheduled Tribe) were found to be living on the village margins, and in some villages they lived in areas which were quite cut-off from the village.<sup>49</sup> The segmentation process took care to include these disparate settlements in the sample universe. In other words, all households, irrespective of their caste, had an equal chance of being selected for the household sample.

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<sup>46</sup> In addition to the 6 villages that had more than 300 households as per Census 2001 data (Table 4.1), it was found during field visits that Gaur village in Maharajganj also had more than 300 households and therefore segments were created in this village as well.

<sup>47</sup> Although high population densities in Siwan (and for that matter, in the whole of Bihar compared to national average) means that most villages in the district have quite dense population settlement patterns, the ways in which local village classification works makes the matters complicated from the perspective of selecting the sample at times. For example, it is not uncommon to find a few households of say village A, settled as far as 2-3 kilometres away in a completely different village B, and yet officially classified as part of village A.

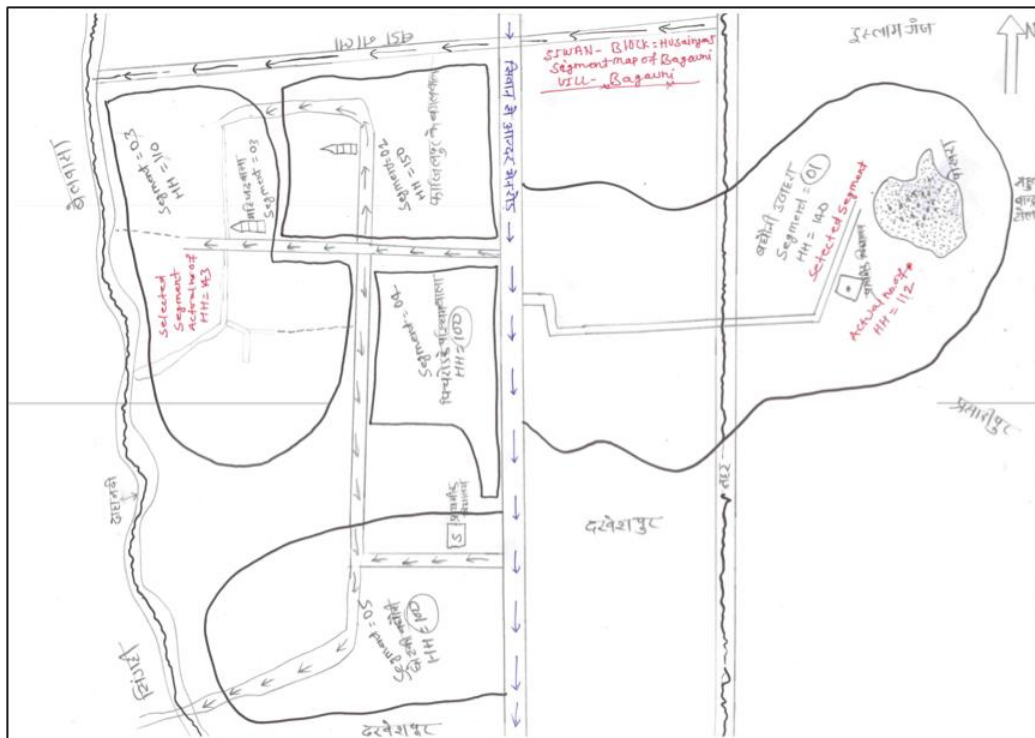
<sup>48</sup> As per Census 2011 data, among all Indian states (except a few geographically smaller Union Territories) Bihar had the highest population density of 1102 persons per square kilometer (Registrar General of India, 2011d, p. 140).

<sup>49</sup> In many case-study villages, the smaller hamlets were named after the caste of the inhabitants of that hamlet. For instance, Bansfor Tola (hamlet of the Bansfors caste), Harijan Tola (hamlet of the members of Scheduled Caste) and so on.

Clearly, the number of segments created in each of the 7 case-study villages varied, depending on the number of households in the village. For example, in the large village of Gayaspur, 10 segments were made as against just 4 segments in Gaur. However, as noted above, irrespective of number of segments, two segments from each village which had between 100 and 150 households each, were selected from each case-study village using the random selection procedure (see the *Segmentation Particulars Form: Appendix 2*). On average, this provided a sample frame of about 230 households from each village, from which the sample of 40 households was to be drawn.

Figure 4.2 depicts a specimen segmentation map of Baghauni village (these rough maps were created for all the study villages). As can be seen, five segments were created in the village and segment 1 and segment 3, comprising 140 and 110 households respectively, were selected. Information on the basic characteristics of all the households residing in these selected segments was obtained through house-listing, an exercise which aimed to ascertain the migration status of the households which I now describe.

Figure 4.2: Segmentation map of sample village Baghauni of Hussainganj Block, Siwan



Source: Own work.



*b) Identifying the migration status of the households through house-listing*

As noted earlier, the Census 2001 data used to select the villages did not provide any information on the migration status of the households. In order to obtain this information, an identification schedule, referred to as *household listing form* in the survey, was administered to the households in the sample villages, or the two selected village segments where segmentation was done. The household listing schedule collected information on the type of building structure (residential or non-residential), number of households living in each structure, name of the head of the household, whether the household had any member who engaged in employment migration during the past year (reference period for this study is discussed in Appendix 1) and if yes, how many members undertook migration. Besides, since this study focused on internal migration, information was also sought on the whether the member(s) migrated within or outside the country (*Household Listing Form: Appendix 2*).

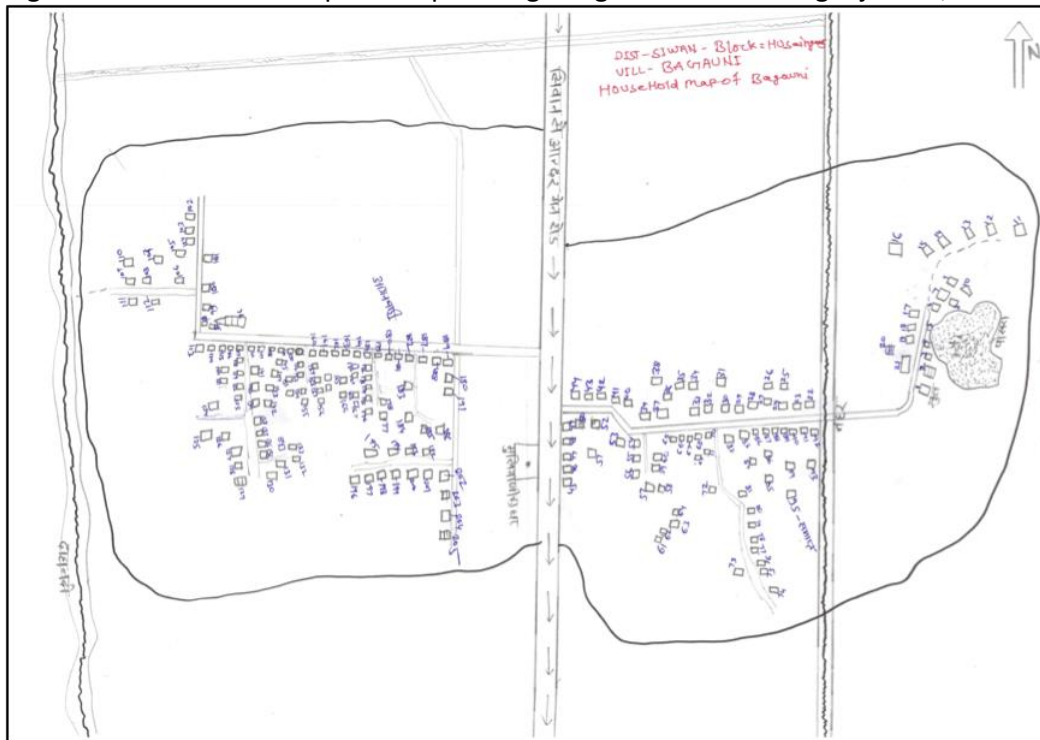
All the structures (and the households living within each structure) in the sample villages or selected segments were assigned a number for identification and, simultaneous to house-listing, rough households maps were prepared. The main objective behind preparing these household maps was to help locate the selected households and thus, avoid the non-sampling errors of wrong inclusion and exclusion.

Figure 4.3 is a specimen household map of the same Baghauni village which shows that location of all structures in the selected segment 1 and segment 3 of Baghauni village (see Figure 4.2 and related discussion above). Although named as a household map, Figure 4.3 shows the building structures within which households were located as in many cases there were two or more households residing in one structure. This is consistent with usual mapping rules.

The house-listing exercise also provided a means to double-check the validity of the segmentation process. Given that village segments were created to facilitate sampling for this study and there was no official count on the number of households in the segments, this number represented a best guess estimate which was arrived based on the conversations with the GP representatives and senior villagers aware

of the village geography, as well as quick tours of the study villages. But the house-listing provided an actual count of the number of households with which the segmentation count could be tallied. And it was found that in all villages the rough count of households in the village segments matched quite closely with the real count done through house-listing.<sup>50</sup>

Figure 4.3: Household map of sample village Baghauni of Hussainganj Block, Siwan



Source: Own work.

### Selecting the households for surveys using systematic circular sampling

The identification particulars obtained through house-listing provided information on whether or not households had member(s) who undertook migration for employment reasons. Following the house-listing, the last step required choosing a sample of 20 migrant and 20 non-migrant households from every one of the villages/village segments. For this, *systematic circular sampling with a random start* procedure was used.

<sup>50</sup> For example, according to the guesstimates, segment 1 and segment 3 in Baghauni village had 140 and 110 households, respectively. And the house-listing revealed that the actual number of households was 112 in segment 1 and 143 in segment 3 (Figure 4.2). And the number of structures in segment 1 and segment 3 were 95 and 110 respectively (Figure 4.3).

The house-listing provided, on an average, a sample universe of 230 residential households in each village, which included both the households with and without migrant members, from which a sample of 20 migrant and 20 non-migrant households was drawn. It is important to note that from the list of residential households, migrant and non-migrant households were separated and the sample of migrant and non-migrant household was drawn, using the procedure described below, from their respective lists.

The procedure for systematic circular sampling but with a random start (the ways these households were selected) is as described as follows:

- Suppose  $N$  is the total number of residential households listed in a case-study village and the number of households to be sampled is 20, then the sampling interval  $I = N/20$ .
- Afterwards, a random number, expressed as  $R$ , between  $I$  and  $N$  was selected.
- The target sample of 20 households, thus, is the household numbers,  $R, R+I, R+2*I, R+3*I...R+19*I$  (as noted above, the households were assigned a number; see *Household Listing Form: Appendix 3*).

An example may help clarify things better.

- The number of migrant households listed in Baghauni village was 127 households. Thus,  $N=127$
- To obtain sampling interval, divide  $N$  by target sample 20. Thus,  $I=127/20 = 6$  (fraction of 0.35 is rounded off).
- Take the random (start) number as 88.
- Using this procedure, the sample selected for the surveys would include household numbers, 88,  $88+6=94$ ,  $88+12=100$ ,  $88+18=106$ ,  $88+24=112$ ,  $88+30=118$ ,  $88+36=124$ ,  $88+42=130$  or  $130-127=3$ ,  $88+48=136$  or  $136-127=9$ ,  $88+54=142$  or  $142-127=15$ ,  $88+60=148$  or  $148-127=21...88+102=190$  or  $190-127=63$ ,  $88+108=196$  or  $196-127=69$ ,  $88+114=202$  or  $202-127=75$ .

Note that if the selected random number leads to a household number being greater than N, then N is subtracted from the household number. The same is done in the example of Baghauni village above.

Thus, the households selected through this procedure were approached for the survey. From the target sample of 200 migrant and 200 non-migrant households, interviews were conducted with 197 migrant and 195 non-migrant households, leading to an overall response rate of 98 percent. The mapping and house-listing was carried out in January-February, 2012 and the household surveys were conducted during April-May, 2012.

### **Sample selection of migrants**

Although the principal focus of this study was on the migration origin areas i.e. the selected villages in Siwan District, an attempt was also made to understand the linkages between migration origin and destination places by interviewing the migrants belonging to the sample migrant households in Siwan at the destination areas. For this purpose, 20 unstructured interviews with migrants, equivalent to 10 percent of migrant household sample, were planned. However, interviews with only 10 migrants could be conducted due to the difficulties in tracing the migrants at their current destinations.

This was undertaken as follows. The village-level household survey questionnaires included a section which, among other things, obtained information on the socio-demographic characteristics, income, occupation and work destination of the migrant member(s) of the surveyed households. Upon the completion of the household surveys, survey participants from migrant households in the study villages were informed that another leg of this study involved interviews with the migrant members and were asked if they would be willing to provide the contact details of the migrant members for further rounds of interview. Close to half (100) of the migrant households agreed to share the contact details, however, as it turned out, the information possessed by the rural resident members on the whereabouts of their migrant counterparts was quite patchy and they did not know much beyond the name of city or town in which the migrant members lived. Nonetheless, most households had the mobile numbers of their migrant members (which was not

entirely surprising given that in 2012 mobile subscribers in India were estimated to be approximately 894 millions: Jeffrey & Doron, 2013, p. 7), which they willingly shared, though quite naturally, they left the decision to take part in the interviews on them (on what information was sought about migrants through the household surveys, see Part 29 in the *Household Survey Questionnaire: Appendix 4*).

These migrant members were contacted on their mobile phones in the presence of their family from the study villages. They were informed of the nature and objectives of the study, and were asked if they wished to be part of the study. Upon talking to their family members, who in many cases included their wives, most of the migrants agreed to be contacted for the interviews. However, analysis of the information on migrants' current place of destination revealed that they were spread all over India, from the state of Jammu and Kashmir in the north to Kerala in the south. Thus, owing to logistical considerations, the National Capital Region (or NCR which includes Delhi and parts of states of Haryana and Uttar Pradesh), which emerged as the most-favoured migration destination in the household surveys (75 migrants out of the total of 280), was identified as the area for interviews with migrants.<sup>51</sup> However, several difficulties arose in tracing the migrants for the interviews. Firstly, many migrants with whom we had spoken earlier could not be contacted again, as they had, it seemed, changed their mobile numbers. Secondly, the fieldwork was carried out in the month of June 2012 which coincided with the wedding season in Siwan and many migrants had also gone back to their respective villages, Thus, owing to these problems, in the end, interviews with only 10 migrants could be carried out.

One might question the logistical pragmatism in the selection of migrants and argue that choosing migrants from the most-favoured destination (i.e. NCR) may prevent the study to capture the heterogeneity of migrants' lives. Although some common aspects were indeed same for the people working at same destination, the events and episodes that shaped migratory behaviour as well as the outcomes of migration varied significantly from one individual to another. In that sense, each migrant constituted a unique and mutually exclusive part of the sample. Moreover, the main

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<sup>51</sup> These 75 migrants were in five districts of NCR region which included: i) Delhi; ii) Faridabad; iii) Ghaziabad; iv) Noida; and v) Gurgaon.

purpose of interviews with migrants was to better understand the connections between migration origin and destination place and the bearing of such connections, if any, on rural food security, which did not require following strict sampling criteria and procedures.

### **Data collection tools**

As noted above, this study used a mixed method data collection approach which involved: i) household surveys; ii) key-informant interviews with village leader; and iii) unstructured interviews with migrants. The following section provides brief information on the each method of data collection separately and what they sought to achieve for the purpose of this study.

#### ***Household surveys***

These household surveys were carried out using a structured questionnaire (which was pilot-tested and revised before it was administered). These questionnaires were usually administered on the 'head of the household' (male or female) or in the absence of household head, on any other household member (male/female) aged 18 years and above who was deemed knowledgeable of household, with prior informed consent. The household questionnaire had three broad sections.

The *first section* contained a similar set of questions for migrant and non-migrant households in order to draw a comparison of household food security by migration status and other correlates, similar and/or different, of food security/insecurity between both types of households. This involved collection of information on variables such as,

- i) Social and demographic characteristics of sample household members i.e. information on caste, class, education level, age, marital status and so on
- ii) Social and economic conditions of the household i.e. type of house, source of drinking water, sanitation facilities within the premises etc.
- iii) Household economics, i.e. household income and consumption patterns, assets base of household, savings and investments, debt burden, main

- economic activity of the household as well as occupation of the each members of the household, size of agricultural land holding, if any
- iv) Food security situation of the household such as food consumption patterns of household members, diversity of diets and strategies devised in times of food scarcity
  - v) Eligibility and access to different government-run food and livelihood security schemes such as PDS, MGNREGA, ICDS
  - vi) Subjective assessment of aspects of personal well-being etc. (see Part 1-17 in the *Household Survey Questionnaire: Appendix 4*).

The *second section* of household questionnaire collected information on the migrant members working away from home. In total, information on 280 migrants belonging to 197 migrant households was collected which included,

- i) Socio-demographic information about migrant member(s) such as age, sex, level of education
- ii) Current work destination and duration of stay at the current work destination
- iii) Income and occupation at current work destination
- iv) Patterns of remittances, amount of remittances, mode of remittances, use of remittances by the household
- v) Type of migration (seasonal, circular, permanent), number of trips to the origin village in the past year and reasons for these trips etc. (see Part 18-20 in the *Household Survey Questionnaire: Appendix 4*).

As has been noted earlier, the predominant pattern of migration from Siwan (and indeed from Bihar as a whole) involves single-male migration which has the potential to alter, and quite profoundly so, the intra-household gender dynamics relating to management and control of household affairs. As these outcomes have implications for household food security, the *third section* of the questionnaire was administered on the left-behind wives of the migrants to understand 'greater female autonomy versus greater responsibility' hypotheses of migration effects and how they influence food security of household members. In other words, the women-only section of the questionnaire sought to understand the changes in

gender roles, if any, as a result of migration and how they interplay with household food security (see Part 21-28 in the *Household Survey Questionnaire: Appendix 4*).

It must be mentioned that this section was administered on the left-behind wives of the migrant members, if migrants were married. Since this interview with left-behind women was an extension of the interview with migrant households, the selection of left-behind wives did not involve any sampling as migrant households were already selected through the sampling procedure described above. Thus, following the household interview with migrant households, the left-behind wives of the married migrants were approached for the interview, if they were available, with the prior oral consent also of the household head or senior female member if the household under question involved joint/extended household. Only one left-behind wife was interviewed from each migrant household and in cases where household had more than one married migrant member, attempt was made to select the youngest female for the interview. In total, interviews with 144 left-behind women were carried out.

### ***Key informant interviews***

The key informant method is used extensively in social research. This approach is particularly useful for village level studies and has been employed by social sciences researchers to understand the broader village-level dynamics. A key-informant refers to any person in the study area who can provide useful information about the community under investigation. The key-informants are often strategically chosen based on their long-experience and knowledge about the study area and they include, in most cases if not all, influential people of the community. This strategic selection also provides researchers a gateway to study population and helps in rapport-building with the community (for a useful description of key informant technique, see, inter alia, Gilchrist, 1992; Marshall, 1996; Tremblay, 1982).

One of the objectives of this study was to understand if institutional arrangements pertaining to food and livelihood security had any impact on migration. Thus, the key informants in this study mainly comprised of the members of GPs. In India, GPs have been entrusted with the responsibility of monitoring the village-level social and economic development programmes and thus, maintain records about the



social-economic conditions of all the members of the village. GPs play an important role in identifying the households living *below the poverty line* in the villages who then are provided benefits under different government welfare schemes relating to universal education, food security, primary health, employment guarantee etc. Through largely unstructured interviews with the members of GPs, including the GP president (or 'Mukhiya' as s/he is known in local parlance), qualitative information on functioning of government welfare schemes and local-level implementation challenges was collected which helped understand livelihood and food security situations of the resident households in the study villages better.

### ***Unstructured interviews with migrants***

Although the main focus of this study was the rural communities at place of origin, an attempt was also made to understand the perspectives of migrants at the destination. Indeed, understanding the complexity of migration decisions and outcomes necessitates an appreciation of links between origin and destination. As Connell et al. (1976, p. 3), in their widely cited study on migration from rural areas in the developing countries, suggested: "Motivations, conditions and options in communities of origin and of destination have to be looked at together." For this purpose, *unstructured interviews* with 10 migrants at their place of destination (which was NCR, as mentioned above) were carried out.

The unstructured interview is a qualitative research technique used to elicit information on the social and behavioural realities from the perspective of respondents. As the name suggests, this method of data collection follows no predefined set or structure of questions and involves an informal conversation between the researcher and respondent(s) on the subject matter under investigation. Also often known in the literature as *in-depth interview* or *informal conversation*, unstructured interviews allow researchers to obtain in-depth information about the life events of the informants that have shaped their current behavior (see, *inter alia*, Burgess, 1982; Fontana & Frey, 2005; Kumar, 2005).

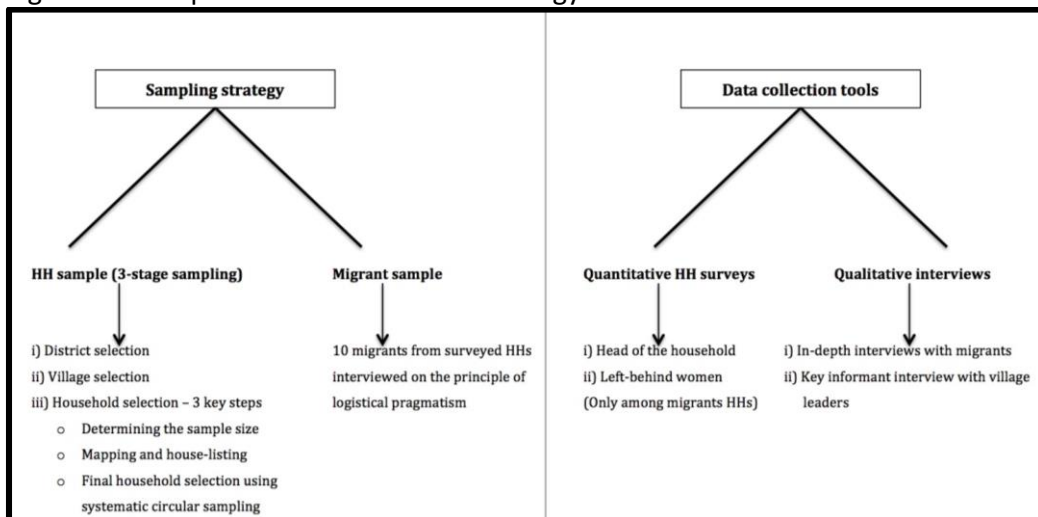
Migration decisions and outcomes are shaped by a complex mix of social, economic, cultural, political and contextual factors which make informants' narratives and perspectives crucially important. This is precisely the reason why unstructured

interviews provide a more effective tool to understand, from the viewpoint of respondents, the complexity of migration decisions and outcomes. Moreover, these interviews with migrants were conducted to complement the rural surveys which provided a methodological merit to the study.

These unstructured interviews with migrants generated information on their life histories, about the factors and events that shaped their decisions to migrate, on the dichotomy of choice versus compulsion migration, on their living and working conditions, on their food consumption patterns, on their access to welfare entitlements at the place of destination and so on. An *interview guide*, which contained a check-list of issues was used as an *aid memoir* (interview guide is attached as Appendix 5).

In a nutshell, this research uses scientific sampling methods and a mix of quantitative and qualitative data collection techniques in order to generate a holistic understanding of migration-food security relationship at the household level (see Figure 4.4 for a snapshot of research methodology).

Figure 4.4: Snapshot of research methodology



Source: Own work.

### Positionality, reflexivity, and insider/outsider in field research: reflecting on fieldwork experiences

In the past two decades, social sciences researchers, particularly those practicing qualitative research methods, such as anthropologists, sociologists and human

geographers, have increasingly called for reflexive exploration of researchers' own positionality and identity vis-à-vis their participants in the knowledge generated through field-based research (*inter alia*, England, 1995; Mcdowell, 1992a, 1992b; Merriam et al., 2001; Rose 1997). The focus on "reflexive notion of knowledge" (Mcdowell, 1992, p. 399) emanates from the widespread acknowledgement that all knowledge is situational in that the production of knowledge takes places "in specific circumstances and that those circumstances shape it in some way" (Rose 1997, p. 305). And therefore the ethics of participatory research warrant that the researchers be self-reflexive about their research contexts as well as how the different attributes of their own identity such as race, social class, gender, and caste position them vis-à-vis the "researched" either as "insiders" or "outsiders", and how these in turn affect the process of knowledge creation. The reflexive examination of the situational and contextual realities of knowledge production process in social epistemology serves to inform the research study, and put the research findings in perspective. Given that the present study uses a mixed-method approach, generating insights from qualitative research methods, such as in-depth narratives and key informant interviews, in conjunction with quantitative household survey data, I consider it pertinent to briefly discuss the issues of my positionality and identity. In particular, I draw on my fieldwork experiences in order to reflect on how my own background and markers of my social and economic identity vis-à-vis my survey participants resonated with the notions of insider and outsider, how I navigated and negotiated these features during the field research, and how these in turn influenced the process of knowledge production.

It is important to note that emphasis in social research on the issues of positionality and reflexivity has led to intense theoretical debates around the issues of representation (whether the researchers' backgrounds sufficiently allow them to represent their participants) and the disconnect between universities' institutional codes of conduct for ethical research and field realities of participatory research. It is not possible for me to dwell on the theoretical dimensions of these debates in details here (for a useful account on these issues, see, *inter alia*, Banks et al., 2013; Nagar, 2002; Nagar and Ali, 2003; Sultana, 2007), and therefore what follows is a brief reflection on the practical aspects of the process of conducting ethically

participatory field research in Siwan, Bihar. From the perspective of present research, I briefly reflect on two key issues that I believe have significance for this research. These include: i) my status as an insider/outsider in the field setting; ii) cross-gender nature of research (given that I was a male and research also involved interviews with left-behind wives of migrants).

### ***Insider or outsider or in-between? Negotiating a position in the fieldwork***

Focusing on first of these issues, conducting research in Siwan raised several dilemmatic questions on relational aspects of fieldwork, and my hybrid identity of a native Indian pursuing PhD research degree from an Australian university at the time of fieldwork left me to ponder even more on whether or not I qualified to be an “insider”. Although I had lived a major part of my life in India, returned to do fieldwork in the country in less than a year of moving to Australia for doctoral studies, and, as things stood, intended to return to the country to pursue teaching and research career soon after my doctoral research, by no means these factors alone qualified me to be an insider. For one, I grew up in the capital city of Jaipur in Rajasthan in northwest India (and later moved to Mumbai for higher studies), and my fieldwork district of Siwan, Bihar was markedly different in terms of culture and language; I certainly did not know beforehand the local language of my case-study district. Second, all my field sites were rural villages, which were quite different from the urban environment that I had known most of my life (Jaipur and Mumbai). Third, and most importantly, after a few visits to my study villages at the preliminary stage of the fieldwork (during mapping-listing), I became acutely aware of my socio-economic privileges vis-à-vis my (potential) individual and household research participants. Indeed, carrying out field research on the issue of food (in)security inevitably meant that many of the study participants did not have the material conditions to be food secure throughout the year, and these material inequalities separated me from my study participants.

And yet there were commonalities that allowed me to bridge some of these gaps and negotiate a space within the communities of research and I became more accepted over time. These commonalities included nationality and Hindi language (which almost all of my survey participants understood and spoke). I was not strictly

*Desi*, but a *Hindustani bhai*, as one of my respondents put it. I also had two local field assistants who helped me to come closer to my research communities. Additionally, my previous experience of doing fieldwork in the rural villages of Rajasthan, and my attempts to speak local Bhojpuri language which often gave chuckles to my research participants, came handy for me to be able to blend in. In regards to the latter, much to my surprise my broken Bhojpuri proved to be a useful tool to build rapport with the communities I was researching! My fluency in Bhojpuri was restricted to a few everyday greetings. And yet, picking up from how my field assistants spoke with the locals, I tried to challenge my own skills and converse with local in their own language. While this act did not mean that I was ever perceived as an insider (it would have been immature on my part to assume that), I believe this allowed me to at least shed the tag of an outsider; I was an “in-between”. (I must confess though that I remain unsure of whether it was because the locals perceived my attempt to speak Bhojpuri as genuine or the humour it generated that the lack of language skills ironically became my advantage.) Indeed the simple act of greeting people in Bhojpuri with *rauva ki bhani* (which translates as *how are you?*) enabled me to fit in. Despite being able to negotiate a space within the community, two issues are worth nothing.

Firstly, because my study design involved using both quantitative and qualitative data collection techniques, this mixed method approach, while useful to generate a holistic understanding of individual and household level dynamics of migration-food security nexus, was not without problems. In the survey villages, the individual and household-level qualitative data was often simultaneously collected while administering the survey questionnaire. While the village-walks during the mapping and listing exercise meant that I became a familiar face in the study villages, strict sampling criteria at times caused suspicions among the households not included in the final survey sample. Indeed an issue that I frequently encountered during the rural surveys was that whereas a sample of 40 selected households was drawn for the survey, many other households in the study villages seemed to want to participate in the survey. This apparent inclination was due to the perception among the households that we were government officials and the surveyed families will later be rewarded with welfare benefits. This was a dangerous perception with

implications for the quality of survey data. In one of the study villages, where one of the two segments selected happened to be the Hindu-dominated part of the village, a Muslim clergyman from the local mosque suspected us of being biased and surveying only the Hindus so that they could all be entitled to benefits which, according to him, were to follow. He remarked: "All the Muslims have been removed from the list." However, it was clarified that this study was an academic exercise with no links to government benefits whatsoever, and where confusion persisted people were informed wholly the nature and objectives of the study.

Secondly, adhering to the research ethics requirements of the USyD in rural Siwan at times acted as a barrier to be closer to the study participants. While in general there was excitement and curiosity among the locals about a graduate student from an Australian university doing field research in their villages, some of the USyD's ethics requirements, such as taking a "written" informed consent before beginning with the interview distanced some people in the beginning as they thought that I could use their signature against them for matters such as transferring their land and assets away from them. (The written component of the informed consent was later dropped in view of fieldwork realities.) While implementation of such institutional formalities did not hamper the process of fieldwork and knowledge creation as such, this meant that I had to devise ways through which I could meet the ethics requirements as well as build rapport and trust among the research participants. For example, one of the ways I achieved the balancing equation to resolve this issue was by attending village meeting and camps where I got an opportunity to interact with village locals across the social and economic strata.

### ***Reflecting on cross-gender research***

As noted earlier, my fieldwork also involved interviews with the left-behind wives of migrant members, and with me being a male researcher this cross-gender component of the study warrants some self-reflexivity on my part on the relational aspect of my field research. This is because gender often exerts great influence on the negotiation of fieldwork relations. As Warren (1998) succinctly put it: "all knowledge is gendered" (cited in Mckeganey and Bloor, 1991, p. 195). And therefore an appreciation of fieldwork negotiations mediated through gender can

enable field researchers to pay greater attention to situational realities of where gender can confer advantage or disadvantage in field data collection. For example, Brandes (1992), a male anthropologist who carried out his fieldwork in Andalusia in Southern Spain on women, reported that operation of strict gender norms and sexual boundaries meant that he could gain access to women participants through their husbands. Drawing on their experiences from three research projects on the impact of cross-gender relations in field research, Mckeganey and Bloor (1991), two male researchers, noted that in their fieldwork with their female participants they faced constraints on physical access to space.

While designing my study and inserting the cross-gender component in the research, on many occasions I wondered whether my gender would allow me to negotiate fieldwork relations with my female respondents in order for me to be able to explore the intra-household gender dynamics of migration and food security effectively. My apprehensions grew further because my reading and understanding of Bihar was that of a place where social and cultural norms imposed greater restrictions on the interaction of females with outside males. Moreover, I was a 30-year-old single man and all my respondents were married women. However, when I arrived in the field I found that the fieldwork realities were different from my in-office thinking of gender relations in my case study sites. While gender certainly established some boundaries in the way I interacted with the left-behind wives of migrants, it conflated with several other factors, such as age, caste, family structure, economic status of the women respondents. I faced greater constraints in talking to young women living in joint families, particularly when their in-laws were present in the house, as compared to middle-aged women from nuclear households. The women from poor, lower caste households opened up to me more on personal questions, such as how they felt about the husbands spending a large part of the year away from them compared to those from better-off, upper caste families. Some women called their female friends and neighbours, and talked to me only in their presence. In other words, gender interacted with other social and economic categories, however, my prior awareness of role of gender in the process field research relations helped me to understand, and deal with, the dynamics of cross-gender research. As Galam, (2015, p. 5) suggests: "... appreciation of the role played

by gender in fieldwork relations engenders a dynamic perspective of how gender interacts with other social and cultural categories and factors germane to the research.”

I was obviously conscious of not crossing the boundaries and so I avoided asking any questions of intimate nature. In any case, the main objective of this cross-gender part of the study was to understand the intra-household power relations of migration-food security relationship and did not warrant invading the more private parts of their lives. Moreover, depending on the age of my female respondents, I assured them that they are like my “sister” or “mother”, and it helped me bond with them well. In overall terms, while my gender posed obvious constraints in that I could not talk to them as openly as a female researcher could/would have (for instance, on sexual matters, given the prolonged absence of their husbands), the non-sensitive nature of the cross-gender part of my research allowed me to understand the gender dynamics of migration-food nexus as holistically as possible. I hope the findings presented in Chapter 8 will give the same sense.

## **Conclusion**

This Chapter has discussed the methods and materials used in this study to generate concrete empirical-based understanding of the linkages between migration and food security. To this end, this study focuses on a strategically selected and statistically representative sample of 392 rural households, spread across 10 villages of Siwan district in western Bihar. While the principal method employed in this study is household-based surveys, the overall approach of this study is to use a mixed-method approach in order to also take cues from the in-depth narratives of households’ migrant members, key informant interviews with senior villagers and observations made during field investigations on the relationship between migration and food security. The selection of Siwan as a case-study site was done on the basis of Indian Census 2001 data on migration which establish it as one of the high outmigration districts of Bihar. Moreover, a close scrutiny of the historical records suggests that rural populations of the Siwan district, and, indeed, Bihar as a whole, have historically been highly mobile, consideration which also informed the



selection of Siwan. Drawing on historical and contemporary evidence, in the next Chapter I discuss the context and drivers of migration from Siwan and Bihar.

## **5 THE CONTEXT OF MIGRATION: BIHAR AND SIWAN IN PERSPECTIVE**



## CHAPTER 5: THE CONTEXT OF MIGRATION: BIHAR AND SIWAN IN PERSPECTIVE

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### Introduction

Despite the fact that migration has traditionally been an integral part of lives and livelihoods of rural communities in much of the developing world, all too often rural populations have suffered from the image of being *immobile* in the academic and policy discourse around rural development. This static image of rural societies is, in part, the result of “rural-equates-agriculture” paradigm of thinking which, although fading, still remains prevalent (Rigg, 2006). This notion of an immobile peasantry, however, is an unwarranted assumption (Bryceson, 1997), and with some risk of oversimplification, a myth. The inherently cyclical nature of agricultural work means that rural populations go through cycles of peak and lean seasons. In places where rural labour markets do not provide enough opportunities for non-agricultural income diversification throughout the year, which is often the case in most, if not all, countries of Asia and Africa, many households have traditionally employed migration as one of the livelihood diversification strategies to meet their income needs outside of the busy agriculture period. As de Haan (1999, p. 7) suggests, “population movement [represents] the norm rather than the exception.”

Positing the significance of migration in rural livelihoods is important, for it enables viewing rural livelihood systems as “dynamic”, comprising not just of farm-based activities but also a wide array of local and extra-local non-farm occupations. From the perspective of food security, this implies that in addition to land-based livelihoods, the issue of rural food security, or insecurity, has always been closely connected with access to, and gains from, the non-farm, migration incomes. In fact, in many instances the extent to which land facilitates household’s food security needs is contingent upon the extent of income from non-farm sources (Owusu, Abdulai, & Abdul-Rahman, 2011; Reardon, 1997).

The Indian state of Bihar, the geographic focus of this study, is a case in point where a large majority of rural households have traditionally engaged in non-farm livelihood diversification to meet their income and food needs. Located in the Indo-

Gangetic plains, the state is endowed with highly fertile soil and abundant water sources. However, persistently high population densities have almost always counterbalanced the capacity of rural land and resources to allow the region's inhabitants to adequately meet their food security needs. In particular, population densities in the western part of Bihar, where the case-study district of Siwan is located, have been much higher than most other places in the country (O'Malley, 1930; Yang, 1979, 1989). In the absence of local non-agricultural employment options, migration has always been central to the incomes and livelihoods of rural dwellers of this region. The historical significance of migration in western Bihar was also one of the important reasons for selecting Siwan district as a case-study site, in addition to the other strategic considerations (adopted for this purpose), as described in Chapter 4.

The traditional importance of migration from Bihar notwithstanding, the social, economic and infrastructural realities in India have changed dramatically over time. The market reforms of the 1990s are reshaping the very process of migration all over the country (Deshingkar & Anderson, 2004; Deshingkar & Farrington, 2009). New patterns and streams of migration are fast evolving; for example, rural-urban migration is gaining significance relative to rural-rural migration. By combining historical evidence with household survey data collected for the present study in Siwan, I shall discuss some of these changes in the later sections of the Chapter.

It is important to note that in addition to high population pressures on land, Bihar as a whole has remained an economically backward region throughout the past two centuries. This has created heavy reliance on migration incomes among the rural communities of the state. In fact, continued lack of gainful opportunities at home seems to have created a "culture of migration" in rural Bihar. The economic decline of Bihar began during British rule and continued throughout much of the post-independence period. Faulty economic policies during the British Raj, political indifference of federal government towards the development needs of the state in much of the post-independence period, and a slew of internal problems including the virtual absence of governance and order between 1990 and 2005, have undermined the economic development of Bihar (Mukherji & Mukherji, 2012). More importantly, market reforms initiated in India since early 1990s largely

bypassed Bihar until recently. Thus although outmigration from Bihar has been historically widespread, village-level studies indicate that the incidence of migration from Bihar increased further in 1990s (Karan, 2003; Sharma, 2005), a period which otherwise marks the watershed of Indian economy.

Against this background, this Chapter aims to set out the research context as a precursor to the household-level analysis of relationship between migration and food security. Firstly, I provide an overview of Bihar's economy and society and place it in the Indian map of development. Secondly, I will attempt to briefly trace the reasons for Bihar's current backwardness and its relationship with high rates of outmigration from the state. I then discuss the food security situation across different districts of Bihar and how this correlates with district-wise migration. Finally, I will situate my case-study district of Siwan within Bihar and provide a brief profile of place, people and livelihoods in the district. For the discussion in this Chapter, I combine the secondary data with some of the household survey data collected from Siwan.

### **A geography of deprivation: Bihar on the Indian map of development**

A vast stretch of fertile alluvial land forming part of the Indo-Gangetic plain, the eastern Indian state of Bihar is considered as one of the most backward states in the country. The state is characterised by excessively high population pressures, an underdeveloped and weak economy, the highest proportion of population lacking access to bare minimum living standards and dysfunctional education and health care infrastructure. Social inequalities along the lines of caste and gender, although by no means unique to Bihar, take a particularly potent form in the state.

Lagging far behind in demographic transition vis-à-vis most other Indian states, Bihar is affected by high population growth rates. The third largest Indian state in terms of population size, in 2011 Bihar had a total population of over 100 million people, accounting for nearly 9 percent of India's total population. Seen in international perspective, if Bihar were to be a country of its own, it would rank the twelfth biggest in the world in terms of population size (United Nations, 2013c, pp.

51-55).<sup>52</sup> During the most recent inter-censal period between 2001 and 2011, the population in Bihar increased by 25 percent. Although this represents a marginal decline from the decadal population growth rate of 28.6 percent during 1991-2001, population increase in Bihar was still higher than the national average of 17.6 percent. A predominantly agrarian society, close to 90 percent of Bihar’s population lives in rural areas. It is important to note that even though the urban population in Bihar grew at a faster rate during 2001-2011, the levels of urbanisation barely moved upwards, indicating intensification of pressure on rural land and resources (Table 5.1).

Table 5.1: Population size, growth and distribution

Place of enumeration	Total Population 2011		Urban population (%age)		Inter-censal change during 2001-11 (%)	
	Rural	Urban	2001	2011	Rural	Urban
<b>Bihar</b>	92341436	11758016	10.46	11.29	24.25	35.43
<b>India</b>	833087662	377105760	27.82	31.16	12.20	31.80

Source: Registrar General of India (2001c, 2011b)

With an economy characterised by little exposure to the urban manufacturing and service sectors (notwithstanding their growing importance in recent years) and a dearth of rural non-farm activities (Jha, 2006), agriculture remains the primary source of local livelihood for a large proportion of Bihar’s population. Indeed, by the virtue of its location, the state is naturally endowed with highly fertile soil and abundant ground water resources. Several tributaries of the river Ganges including Mahananda, Kosi, Ghaghara and Gandhak flow through the different parts of the Bihar plain, making it one of the most fertile in the country. The real agricultural potential of the state, however, remains far from being adequately realised which has prevented any meaningful decline in poverty and deprivation in the state. This situation is best described in the report of the Task Force on Bihar’s Agriculture which terms the Bihar plain a “rich State inhabited by poor people” (Government of

<sup>52</sup> Comparison based on country-wise population statistics published by the United Nations Population Division in the 2012 revision of World Population Prospects. See bibliography section for fuller details.

India, 2008, p. 11). Bihar has one of the lowest rates of agricultural productivity in the country (Government of India, 2008, pp. 18-19; Joshi, Tripathi, & Gautam, 2012). Fragmented landholding patterns owing largely to high population pressures, lack of irrigation facilities, and poor credit and extension services to farmers have impeded the achievement of the state's agricultural potential. Additionally, the large number of rivers also means that recurrent floods remain a perennial problem affecting lives and livelihoods dependent on agriculture in the state (Pritchard and Thielemans, 2014). Bihar plain is among the most flood-prone areas of India, with 31 out of 38 districts of the state classified as flood-prone (Deshingkar et al., 2009). The most recent calamitous floods in the state in 2008 from the Kosi river, considered the Hwang Ho of Bihar (Ahmad, 1961, p. 265), took approximately 500 lives (a further of 3500 people were missing after the floods) and rendered 2,73,000 acres of arable cropland fallow (Government of Bihar, 2008).

Until recently, Bihar suffered from a long spell of poor governance and economic stagnation, with each reinforcing the other. Prior to 2007, the state consistently ranked as among the slowest growing regions of India (Basu, 2013; Sharma, 2013). While some of the factors for Bihar's laggard economic growth related to internal problems such as governance deficits (see below), it also suffered from several discriminatory economic policies from the federal government. For example, the Green Revolution, which brought about great economic prosperity in the northwestern states of Punjab and Haryana, largely bypassed Bihar even though the state seemed no less suited for it. The slow economic growth in the wake of rising demographic pressures has had a regressive impact on living standards. The living standards in the state remain low and incidence of poverty and deprivation high. In 2008-09, the per capita income in the state barely amounted to INR 13,728 (approximately US\$ 275), representing one-third of India's average per capita income (Government of Bihar, 2014b). Furthermore, in 2009-10, 53.5 percent of Bihar's population lived below the official poverty line, as against the national average of 29.8 percent (Planning Commission, 2012). The state ranks the lowest in terms of literacy, with 36 percent of the population enumerated as completely illiterate in 2011; in comparison the literacy rate in the best performing state (Kerala) is 94 percent (Registrar General of India, 2011i, p. 110). Poverty and



deprivation take a particularly severe form in rural areas where much of the Bihar's population lives, as noted earlier. This is also reflective of the highly unbalanced nature of state's economy, hinging excessively on the rural end in the absence of any significant opportunities in the urban sector.

The accumulated damage of decades of slow economic growth in Bihar also acted as a detriment for the state to reap the benefits of market reforms initiated in India since the early 1990s. Following the liberalisation of its economy, India has registered impressive economic growth and has become one of the fastest growing economies of the world. Although the distributional aspects of increasing wealth in India remain troubling, as alluded to in Chapter 1, the faster economic growth rates are, nevertheless, associated with overall poverty decline in India (Deaton & Dreze, 2002). However, economic growth and poverty decline have hardly been uniform across Indian states and exhibit a regionally diverse pattern. Indeed, the evidence suggests that the new growth trajectory in India has resulted in a widening of regional inequalities in income and living standards. Findings of several studies indicate that the average incomes across Indian states have tended to diverge in the post reform period, with the income growth positively associated with the initial per capita levels of income of the states. The Indian states with better human and capital resources and infrastructure have been able to attract more investments and grow faster in the post-reform period (*inter alia*, Dasgupta, Maiti, Mukherjee, Sarkar, & Chakrabarti, 2000; Kurian, 2000; Rao, Shand, & Kalirajan, 1999; Sachs, Bajpai, & Ramiah, 2002).

With Bihar sorely lacking in human capital and physical infrastructure, it is not surprising that the state slipped further behind most Indian states. The per capita income in Bihar, which was close to 60 percent of the Indian average during the 1960s, declined to nearly 40 percent in 1993-94 and further to approximately 30 percent in 2003-04 (Institute of Human Development, 2010, p. 1). In fact, in the first few years of market reforms, Bihar's economy contracted. Between 1992-93 and 1998-99, Bihar's per capita income grew at (negative) -0.2 percent per year, whereas annual per capita income growth in Gujarat, for example, was 7.8 percent (Sachs et al., 2002, p. 33). Although Bihar's economy has shown signs of revival in recent years, with economic growth in the state during 2007-12 being one of the

highest among all Indian states (Government of Bihar, 2014b), its impact on poverty and living standards is still quite muted. The state still occupies the lowest rank on several key indicators of social and economic development.

Table 5.2: Trends in human development in India: an inter-state comparison of 15 major states

	1981		1991		2001		2007-08	
	HDI Value	HDI Rank	HDI Value	HDI Rank	HDI Value	HDI Rank	HDI Value	HDI Rank
Andhra Pradesh	0.298	9	0.377	9	0.416	10	0.473	9
Assam	0.272	10	0.348	10	0.386	14	0.444	10
<b>Bihar</b>	<b>0.237</b>	<b>15</b>	<b>0.308</b>	<b>15</b>	<b>0.367</b>	<b>15</b>	<b>0.367</b>	<b>14</b>
Gujarat	0.360	4	0.431	6	0.479	6	0.527	6
Haryana	0.360	5	0.443	5	0.509	5	0.552	5
Karnataka	0.346	6	0.412	7	0.478	7	0.519	7
Kerala	0.500	1	0.591	1	0.638	1	0.790	1
Madhya Pradesh	0.245	14	0.328	13	0.394	12	0.375	13
Maharashtra	0.363	3	0.452	4	0.523	4	0.572	3
Orissa	0.267	11	0.345	12	0.404	11	0.362	15
Punjab	0.411	2	0.475	2	0.537	2	0.605	2
Rajasthan	0.256	12	0.347	11	0.424	9	0.434	11
Tamil Nadu	0.343	7	0.466	3	0.531	3	0.570	4
Uttar Pradesh	0.255	13	0.314	14	0.388	13	0.380	12
West Bengal	0.305	8	0.404	8	0.472	8	0.492	8

Source: National Human Development Report (HDR), 2001, p. 25 (for 1981, 1991 and 2001) and India HDR 2011, p. 24 (for 2007-08)

Table 5.2 presents HDI for 15 major Indian states from 1981 to 2007-08. The HDI index is a summary measure which assesses average performance in the three interrelated dimensions of education, health and standard of living. As is evident, most states have witnessed improvement in the HDI value over the period, suggesting improvements in human development indicators.<sup>53</sup> It is important to note that there is hardly any change in the HDI rankings of states throughout the

<sup>53</sup> On the other hand, between 2001 and 2007-08, Madhya Pradesh, Orissa and Uttar Pradesh witnessed a decline in their HDI scores while Bihar's HDI remained stagnant.

whole period and Bihar, although having witnessed some improvements in HDI values, has consistently occupied either the lowest or second lowest HDI rank among all major states.<sup>54</sup>

### **From civilisational cornerstone to development curse: the decline of Bihar**

It is important to note that Bihar was not always one of the backward states of India. In fact, it once represented an economically, socially and cultural advanced region of country and indeed one of the cornerstones of Indian civilisation. Seat of the first all-India Empire, the Mauryan dynasty, some commentators have argued that in many ways “the history of ancient India [was] the history of ancient Bihar” (Thapar, 1966 cited in Mukherji & Mukherji, 2012, p. 2). The world’s oldest university, Nalanda, was set up in Bihar which for centuries served as a center of knowledge and learning. Buddhism flourished in the state before it spread more widely in the countries of East and South-east Asia. Furthermore, some of the earliest challenges to traditional hierarchies of caste and gender in India originated in Bihar (Sen, 2013, pp. 3-5). However, beginning from the late eighteenth century when the state came under British rule, Bihar declined in rank and clout. The fall of Bihar’s fortunes continued throughout much of the post-independence period, so much so that it came to be viewed as a ‘basket case’ in the Indian development discourse. It is perhaps not so much of a coincidence that the acronym BIMARU (as noted in Chapter 3, BIMARU is a Hindi word meaning ‘sick’ or ‘morbid’ which is used to describe the backward north-Indian states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh) begins with Bihar.<sup>55</sup> There are many reasons for why Bihar slid down to occupy the bottom ranks among all Indian states. In the following section, I offer some of the explanations.

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<sup>54</sup> In HDR 2001, the HDI ranking of 15 states is provided whereas in HDI 2011, 23 states were ranked on their HDR performance. To ensure consistency and to elicit time trends, this table does not include the ranking of eight new states reported in the HDR 2011 for the period 2007-08 and therefore, the HDI ranking of the states reported in this table varies from the report. Consistent with the usual procedure, the ranking of the states for 2007-08 reported here is nonetheless arrived at based on the HDI value of the respective states.

<sup>55</sup> The acronym BIMARU was coined by Indian demographer Ashish Bose in 1980s to classify the states which were socially, economically and demographically the most backward in the country. Distinguishing Bihar in the BIMARU group states in one of his later papers, he commented that “Bihar is a picture of anarchy” (Bose, 2000, p. 1699).

### ***Permanent Settlement and its fallouts***

Much of the current backwardness of Bihar could be traced back to the faulty economic policies imposed by the British Raj which continue to impede its development even till today. In particular, a great deal of the state's malaise can be attributed to the land revenue extracting system of Permanent Settlement introduced by Lord Cornwallis in 1793, which "sowed the seeds of Bihar's decline" (Kumar, 2014). Under the British rule, Bihar (or for that matter, the entire eastern region of the Indian sub-continent) already received a disproportionately lower share of public investment in agriculture infrastructure compared to, say, the northwestern state of Punjab where the British made investments to restore and improve the canal systems for irrigation purposes (Timberg, 1982, p. 476; for a detailed account of canal irrigation in British India, see Stone, 1984). The Permanent Settlement fixed the amount of taxes that the Zamindars – big landlords who controlled land and collected rents from cultivators – needed to pay to the British government. Unlike the Ryotwari System followed in the Madras and Bombay provinces, in which revenues were linked with agricultural output, this change in the tax system aggravated the woes of the discriminatory investment policies of the Raj. The Permanent Settlement, which was introduced against the backdrop of falling agricultural production in India, was intended to incentivise the Zamindars to invest in land, as any additional revenues coming to Zamindars from the land added after 1793 were not liable to be taxed. This also meant that the British government's taxes were now not to be affected by the variability in agricultural production on account of environmental vagaries such as droughts and, more importantly, floods. In other words, while agricultural production was still subject to vagaries of climate, the taxes became shock-proof (Banerjee & Iyer, 2005; Mukherji & Mukherji, 2012).

In the period of 30 years (between 1764 and 1793-94) before Permanent Settlement was implemented, the tax revenues in Bihar had already increased by 300 percent (Dutt, 1960 cited in Bhaduri, 1976, p. 45). Fixing of rents without due regard to the harvest conditions produced quite disastrous outcomes; it weakened Bihar's agriculture system and gave rise to new inequalities in land ownership. Far from encouraging investment in land, many Zamindars, particularly smaller ones, defaulted while the others resorted to passing on the increased tax demand to the

small peasants. The rural populations at the bottom of the social and economic strata were worst affected; their poverty and food insecurity increased. As Mukherji and Mukherji (2012, p. 18) recount: "The impoverishment of farmers and tillers continued throughout; small landowners sold out, farm labor became indentured, and the dismal situation of the already poor was made worse." The big Zamindars who largely belonged to the Hindu high castes of Brahmin, Rajput, Bhumi-har and Kayastha appropriated more land, although a greater proportion of these high caste Hindus were also landless or became so along with other backward classes. In many places, men from upper caste Zamindari families who lost their land migrated out in search of employment and took up manual labour jobs (de Haan, 2002, pp. 119-120) which were hitherto prohibited under the caste hierarchies.

In many districts of Bihar, the pauperisation of the peasant underclass (comprising the large majority of the state's socially backward caste groups without access to land: Chakravarti, 2001; Sharma, 2005) was to the extent where they were unable to meet even their food needs. Added to this were recurrent famines. For example, the district of Saran in western Bihar (of which Siwan was earlier a part; see the discussion below) experienced five famines between 1770 and 1897 (O'Malley, 1930, p. 69). And while no large-scale famines have occurred in post-independent India, Bihar was one of the two states (the other being Maharashtra) which experienced a severe famine in 1966-67 affecting 34 million people in the state (Brass, 1986, p. 247). In many cases, the incidence of migration was intimately connected with food shortages, and oftentimes, income from seasonal migration by household member(s), usually males, provided the only source to ensure the food security of the household.

The Permanent Settlement debilitated Bihar's agricultural economy, on which the fortunes of a large majority of Bihari population directly depended. It also resulted in an even more exploitative agrarian structure leading to widening of inequalities in landownership. In the post-independent years, efforts to remedy the colonial legacy of an inequitable agrarian structure through land redistribution policies in the state have remained beset with difficulties. Although Bihar was the first state in independent India to officially abolish the Zamindari System in 1950 (Sharma, 1995, p. 2593), this didn't translate into improved access to land among the very poor,

particularly those belonging to the traditionally disadvantaged Scheduled Castes and Scheduled Tribes.

However, following the abolition of the Zamindari system, social formation of agrarian relations based around caste did witness some change. Although the end of Zamindari led to a mass eviction of sharecroppers and tenant cultivators who were the actual tillers of the land, big landlords from the high castes also saw their landholdings diminish. A new class of landlords belonging to the upper-middle caste groups such as Kurmi, Koeri and Yadavs (officially categorised as Backward Castes in contemporary Bihar) emerged. Mostly these were small and middle peasants who were able to consolidate their landholdings and position in society in the midst of Zamindari reforms (Sharma, 2005; Wilson, 1999).

Notwithstanding this shift in agrarian relations, land control still remained the prerogative of the upper castes. More importantly, the situation of the communities at the bottom of social strata did not change, as noted above. The rural underclass including small peasants, sharecropper farmers and landless labourers (the large majority of the state's population: Sharma, 2005) saw their fortunes only deteriorate. Those who worked as farm labourers continued to be under-paid or not paid at all. Poor peasants whose incomes were so low to meet even the bare minimum consumption needs resorted to borrowing from the big landlords and entered into relationships of "informal bondage" (Prasad, 1975, p. 931). Their social oppression, including sexual abuse of women, at the hand of landowning communities continued unabated (Sharma, 2005, p. 964).

This continuous oppression of the least privileged by the landowning elites provided an imperative for peasant mobilisation. They organised under several peasant and agricultural labour organisations such as *Mazdoor Kisan Sangarsh Samiti* (Committee for Peasants' and Workers' Rights) and *Bihar Pradesh Kisan Sabha* (Bihar State Peasant Union) that emerged to represent their interests. By the late

1960s, a radical ground-level politics, known as the Naxalite movement, began to challenge the existing order.<sup>56</sup>

The Naxalite movement operated outside the purview of the constitutional framework of democracy, as it perceived the state not only to have ignored the plight of lower caste but also viewed it as being responsible for further abetting and accentuating the feudal structures. Although the movement had a broad objective of addressing the historical oppression of the lower castes in all dimensions including, for example, sexual exploitation of women, it was intimately connected with the issue of inequalities in land ownership. After all, control over land was the reason why the upper castes were able to rule.

These peasant movements provided confidence and hope to the oppressed classes to regain their place and dignity in the society. However, these hopes were soon dashed. Worried about the threat peasant resistance and mobilisation posed to the order of the day, the landowning elites, allegedly in connivance with the state apparatus, formed private armies and launched attacks on the oppressed masses. Peasant resistance was met with what Sushmita (2014, p. 41) terms as “politics of massacres”. According to official estimates, in Bihar, between 1976 and 2001, the upper caste militia and police killed nearly 700 people belonging to Dalit and lower-backward caste groups (Sushmita, 2014, p. 41). The most notorious of these landlord armies is Ranvir Sena, a militia of upper caste Bhumihar landlords. Formed in 1995, Ranvir Sena allegedly perpetrated 29 massacres between 1995 and 2005, in which 287 people from the backward lower castes were killed. In an incident that shocked the nation, on December 01, 1997 the members of Ranvir Sena massacred 61 people, including 27 women and 16 children, from the lower backwards castes, mostly Dalits, in Laxamanpur Bathe village of Arwal district in Central Bihar (Mahaprashasta, 2013).

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<sup>56</sup> The Naxalite movement first originated in 1967 in Naxalbari village in West Bengal, in response to the attack on a tribal farmer by the local landlords who tried to prevent him to farm on the land for which he had obtained judicial orders to farm (Kujur, 2008, p. 2). Later, the movement spread to other parts of India. Currently, 106 districts of India are identified to be affected by Naxalism (Ministry of Home Affairs, 2013).

The repression of the land and wage rights of the rural underclass by violent means instilled in them feelings of fear and insecurity. These continue to affect their everyday lives. Because the political and bureaucratic apparatus is largely dominated by the representation of the landowning communities, they have managed to prevent, to the extent possible, attempts that have sought to change the existing order (Chakravarti, 2001). Although Bihar has undergone a major transformation in recent years, particularly after the election of new government in 2005, remnants of feudalism still remain widely prevalent in the state. Rural populations at the bottom of the societal structure continue to be deprived of their rights. Following the election of the new government, the state constituted a Land Reforms Commission under the chairmanship of D Bandyopadhyay, a former Indian Administrative Service official who was instrumental in the land reforms of West Bengal (a state which also carried a comparable colonial legacy of inequitable and exploitative land-tenure: Banerjee & Iyer, 2005). The Bandyopadhyay Commission, after a detailed study, submitted its report in 2008. However, its recommendations have not yet been implemented due to lobbying by the upper-caste landlords (Bandyopadhyay, 2008, 2009). In 2010, the Indian media reported that the newly elected Chief Minister of state, Nitish Kumar (who is widely credited for the state's revival in recent years), was warned by an upper-caste leader of his own political party, Prabhunath Singh, that passing a law that sought to protect sharecroppers' rights would push the state to the brink of civil war (Deccan Herald, 2010).

These class-caste tensions in the agrarian landscape of Bihar have had a huge impact on the development of the state in the post-independence period. Though it has been more than 65 years since the British Raj ended, the deep scars left by the Permanent Settlement continue to affect the society and economy of Bihar (for more on Permanent Settlement in Bihar, its fallouts and legacy, see, *inter alia*, Banerjee & Iyer, 2005; Bhaduri, 1976; Das, 1983; Mukherji & Mukherji, 2012; Sharma, 1995, 2005).

### ***Discriminatory treatment by federal government***

If the faulty policies of the British government were responsible for pushing Bihar on the margins, the troubles of this eastern state were only compounded by the



political indifference of, and even discrimination by, the federal government in much of the post-independence period. The disadvantage of Bihar was magnified, firstly, by the federal government's Freight Equalisation Policy of 1948 which remained in place until 1993. In order to promote industrial growth in all the regions of the country, this policy subsidised the transportation costs of raw materials such as iron ore and minerals. In other words, the inputs for industrial development were to cost the same everywhere in India. Before the bifurcation of the state in 2000 into Bihar and Jharkhand (the southern part of the Bihar was carved out to create the state of Jharkhand), Bihar was rich in natural resources and minerals. However, with the Freight Equalisation Policy, there was no incentive to set up industries in Bihar which prevented industrial development in the state. This obliterated what might have been a source of competitive advantage for Bihar vis-à-vis other states (Singh and Stern, 2013, pp. xxi-xxii). With the agricultural sector already battling with the burden of high population growth rates and increasing class-caste tensions, this proved to be a double curse for Bihar.

On the other hand, despite the Indian planning vision of balanced regional development, supposedly in which investments in underdeveloped regions have repeatedly figured as a development priority<sup>57</sup>, for the most part after independence Bihar has received inadequate fiscal transfers from the Central pool. For nearly a decade and half following independence (up until 1961), allocation of resources from the Center to States followed "no definite formula" (Planning Commission, 1997, p. 2) and the funds allocated were at the discretion of the government at the helm. Although the formulae for fund allocations have subsequently been improved, Bihar has got a disproportionately lower investment vis-à-vis many other Indian states. Guruswamy, Baitha, and Mohanty (2013) compare the economic experience of Bihar and Punjab (one of the most developed Indian states) within the wider context of regional inequalities in India. They show that in 1965, the average per capita income in Punjab was Rs. 562 (US\$ 11), which

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<sup>57</sup>For example, the second five-year plan (1956-61) document noted: "In any comprehensive plan of development, it is axiomatic that the special needs of the less developed areas should receive due attention ... as development proceeds and large resources become available for investment, the stress of development programmes should be on extending the benefits of investments to underdeveloped regions"(Planning Commission, 1956).

was only 1.7 times higher than Bihar's INR 332 (US\$ 6.5). By 2001, Punjab's per capita income of INR 25,048 (US\$ 500) was five times than that of Bihar's INR 5,466 (US\$ 110). This widening income gap between the two states, the authors argue, is directly attributed to the differentials in public investment by the federal government, with Punjab growing faster because of higher public investment (pp. 1-2). They estimate that over the 10 five-year plans (1951-56 to 2002-07), whereas Punjab received Rs. 9742.19 crores (US\$ 1.94 billion) more than the projected allocation, Bihar got Rs. 77,161.5 crores (US\$ 15.4 billion) less than what it should have received (p. 18, Table 14). Furthermore, the additional allocation for Punjab does not factor in the huge investments in agricultural and irrigation facilities on which the success of India's Green Revolution rested.

### ***Internal governance deficits***

Added to this discriminatory treatment by the Central government was the ineffective and corrupt political and bureaucratic administration that came to characterise Bihar since 1990. In that year, the Rashtriya Janata Dal party, headed by Lalu Prasad, formed government. With its focus on narrow individual political gains rather than the development of the state, the Rashtriya Janata Dal rule (which lasted three terms, from 1990 to 2005) pushed Bihar farther behind the development curve vis-à-vis other Indian states. Under the garb of progressive politics for the backward classes, Lalu Prasad often played a tactic of divisive sectarian politics centered around religion and caste.<sup>58</sup> More importantly, it is during this time that Bihar went into the mode of lawlessness; crime (murders, ransom kidnapping, dacoities, rapes) and corruption increased substantially and the criminals and corrupt officers enjoyed political patronage. In fact, crime, corruption and lawlessness became synonymous with Bihar. As Sinha (2011, p. 227) writes: "When a daylight robbery or rape took place in Bengaluru, city residents would scream, 'This is not Karnataka. This is Bihar.'" The money that came for development projects was siphoned off by the corrupt political and bureaucratic

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<sup>58</sup> To Prasad's credit, the Janta Dal rule did have some positive impact on the emancipation of the Backward Castes. For instance, Witsoe (2013, p. 43) notes: "While Lalu systematically destabilised the institutions of governance and state-directed development, I suggest that this also catalysed a meaningful, although partial empowerment of lower caste" (cited in Desai, 2013, p. 70).

apparatus, and no efforts were directed to improve the already deficient physical or human capital base. Kidnapping of rich industrialists by goons was so widespread that many of them fled to other parts of the country. Indeed, the governance deficits in Bihar were so acute that the state came to be known as Jungle Raj. In an article in *The New York Times*, Polgreen (2010) notes:

Criminals could count on the police for protection, not prosecution. Highwaymen ruled the shredded roads and kidnapping was one of the state's most profitable businesses. Violence raged between Muslims and Hindus, between upper castes and lower castes. Its economy, peopled by impoverished subsistence farmers struggling through alternating floods and droughts, shriveled. Its government, led by politicians who used divisive identity politics to entrench their rule, was so corrupt that it required a newly coined phrase: the Jungle Raj.

### **Migration and food security in Bihar**

These conditions produced a climate of social and economic insecurity whereby a large proportion of the Bihari population was left with few livelihood options other than to migrate out of the state. Although some streams of work-related outmigration from Bihar were already well established as early as the late nineteenth-century (for example, migration to jute-mills in Kolkata and adjoining areas: Sen, 1999), in the 1990s the overall trend intensified.<sup>59</sup> Heightened pressures to migrate were closely related to acute food shortages in Bihar. The state's agriculture sector, already operating under intense population pressure<sup>60</sup>, stagnated and its capacities to ensure income and food security to the Bihari population

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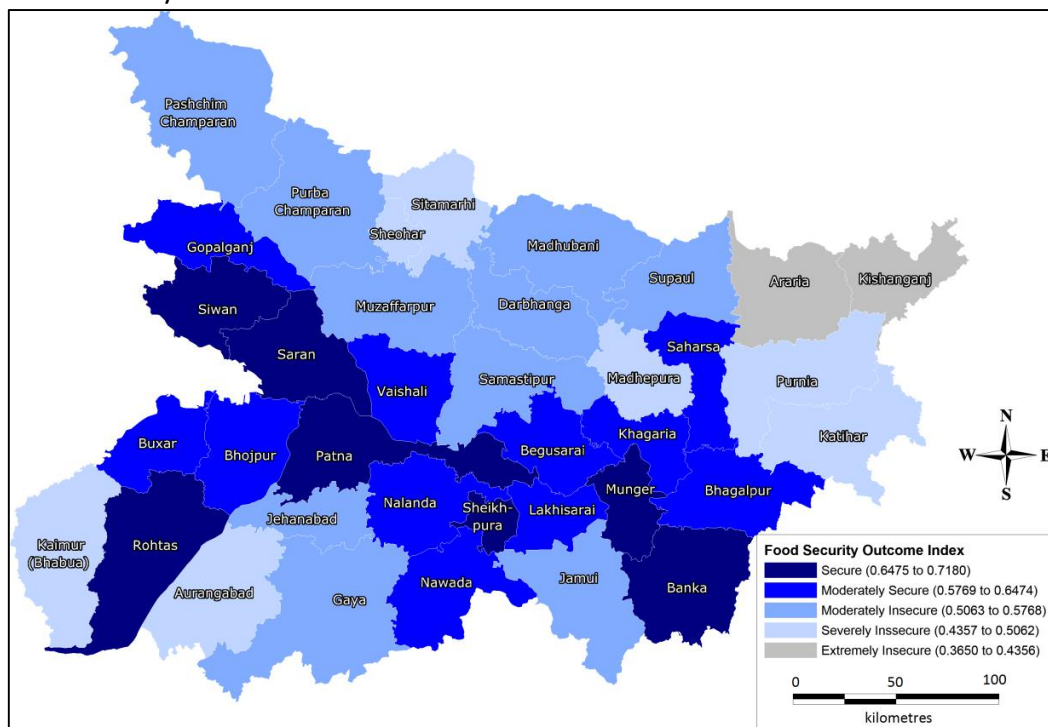
<sup>59</sup> For example, a follow-up study in the six villages of three districts of Gopalganj, Madhubani and Purnea in north Bihar found that between 1982-83 and 1999-00, the incidence of migration in the study villages doubled. In 1982-83, 27.69 percent of households reported having one of more members working outside the village for work and this proportion increased to 48.63 of all households in 1999-2000 (Karan, 2003, pp. 112-113; also see Sharma, 2005). Of course, not all migration was a result of the distress situation at home and many people also responded to the better-employment opportunities that emerged in other parts of India but Bihar, after the advent of market reforms in early 1990s.

<sup>60</sup> Population growth rates in Bihar have been much higher than most states in the country. In 2011, 35 out of 38 districts in Bihar state had a population size of more than a million people (Registrar General of India, 2011c).

dwindled. The food-based safety net programmes such as the PDS, were marred by huge problems of corruption.

Notwithstanding the political reinvigoration and higher economic growth of recent years, a rampant incidence of food insecurity persists in the state. Although food insecurity in India as a whole remains high, the situation in Bihar is even worse. A comparison of hunger and undernourishment in 17 Indian states by the IFPRI<sup>61</sup> puts food insecurity situation in Bihar as ‘alarming’. The state ranks 15<sup>th</sup> out of 17 states, only ahead of two other highly food-insecure states (Jharkhand and Madhya Pradesh). Seen in an international perspective, Bihar’s rank in hunger index is lower than many extremely poor countries in the Sub-Saharan African region such as Mali, Malawi, Mozambique, Tanzania, Rwanda (Menon et al., 2009, pp. 11-19).

Figure 5.1: District-wise prevalence of food insecurity in rural Bihar according to the Food Security Outcome Index



Source: Own work using data from WFP-IHD’s Food Security Atlas of Rural Bihar, 2009 (Table 3.2, p. 27).

Almost half of the 38 districts in the state currently suffer from food insecurity in varying degrees. Figure 5.1 presents the district-wise picture of undernourishment

<sup>61</sup> This uses the SHI (similar to IFPRI’s GHI) which takes into account three indicators of i) calorie undernourishment, ii) prevalence of underweight among under-five children, and iii) under-five mortality rate.

prevalence in rural Bihar using the Food Security Outcome Index (FSOI), as reported in the Food Security Atlas of Rural Bihar, 2009.<sup>62</sup> It is worth noting that food deprivation is largely concentrated in the northern part of Bihar (mostly in the areas above where the Ganges naturally divides the state into two unequal halves of north and south Bihar), which is relatively more backward than the southern part, though there some clear outliers (WFP-IHD, 2009, pp. 26-30).

Although there are no recent estimates of household-level food insecurity for the state as a whole, in 1999-2000 it was estimated that nearly a quarter of all households in Bihar did not 'get enough food all-year round', with this proportion increasing to 45 percent among landless households and 65 percent among households whose primary occupation was local agricultural labour (Sharma et al., 2000 cited in WFP-IHD, 2009, pp. 36-37). The household survey data collected for this study in 2012 on the 'regularity of eating' of 2286 individuals from 392 households in Siwan suggested that 22 percent of individual members consumed 'two or less meals a day' during the month preceding the survey. This proportion increased to 26 percent among households with no land, compared with 15 percent of households who owned an acre or more of land.<sup>63</sup>

Does migration contribute to improving food security situation at the household-level in Bihar, where a large proportion of households simply do not have access to enough land and the rural and urban non-farm sectors remain characterised by a dearth of income and employment opportunities?

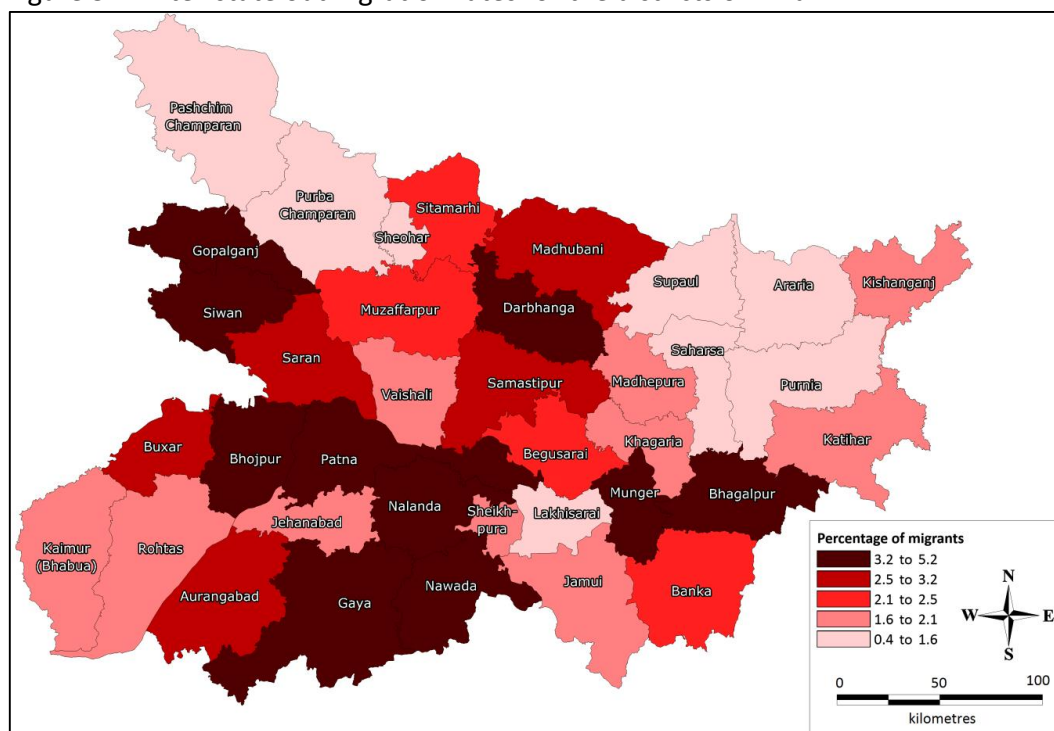
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<sup>62</sup> The FSOI is a composite measure of food insecurity which measures food deprivation using two key indicators of underweight among under-five children and under-five mortality rate (data on calorie undernourishment, used in the SHI, are not available at district-level, though the methodology of both indices is different too). Based on these parameters, the different districts are classified into five categories of i) food secure, ii) moderately secure, iii) moderately insecure, iv) severely insecure and, v) extremely insecure (the index values of district range from 0 to 1, with low value corresponding to high food deprivation).

<sup>63</sup> To avoid recall lapse, the reference period on 'regularity of eating' (data for which was collected for each household member) was kept to a month preceding the survey. It must be noted that there were other food-consumption related questions which were administered through the survey and they all varied in reference period which followed the principle of 'ease of recall'. For example, data on different food items consumed by the household (dietary diversity) had an even shorter period of 7 days preceding the survey.

At the district-level, there is evidence to suggest that migration is positively associated with food security. Figure 5.2 presents the inter-state outmigration rates (migrants as a proportion of total district population) for the districts of Bihar using the Indian Census 2001 data on migration. In total, 1.7 million people migrated from Bihar to other Indian states in the decade preceding 2001 (Registrar General of India, 2001a, p. 14).<sup>64</sup> It is important to note that this Census data on migration does not take into account short-term migration which is a more dominant form of labour mobility from the state and severely underestimates the magnitude of migration (Breman, 2010; de Haan, 2002; Deshingkar et al., 2009; Karan, 2003). This also means that assessments based on Census migration data are likely to underestimate the overall impacts of migration. Yet, however, district-wise outmigration rates, in general, show a positive association with the food security situation in the district, as measured by FSOI (Figure 5.1).

Figure 5.2: Inter-state outmigration rates for the districts of Bihar<sup>65</sup>



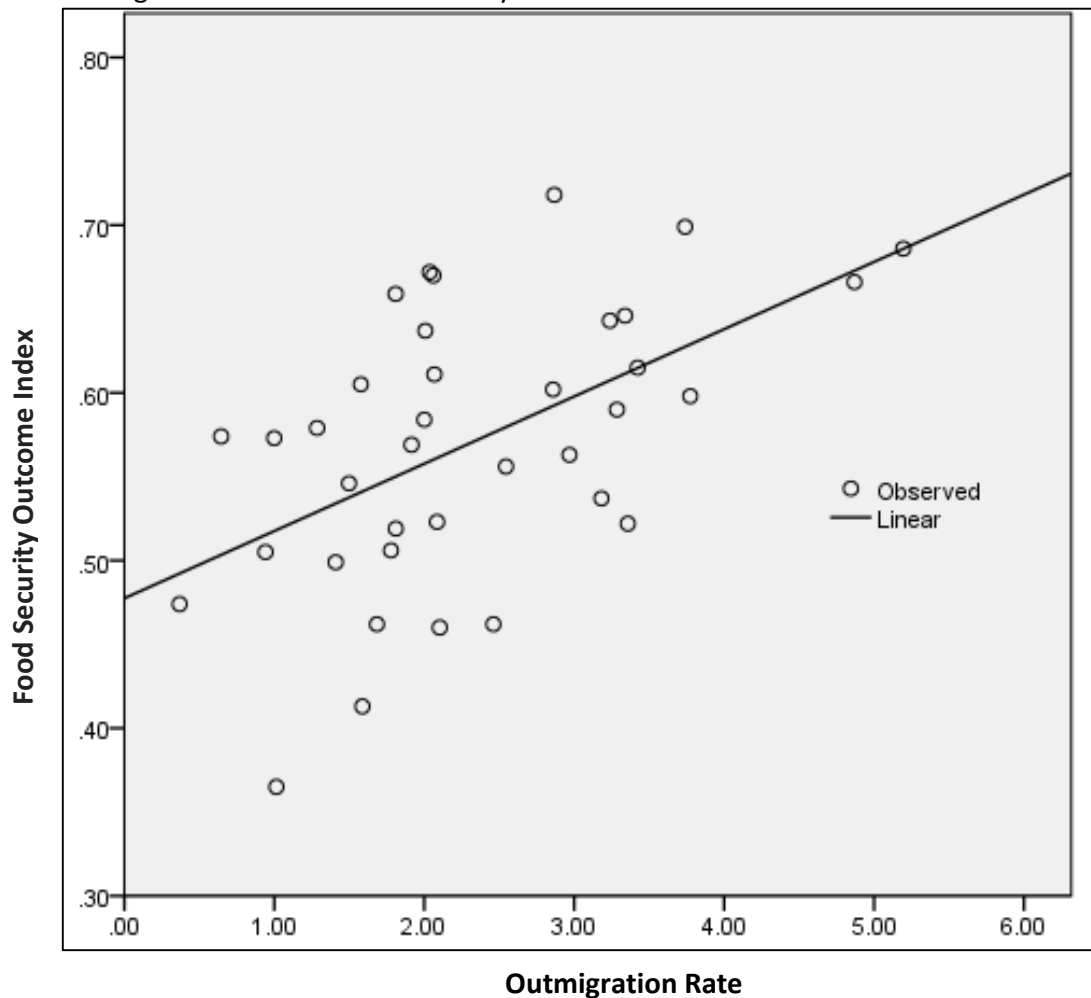
Source: Own work using data Indian Census 2001 data on migration(Registrar General of India, 2001b) (Migration tables: D series).

<sup>64</sup> The inter-state outmigration here refers to migration from Bihar to places (village, towns, cities) in other parts of India during the inter-censal period of 1991-2001.

<sup>65</sup> Figure 5.1 and Figure 5.2 do not include include Arwal district which became 38<sup>th</sup> district of Bihar in August 2001 when it was carved out from Jehanabad.

The broad picture that emerges from this map (Figure 5.2) suggests that the districts that have low outmigration are also the ones concentrated mainly in the northern part of Bihar, where food deprivation is high. As noted above, northern Bihar is relatively more economically laggard than the southern region and the low rates of livelihood diversification in the form of migration to distant places, it seems, goes some way in explaining the poor food security outcomes. For example, the districts of Araria, Supaul, Purnia, Saharasa in the north-east have low migration rate and low FSOI. On the other hand, the districts of Siwan, Saran, Gopalganj, Patna, Nalanda, Nawada have a relatively greater proportion of migrants and better food security scores.

Figure 5.3: Scatter plot with estimated linearity curve on association between outmigration rate and Food Security Outcome Index for the districts of Bihar



Indeed, the outmigration rate and food security have a reasonably strong *statistically* positive association. Figure 5.3 depicts this using the scatter plot with estimated linearity curve of association between these two variables. The adjusted

R<sup>2</sup> value of 0.263, although not able to explain all the variation in FSOI values across districts given that several other factors also influence child underweight and child mortality (variables which FSOI uses), seems reasonably well fitted still.

The results of linear regression estimates on the association between food security and outmigration are presented in Table 5.3. The results of both unstandardized coefficients and standardized coefficients reveal that food security and the proportion of migrants in the districts of Bihar are positively correlated, with the standardized coefficients showing much stronger association. In statistical terms, this suggests that one-unit change in the outmigration rates is positively associated with five-unit change in FSOI. The results are statistically significant with the p value <0.001 and t-test value of 3.67.

Table 5.3: Linear regression estimates on the association between outmigration rate and FSOI for the districts of Bihar

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	95.0% confidence interval for B	
	Beta	Std. Error	Beta			Lower Bound	Upper Bound
<b>(Constant)</b>	.478	.028		17.312	.000	.422	.535
<b>District outmigration rate</b>	.40	.011	.528	3.676	.001	.018	.062

### Case-study district: a brief profile of Siwan

My field-research focused on the district of Siwan in western Bihar. As described in Chapter 4, this district was chosen because it exhibited a high rate of outmigration. Siwan came into existence as a separate district in 1972, prior to which it was one of the three sub-divisions of the larger district of Saran (the other two sub-divisions being Chapra – the then administrative headquarters of Saran – and Gopalganj). The district of Siwan, which translates into “border” in local-language Bhojpuri – an apparent reference to its erstwhile geographic location when it formed the



southern border of Greater Nepal – is one of the most densely populated districts of Bihar.<sup>66</sup>

In 2011, Siwan had a total population of 3.14 million people in a total land area of just 2,200 square kilometers (Government of Bihar, 2014a). To put these figures in perspective, there are nearly 400 more people on per square kilometer of land in Siwan than the state average of Bihar, a figure which, in itself, is higher than the average population density of India as a whole. And the data over the longer period highlights that this density gap (Siwan vis-à-vis Bihar and India) has only increased over the years (Table 5.4). The level of urbanisation in Siwan remains unusually low, with close to 95 percent of the population currently living in the rural areas. Though quite characteristic of Bihar – and, indeed of most under-developed countries – this combination of high population density and low urbanisation makes it one of the poorest districts of India.

Table 5.4: Population density in Siwan, Bihar and India, 1981-2011

Year	Siwan	Bihar	India
1981	801	402	216
1991	978	685	267
2001	1223	881	325
2011	1495	1102	382

Source(s): Registrar General of India (1981); Registrar General of India (2011c); Government of Bihar (2014e)

The district has been identified as one of the 69 most backward districts of India facing acute deficits in living standards, food security, education and health care outcomes (Debroy & Bhandari, 2003). In 2009-10, annual per capita GDP for Siwan was estimated to be INR 8,111, which was 7 times less than the capital district of Patna’s GDDP of INR 55, 539 (Government of Bihar, 2013). Severely deprived of any major industrial activity, with no big private enterprises or public sector undertakings operating in Siwan, in 2011-12 the district had only 3,885 registered

<sup>66</sup> Although no longer is Siwan part of Nepal, the locals still signify the same Bhojpuri meaning of Siwan by loosely referring to the internal border the district shares with the other Bhojpuri-speaking districts of “Deoria” in its west and “Balua” in its south of the neighbouring state of Uttar Pradesh.

micro and small enterprises employing 13,120 workers, including own-family members<sup>67</sup>; of which close to one-third (1246 units) were agro-based enterprises. However, the year-wise trends for the past quarter century in the number of micro and small enterprises registered and employment generated in the district show a decline, from 162 registered units employing 730 workers in 1984-85 to 65 units generating employment for 291 workers in 2010-12 (all data, MSME Development Institute, 2012, pp. 11-12). In Siwan, basic physical infrastructure such as roads and electricity is sorely lacking which has also, among other things, prevented any industrial development. Furthermore, the traditional forms of livelihoods such as pottery, brass work and embroidery, for which the district was once famous (Yang, 1998), have also gradually disappeared.

The local livelihoods in Siwan are heavily reliant on agriculture, with more than 60 percent of the district's population working as either own-account cultivators or agricultural labourers (Registrar General of India, 2011b). However, as is the broader case of Bihar, the nano-size of agriculture landholdings implies that for the large majority of rural dwellers, farming provides, at best, a subsistence option and not an income source. Furthermore, exponentially rising population pressures have further undermined the capacities of agriculture-based livelihoods to enable the district's inhabitants to adequately meet their income and food needs. Already meagre in size, the average landholding size in Bihar has declined by half – from 0.75 hectare in 1995-06 to 0.39 hectare in 2010-11 (Ministry of Agriculture, 2014a). Although similar time-series data is not available at the district level, the cross-sectional survey data collected for this study from 392 households in Siwan shows that the average landholding size of the 265 households who owned any farm land was a little less than 0.25 hectare.

Poverty coupled with lack of gainful employment opportunities in Siwan means that a large majority of the district's population depends on wage income options pursued in distant labour markets, usually outside the state. Although outmigration has been a key historical feature of the rural livelihood systems of Siwan (and

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<sup>67</sup> The evaluation report of the Ministry of Micro, Small and Medium Enterprises (MSME) Development Institute, cited above, does not clarify if the workers involved included family members. However, given most small-scale enterprises in India are family-run units, it is a reasonable assumption.

indeed of Bihar in general), the significance of migration has increased over time. Not only is a greater number of rural dwellers seeking work outside but migration is also becoming of longer duration, unlike the earlier predominant pattern of seasonal mobility that occurred in agriculturally-lean seasons. It is also important to note that while much of the migration from Siwan tends to take place within the national boundaries, the district also has a high rate of international migration, involving mainly the unskilled and semi-skilled workers migrating to countries in the Middle East. Indeed, in some villages, almost every household has at least one member abroad (I discuss this issue in more details in Chapter 7). Though distress-conditions at home remains an important migration pull, the decision-making matrices of households are complex and include, among other things, calculated strategies by households to spread income risks and accumulate savings. Below I attempt to place migration within the livelihood strategies of Siwani dwellers. Drawing from the history of migration from the district, I highlight the nature and patterns of migration from the districts and some of the changes in mobility patterns and streams.

### **Rural livelihoods and culture of migration in Siwan: mobility in the past and present**

A key-feature of Siwan district throughout the past century and a half (as far as Census records are available) has been high demographic pressures on land (Table 5.4). Colonial records suggest that since the first synchronous population Census of 1881, the former district of Saran was consistently ranked as one of the most densely populated district of India, and within Saran, Siwan subdivision had the highest population density (O'Malley, 1930, p. 36; Yang, 1989). The high population pressures in western Bihar have meant that the region has historically lacked the ability to support its people. Furthermore, Saran's proneness to natural calamities, especially floods but also droughts, added to the woes. Harvest failures were not uncommon, leaving people starved and dead. Since Saran came under colonial rule in the late-eighteenth century, the region witnessed five severe famines in 1769-70, 1783, 1866, 1874 and 1897 (O'Malley, 1930, p. 69). The famine of 1769-70 is considered to be the most severe one since, in some areas of the region, it wiped out 50 percent of the total population (Yang, 1989, pp. 31-32). Nonetheless, the

agricultural land under cultivation in the Saran region as a whole was evenly distributed among three harvests of the year including *aghani*, *bhadoi* and *rabi* crops<sup>68</sup> which provided some protection against famines and recurrent food shortages. Famines occurred only when two of the three harvests failed. Siwan sub-division, however, did not enjoy this buffer as it had a proportionally larger agricultural land dependent on the single *aghani* winter crop of rice (O'Malley, 1930) and thus was among the most food scarcity-prone divisions of the district.

The implementation of Permanent Settlement had wreaked havoc across the different regions of Bihar; agricultural production in the state suffered a blow and local livelihoods were disrupted, affecting, in particular, the class of small peasants and agricultural labourers. Because of its high demographic pressures on land, agricultural stagnation affected Saran District worse than virtually all other districts in Bihar, and at the beginning of twentieth century, it became “the first district [of] Bihar to reach the point at which it [could] no longer support an increase in its population in moderate comfort from the produce of the soil” (Fremantle, 1906 cited in Yang, 1979, pp. 47-48). Poverty and food insecurity among the rural underclass increased and they resorted to work migration in large numbers. However, migration was not just restricted to the poor but involved people from all socio-economic strata. Although the Zamindari system meant that control over land determined one’s power and position in society, and hence, migrating out implied loss of land and status, intense pressure associated with land-based livelihoods meant that many people in the region did not mind deserting their land parcels. In any case, the average land sizes were too small and the region was characterised by “petty zamindars” (Hagen & Yang, 1976, p. 77). As Yang (1989, p. 182) writes:

Under the British Raj, when control of land became a fundamental source of power, wealth and status, flight became far less promising as alternative to the raiyats [peasants]. Its continuance ... therefore, highlights the intense pressures on peasants in Saran’s agrarian system.

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<sup>68</sup> *Aghani* was the winter crop harvested in the months of November-December, which included mainly rice and sugarcane. *Bhadoi* was harvested in the autumn season (August-September) and the crops grown included millet, rice, maura rice, corn and indigo. And *rabi* crop mainly included wheat and pulses, harvested in spring months of March and April (O'Malley, 1930; Yang, 1989)

Such was the extent of out-migration from Saran that in 1891, it was described as “one of the greatest emigrating districts in Bengal” (Bourdillon, 1898, cited in Yang, 1979, p. 41).<sup>69</sup> In total, there were 364,315 Sarani migrants enumerated outside the district in 1891 (Yang, 1979, pp. 41-42). While many families from the region left their land and migrated permanently to other places, mobility from Saran was largely of *seasonal and circular* nature which was connected closely with the local agricultural calendar and occurred outside the peak agricultural period. Yang (1979) characterises the seasonal migrant from Saran as an “optimizing peasant migrant” (p. 50) and suggests that seasonal migration was a deliberate strategy of the rural peasant populations of Saran which provided them an effective means to supplement their agricultural incomes without incurring the potential costs (such as leaving behind the established life and family) that permanent migration involved. This pattern of migration has continued even after the end of British Raj (de Haan, 2002), though migration is now occurring for longer durations (see below). Another defining character of migration from the region has been that it has tended to be predominantly single-male migration, because social and cultural norms regarding the role of women pose restrictions on their mobility. As noted in Chapter 4, all the migrants in my study sample were males. Based on my interviews with male migrants and left-behind women, I will show in the later section of this Chapter, that this explains, to some extent, the circular nature of migration from Siwan.

Though migration was largely a result of distress conditions at home, not all moves, however, represented *push* migration. Many people simply responded to better work opportunities in order to improve their standards of living. Migration did, no doubt, involve huge risks and Saranis willingly took onto them. In fact, the colonial administrators viewed the Bhojpuri-speaking population of Saran as distinctly different from the rest of Bihar when it came to their readiness to migrate. To quote Sidney Steward O’Malley, who served as the Collector of Bengal during the colonial rule:

The Bhojpuri speaking country is inhabited by a people of curiously different from the other who speak Bihari dialects. They form one of the

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<sup>69</sup> Up until 1912, Bihar formed part of the Bengal Presidency.

fighting nations of Hindustan. An alert and active nationality, with few scruples and considerable abilities, dearly loving a fight for fighting's sake, they have spread all over Aryan India, each man ready to carve his fortune out of any opportunity that may present itself. They have in former times furnished a rich mine of recruitment to Hindustani army and on the other hand they took a prominent part in the mutiny of 1857. As fond as Irishman of a stick, the long boned stalwart Bhojpuri with his staff in his hand, is a familiar object striding over the fields far from his home. Thousands of them have emigrated to British colonies and have returned rich men; every year still larger numbers wander over Northern Bengal and seek employment either honestly as *palki*-bearers or otherwise as dacoits. The larger Bengal land-holders each keep a posse of these men, euphemistically termed *Darwans* [Doorkeepers] to keep his tenants in order.

(O'Malley, 1930, p. 41)

Although there were numerous streams of migration from the region, including to the far-flung British colonies in South-East Asia and Fiji in the South-Pacific, much of the migration from western Bihar in the pre-independence era was to the neighboring districts of Bengal, mainly Calcutta (now Kolkata). Following the development of the jute industry and railways in West Bengal towards the end of nineteenth century, many labourers from Bihar migrated there to work in the jute mills or as coolies at the railway stations. The greater variety of employment in Calcutta and its neighbouring towns resulted into local labour shortages in the jute mills and migrants from the poorer regions of Bihar and Orissa provided an easy source to fill this gap. As Sen (1999, p. 26), in her study of the jute industry in Bengal, writes:

It is then not surprising that [jute] mills experienced periodic shortages of labour when they depended on local sources. Their problems were solved by the long-distance migrants. From the mid-eighteenth century, Bengal had begun to draw labour from Orissa and Bihar.

Jute mills supported a large number of migrants from Bihar and other eastern provinces. Saran district, of which Siwan formed a part, topped the chart in terms of

the number of seasonal migrants coming to Calcutta to work in the mills (Sen, 1999, p. 27). However, the jute industry, which had already begun to stagnate by the late 1920s in some parts of West Bengal, hit a 'tipping point' around late 1960s and employment opportunities in sector dwindled (de Haan, 1997b, p. 920).

The employment stagnation in the jute industry of West Bengal occurred contemporaneously with the advent of Green Revolution reforms in the northwestern states of Punjab and Haryana. These latter events generated massive agriculture employment in these states. The streams of migration from Bihar thus shifted to these northwestern states and a large number of people from Bihar migrated as agricultural labourers. A study carried out by Singh (1995) in 1980-81 in two in-migration districts of Punjab (Ludhiana and Hoshiarpur) found that seasonal migrants from the north Bihar districts of Munger, Saharsa, Darbhanga, Muzzafarpur and Samastipur numbered between 2,00,000 and 5,00,000 workers. It must be noted that seasonal migration from Bihar to Punjab occurred even during the decade of 1980-90, the period marked by Sikh-militancy, of which several migrant labourers were also the victims. Singh (1997, p. 519) notes: "The flux of migrant labour from Bihar could never be deterred by the bullets of Sikh 'militants' despite their massacre during the turbulent period of 1981-91."

Although there are no independent studies that track the migrant flows from Siwan to Punjab for agricultural work, personal histories of several current migrants confirmed that Punjab was one of their favoured work destinations. Many migrants also reported working in the knitting industry in the Ludhiana district of Punjab. Migration for farm work to Punjab and Haryana remained a predominant stream of migration from Bihar up until early-1990s when agricultural productivity began to taper off, leading to an eventual reduction in demand for agricultural labour.

The high incidence of poverty and lack of productive employment opportunities in Bihar continue to be major 'push' factors of migration from the state. However, more recent waves of migration involve new 'pull' motives and destinations. The rising incidence of rural-urban inequalities in India has resulted in a greater number

of rural dwellers now migrating to urban areas for work.<sup>70</sup> Although rural-rural migration still remains strong, migration to urban areas is growing at a much faster rate. As noted in Chapter 1, the National Sample Survey data suggest that during 2007-08, migration to urban areas grew at the rate of 3.5 percent as against 2.6 percent to rural areas (National Sample Survey, 2010, p. 22).

The household survey data collected for the present study on the current work destinations of migrants from Siwan suggests that most moved to urban areas. Only two out of 280 migrants worked as agricultural labourers and their average monthly income of Rs. 4,000 was the lowest among all the other occupational groups. In terms of urban work destinations, although migrants from Siwan were spread out across different parts of India, migration was found to be highly concentrated into the Tier 1 cities that dominate the Indian economy.

Figure 5.4 shows the major migration destinations from Siwan during 2011-12, as reported by their household members at origin village. With the total migrants numbering 280, a “major migration destination” is defined here as a place where there were 15 or more migrants from Siwan. In total, 161 migrants (65.4 percent) were reported to working in just seven cities. The National Capital of Delhi had the highest number of Siwani migrants (51 migrants), followed by the age-old destination of Kolkata (26 migrants). Other migration destinations included Bangalore (20 migrants), Pune (16 migrants), Mumbai (16 migrants), Faridabad (16 migrants) and Surat (15 migrants). Labour migration to Pune, Faridabad, Bangalore and Delhi is connected with the increasing real estate activities in these cities as most of the migrants were reported to be engaged in the construction sector.

Most migrants belonging to the sample household were engaged in casual work and lacked secure employment tenure. Yet, unlike the earlier pattern of short-term migration which mostly coincided with the agricultural cycle at the origin, the

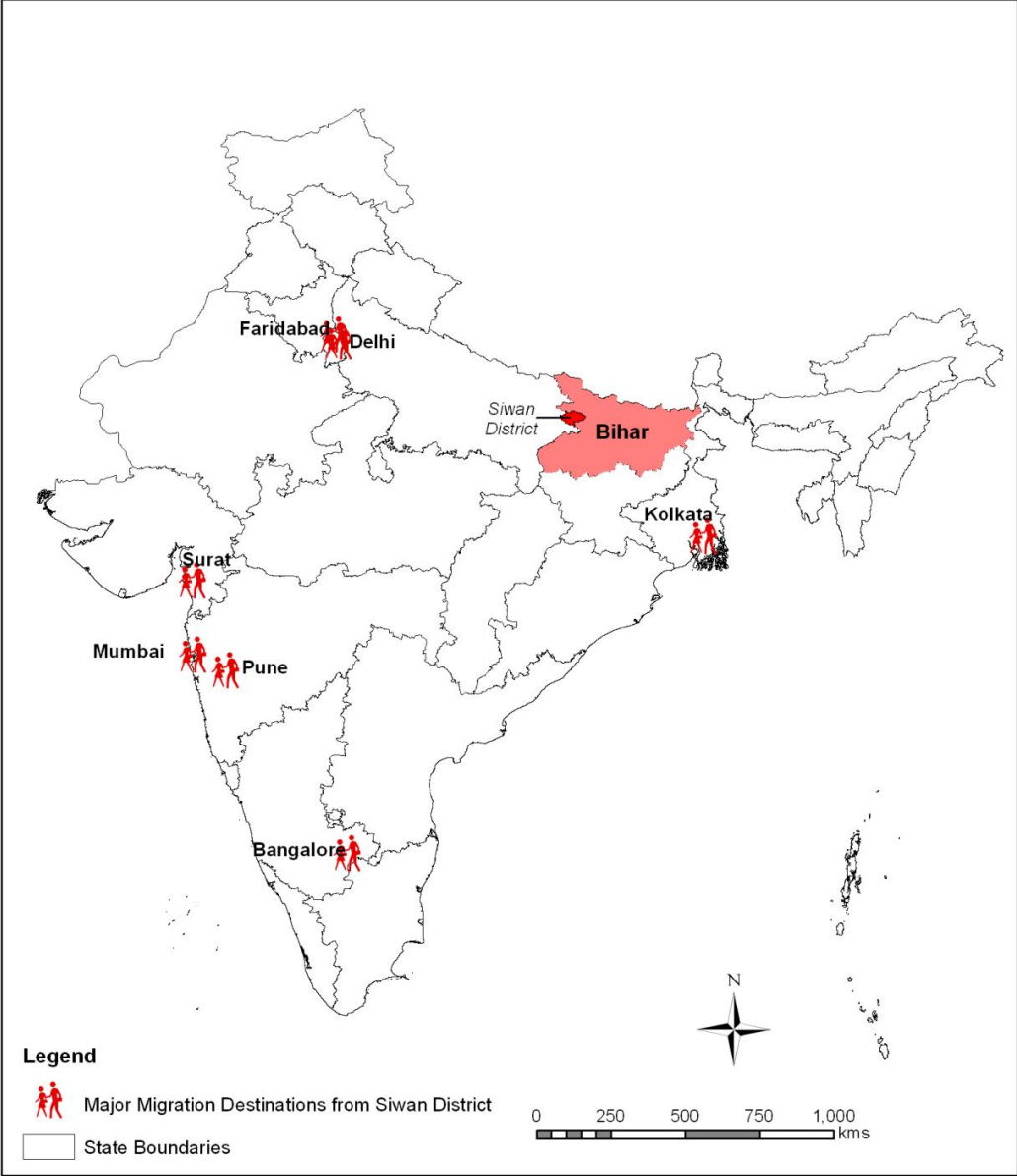
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<sup>70</sup> There is evidence that rural-urban income and wage gaps in India, although always persistent, have widened in the post- liberalisation period. Real agricultural wages in the 1990s grew at an average rate of 2.5 percent, half of the average annual growth rate of 5 percent in the 1980s, whereas annual urban incomes grew more rapidly more rapidly during the 1990s (Deaton & Dreze, 2002). However, even the lower growth of the real agricultural wages are associated with rural poverty decline in India (Deaton & Dreze, 2002, pp. 3737-3738).



household survey data suggest that a large number of Siwani households now have members who are spending more time away from the village for work.

Figure 5.4: Major migration destinations from Siwan, 2011-12



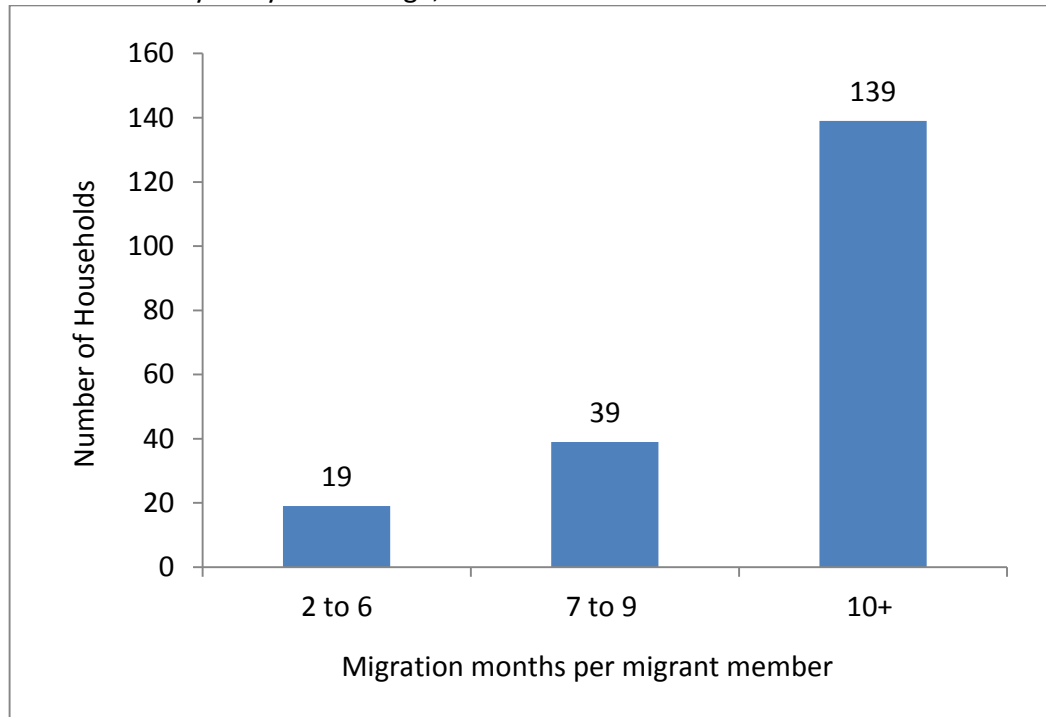
Source: Primary household survey data, 2011-12

Note: The borders of this map do not purport to be the official borders of India.

Figure 5.5 presents the distribution of migrant households by their members' duration spent away from the village for work during 2011-12. Out of 197 migrant households, members of 178 households spent 7 months or more outside the village for work, and 139 households reported that their migrant members were away for 10 months or more during the past year. This, of course, does not mean that migrants did not make visits back home. With the exception of 41 out of 280

migrants, all migrants returned home in the past year, with close to half of the them (134 migrants) visiting home two times or more.

Figure 5.5: Distribution of surveyed migrant households by migrant members' duration of stay away from village, 2011-12



Source: Primary household survey data, 2011-12

My fieldwork suggested that not all migrants, particularly those working in construction industry as masons or helpers, were able to find work on a regular basis. Nonetheless, in general, the average wages in the cities were more than the wages in the villages which allowed most migrants to save and remit money home even after accounting for expenses at destinations such as rent, electricity and food. In many cases, the motivation to migrate in itself was deeply connected by the prospects of savings that migration allowed. For example, a migrant respondent, whom I met in the origin village, told me:

It is not impossible to get work here [in the village]. While I may not get work all year round but work irregularity hangs on my head everywhere. But if I work in the village, I know I cannot save even a single penny. Saving is impossible from the little everyday earning here, whereas I am able to save working outside the village. At least, my children do not ask for pocket

money when I am away and you know how hard it is to refuse money to your children.

Though the longer duration spent away from home is driven by a complex mix of push and pull factors which vary from one household to another, it is also indicative of the increasing significance of migration in the livelihood systems of rural households in Siwan. That said, much of the migration from Siwan is still circular. Consistent with de Haan's (1999, 2002) findings in Saran District, my fieldwork suggested that most migrants in Siwan returned home to visit their families and friends, albeit they now spent less time in the village than what the earlier research seemed to suggest. With migrants now spending more time away from home in non-farm activities, it seems that the dual "optimizing peasant migrant" character of rural dwellers from western Bihar, as suggested by Yang (1979, p. 50), is gradually weakening. On the other hand, however, most migrants tended to invest their savings in household-owned land and agriculture in the origin village which in turn allowed them to maintain their peasant identities. This carries important implications for food security, particularly in places of origin. How circular migration provides a potential pathway to influence household food security is discussed in Chapter 7.

Another defining feature of migration from Siwan is that it is almost exclusively undertaken by the male members of the household while the women stay behind. It is striking to note this single-male pattern of migration has continued throughout the past century, as reflected in the higher number of females than males in the district. Based on the Population Census data, Table 5.5 presents the general sex ratio (females/1000 males) of Siwan and Bihar from 1901 to 2001. As is evident, the number of females in Siwan has consistently outnumbered males throughout the past century, while the sex ratio in Bihar began to decline after 1961 though 1931 marks an exception.

In 2001, the sex ratio for India as a whole stood at 933 females on every 1000 males (Registrar General of India, 2001d), a shortfall of roughly 70 females per 1000 males from the biological norm (Anderson & Ray, 2010, p. 1262). A range of studies have highlighted that the imbalance in sex ratio in India is due to the strong son

preference in the country which manifests itself into widespread treatment differentials and discrimination against girls in matters such as health care, food and nutrition and education, with the overall negative effect on survivorship of the females (*inter alia*, Bardhan, 1974; Boserup, 1970; Das Gupta, 1987, 2005; Miller, 1981; Sen, 1990, 1992).

Table 5.5: Sex ratio (females/1000 males) in Siwan and Bihar, 1901-2001

Year	Bihar	Siwan
1901	1061	1199
1911	1051	1151
1921	1020	1066
1931	995	1038
1941	1002	1082
1951	1000	1118
1961	1005	1154
1971	957	1076
1981	948	1070
1991	907	1017
2001	921	1033

Source: Government of Bihar (2014d)

Seen in comparative perspective, in 2011 Siwan district had 100 more females per 1000 males compared to the sex ratio of India. This imbalance in the favour of women is not because of any absence of son preference in Siwan. It is deeply and rigidly entrenched in rural society in Siwan. The emanating difference owes largely to the effects of single-male migration outflows from the district which, in turn, are guided by the social and cultural conventions posing restricting on the participation of women in distant labour markets. Not only do the societal norms prohibit the women to take up employment outside the village but the possibility of women joining their husbands at their destination places is also considered socially unacceptable. In regards to the latter, while many migrants indicated that they found it economically unviable to bring their wives along, and economic reasons also figured prominently in the responses of migrants' left-behind wives surveyed at

the origin, this is not the only explanation. During my fieldwork, many respondents alluded to the disruptions it can cause to the functioning of the households. For example, Ahmad (name changed), a migrant I interviewed, told me that when his daughter developed a major health problem, he decided to seek her treatment in Delhi, as it had better health care infrastructure and services than Siwan. He brought his wife along to take care of the daughter so that he could continue to work and pay for his daughter's health expenses. The treatment required making periodic visits to the hospital and lasted around a year. When the treatment finally finished and the hospital visits were no longer required, Ahmad went to drop his wife and daughter back to the village. Upon their return, however, his mother separated his family from the joint household as she viewed Ahmad's decision to take his wife along to the city did not involve any consideration that his wife is supposed to take care of his mother in her old age. In fact, interviews with many of the left-behind wives revealed a puzzling dichotomous response. When the stay-put wives of the migrants were asked that if given a chance, would they like to stay with their husband at their place of destination, many women expressed a strong desire to live with their husband; at the same time, they wanted their daughter-in-laws to stay in the village and take care of them. Equally importantly, some wives of the migrants also informed me that they wanted to live in the village and take care of the family elders and children, from which they appeared to derive their sense of self-worth (I discuss the factors underlying male-only pattern of migration in more details in Chapter 8). This provided a reason for the males to return home and explains, to some extent, the circularity of migration.

Male-only migration seems to also trigger fundamental changes in power relations at the household-level. Absence of male members seems to be resulting into women assuming more proactive role in the household affairs, in matters financial and otherwise, which also has the potential to affect household food security. Whether and how this correlates with food security is explored in details in Chapter 8. It is rather surprising that despite male-migration being the norm in most countries in the developing world, research evidence is scarce on how the resultant changing household gender dynamics may impact food security within the household.

## Conclusion

This Chapter has provided a broad overview of the economy and society of Bihar. The discussion above has highlighted that a combined effect of discriminatory economic and investment policies, social tensions along the lines of caste and governance failures has led the state to slide down from the commanding heights of Indian civilisation to a “basket case of irrelevance” (Singh and Stern, 2013, p. xvii). Decades of economic stagnation in the wake of high population pressures has produced a climate whereby migration has become an inseparable part of rural households of the state.

This Chapter has also shown that mobility in Siwan (and in western Bihar in general) has been much more pronounced than the popular rural-equates-agriculture paradigm of thinking seems to suggest. It is worth noting that though the streams and duration of migration have undergone changes over the years, two central characteristics of mobility from western Bihar remain largely intact. This includes, i) circular nature of migration, and ii) male-dominated migration. These patterns of migration imply that there are two key pathways through which migration may have a potential bearing on household food security: firstly, the linkages that circular migration creates between rural-urban economies through remittances; secondly, through the changes triggered by single-male pattern of migration at the household level, with household responsibilities and decision-making falling invariably more on the women in the absence of the men. In Chapter 7 and Chapter 8, I discuss the ways in which these relationships between migration patterns and food security play out. In the next Chapter, however, I address the connections between the institutional arrangements pertaining to the food and livelihood security in rural Bihar and migration.

The analysis of the government-run food and livelihood programmes in Bihar is timely. As noted above, following the election of new state government in 2005, a range of governance reforms has been initiated to revive the state. Indeed, some positive signs are already visible. The state of law and order has improved remarkably and no longer is Bihar in the grip of *Jungle Raj*. The growth rate of Bihar’s economy has also surged, growing at an average rate of 12 percent during

2007-13 (Government of Bihar, 2014b). The arena of food and livelihood safety schemes has not been left untouched by these reforms to improve the food security of rural poor. These governance reforms have led to claims on the decreasing incidence of migration from the state.<sup>71</sup> Drawing from the household survey data collected from Siwan, I examine these claims in the next Chapter.

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<sup>71</sup> In 2012, the Chief Minister of Bihar, Nitish Kumar, was quoted by national media as saying that as a result of development reforms, including the operations of social safety nets of PDS and NREGS, initiated under his premiership since 2005, the overall incidence of migration from the state has declined and the farmers and entrepreneurs in other parts of the country complained of labour shortages (The Hindu, 2012).

## **6 CONNECTIONS BETWEEN FOOD SAFETY NETS AND MIGRATION**





## CHAPTER 6: CONNECTIONS BETWEEN FOOD SAFETY NETS AND MIGRATION

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### Introduction

A key issue facing a large majority of India's vulnerable rural populations is their inability to avail the benefits of state-assisted social protection schemes. Although public expenditure on social protection in India remains notoriously low compared to many other countries at similar stages of economic development (Dreze & Sen, 2013), numerous public assistance programmes – both in-kind and cash-income support – currently exist with the purpose of providing some form of social protection to the poor and vulnerable.<sup>72</sup> Because of the exclusionary nature of economic growth in India in the post-liberalisation period, the cause of strengthening social protection has been given further impetus in recent years. This has been reflected in the dominant narrative of “inclusive development” (Planning Commission, 2006, 2008) that has come to characterise social and economic development policy thinking in India in the past decade. Social protection forms an integral feature of this broad-based vision of development trajectory.

With India having among the worst food and nutritional indicators in the world, not coincidentally, a major thrust of social protection policy in recent years has been on food-based safety nets, particularly for rural populations. It is important to note that while the country has a long-history of running an extensive set of food-based safety nets (for example, in its current form as a social safety net the PDS that provides subsidised food rations to poor families has been in place since the late 1960s)<sup>73</sup>, unlike previous times, policy considerations of food security are now based on the recognition of the constitutional “right to food”. A landmark event in

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<sup>72</sup> According to the India Human Development Survey 2005 data, some 13 percent of all Indian households received direct income supplements from the government (Desai et al., 2010, p. 17).

<sup>73</sup> The history of PDS dates back to pre-independent India. The British first started the PDS in 1939 as a wartime rationing measure in select regions of India. The food shortages of mid-sixties highlighted the importance of continuing and strengthening the programme, and in late 1960s it was extended to whole of India (Swaminathan, 2002, p. 2). And while the PDS has undergone changes in its design and scope during the recent years, it remains an important food-based safety net scheme.

this regard is the passage in 2013 of the right to food law (NFSA 2013) that enshrines the constitutional right to food for poor and vulnerable population groups (Government of India, 2013a). Thus, no longer is food security a matter of public policy discretion; instead, the state is now legally obligated to ensure that the minimum food needs of the poor and vulnerable are met (Pritchard et al., 2014, p. 114).

The three major food-based safety net programmes in India are the *Public Distribution System (PDS)*, *National Rural Employment Guarantee Scheme (NREGS)* and the *Integrated Child Development Scheme (ICDS)*. The aim of this Chapter is to review these interventions and ask how they interact with household food security and migration, the two core social processes at the heart of this thesis.

The Chapter argues that notwithstanding the importance of these policy initiatives, the current state of these schemes in India is plagued by huge problems of maladministration, corruption and leakages, thereby effectively preventing vulnerable rural populations from reaping their benefits. These inefficiencies provide a strong imperative for the rural poor to devise their own livelihood security mechanisms.

Migration can be viewed as one of the most important of these livelihood strategies. Rural India is characterised by a preponderance of smallholder households whose already low farm output and income are subject to adverse shocks from erratic monsoon and several crop diseases (for example, see Townsend, 1994). Such rural households, whose local livelihoods are subject to recurrent and transitory shocks and to whom social protection may not always be available, may seek to spread and mitigate income risks by geographic dispersion of their members across different economic activities. As noted in Chapter 2, this is one of the central premises of the New Economics of Labour Migration (NELM) (Stark, 1991; Stark & Bloom, 1985). According to NELM, risk-aversion is identified as a central determinant of migration decisions of rural households. A key starting point of NELM is that in many developing countries, because of weak formal and informal institutional mechanisms (for example, financial, credit and labour markets), small-farmer households have strong incentives to send one or more

members to distant urban locations to achieve a livelihood portfolio that lowers income risks. In other words, migration provides a risk-reducing and insurance-maximising strategy to rural households to allocate household labour more efficiently in order to achieve a diversified livelihood portfolio (Stark, 1978, 1981, 1991; Stark & Levhari, 1985).

The entwined themes of migration and social protection have particular relevance in contemporary Bihar. As noted in Chapter 1, the administration of social welfare schemes is ironically the weakest in poor states and regions which need it the most (Bardhan, 2011, p. 39). Bihar remains among most economically backward states of India, notwithstanding the high economic growth in the state in recent years. The high incidence of poverty coupled with lack of gainful livelihood options in the state implies that safety nets such as PDS, NREGS and ICDS represent crucial means of delivering food security to its most vulnerable citizens. At the same time, grounded realities of the functioning of these schemes suggest that they are riddled with massive corruption and maladministration. Notwithstanding the “culture of migration” from the state, involving moves that are not necessarily caused by livelihood distress, it is reasonable to expect that the incidence of migration from the state would have been much less in the presence of effectively functioning social safety nets.

Against this background, this Chapter critically assesses the three food-based safety nets of PDS, NREGS and ICDS, drawing primarily on the field-evidence collected from Siwan. In each case, while an overview of the scheme at the national level is provided, the focus is invariably centered more on Bihar. Placing the importance of these institutional arrangements in the lives of disadvantaged rural populations of Bihar, I highlight the wide discrepancies that currently exist between the design, attributes and intentions of these programmes and their on-ground implementation, ultimately leaving the rural poor to devise their own strategies to meet their food security needs.

### **Public Distribution System**

The Public Distribution System (PDS) is the largest permanent public welfare programme operated by the Government of India (Svedberg, 2012, p. 53). A

producer-cum-consumer subsidy programme, the PDS serves the dual purpose of protecting farmers as well as poor and vulnerable households. Under the PDS, the Government procures foodgrains (mainly wheat and rice) from the farmers at a Minimum Support Price (MSP) thereby preventing them from market fluctuations. (The MSP is often higher from the market price which also acts as an incentive for farmers to produce.) Then, through a vast network of approximately half-a-million government-licensed Fair Price Shops (FPS) the PDS provides foodgrains at subsidised prices to the poor in order to help them meet their minimum calorie requirements.

Until 1992, the scope of PDS was universal. Given the poverty-alleviation mandate of the programme and high transaction costs of subsidising the non-poor (Parikh, 1994; Radhakrishna, Subbarao, Indrakant, & Ravi, 1997), the scheme was transformed, firstly in 1992 into the Revamped Public Distribution System (to reach out to the poor and vulnerable population segments located in geographically isolated and climate-prone regions) and then, in 1997, into the Targeted Public Distribution System (TDPS), which used economic status of the households to assess their eligibility for PDS benefits. Under the TDPS (currently in operation, though the common acronym PDS is still widely used), households are classified in accordance with a set of socio-economic parameters and provided with a ration card on this basis. Across India, the three core PDS card categories are Above Poverty Line (APL), Below Poverty Line (BPL) and Antyodaya Anna Yojana (AAY) (poorest of the poor). Originally, the changes implemented through the TDPS classified households into APL and BPL groups. The AAY was started in 2000, with the aim of addressing the problem of hunger among the poorest BPL households. As per the last updated estimates by the Central government, there are 40.9 million BPL households, 24.3 million AAY households and 115 million APL households (Government of India, 2013b, p. 23). Following the changes introduced in 1997, the BPL and Antyodaya households are provided with subsidised foodgrains while the central subsidies for APL households have been done away with (Khera, 2011a, 2011b).

Although PDS is a centrally-sponsored scheme, independent Indian states enjoy considerable degrees of autonomy in programme management. By and large, the role of the central government ends at pegging the number of poor in each state,

according to which food grain allocations are made. However, states can expend additional resources to widen the coverage, entitlement levels and range of commodities offered to beneficiaries. Consequently, wide differentials in PDS eligibility rules exist across the states. For example, while most states have set inclusion-exclusion criteria for PDS eligibility, the Southern state of Tamil Nadu has a universal PDS covering all households (Khera, 2011b).

In Bihar's case, the state government has sought to implement the PDS under conditions of dire poverty and chronic under-funding from the Centre. Bihar remains extremely backward, with 53.3 percent of its population classified as poor in 2009-10 (Planning Commission, 2012). The deep-rooted incidence of poverty in Bihar implies heavy reliance on PDS allocations throughout the state. However, the state has estimated that Central government PDS disbursements fall well below their needs. In the Economic Survey 2011-12, the Government of Bihar listed 13.5 million households as BPL and a further 2.5 million households as Antyodaya whereas the Central government allocated Bihar with food grains of 35kg/month for only 6.52 million households (Government of Bihar, 2012). To make up for this shortfall, the State has allocated BPL households with (only) 25kg of food grains per month. (Antyodaya households are nominally provisioned with 35kg monthly.) Notwithstanding this reduced allocation to the large cohort of BPL households in the state, the Government of Bihar is still required to incur ancillary expenditure on the PDS. The PDS in Bihar also provides a monthly allocation of 2.75 litres of subsidised kerosene to all households, irrespective of their ration card status (Table 6.1).

The household survey sample in Siwan consisted of 167 BPL households, 159 APL households and 24 Antyodaya households.<sup>74</sup> Table 6.2 presents the background characteristics of the study sample by their PDS ration card status. By caste status, about 60 percent of the households in both the Antyodaya and BPL card categories were members of Scheduled Castes/Tribes (SC/ST) and Extremely Backward Castes

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<sup>74</sup> Out of the total survey sample of 392 households, 42 households (10.7% of the sample) did not have ration card of any kind and hence, they have been excluded from this analysis.

(EBC). However, of the households with an APL card, only 37.4 percent were SC/ST or EBC.

Table 6.1: Number of beneficiary households, PDS commodities and entitlements by PDS card category, Bihar

Type of household	Number of household (in million)	Monthly PDS Entitlements		
		Wheat (kg). (Rupees)	Rice (kg.) (Rupees)	Kerosene (litre) (Rupees)
Antyodaya	2.5	14 (3)	21 (2)	2.75 (12.82 to 13.71)
Below poverty line	13.5	10 (6.78)	15 (5.22)	2.75 (12.82 to 13.71)
Above poverty line	2.9 <sup>75</sup>	n.a.	n.a.	2.75 (12.82 to 13.71)

Source: Compiled from Economic Survey of Bihar, 2011-12, p. 229

Table 6.2 also displays the close association between card status on the one hand, and poverty and deprivation on the other. This is starkly apparent with regards to the key socio-economic indicators of literacy, dwelling type, Monthly Per Capita Expenditure (MPCE) and landholding status. Nevertheless, reflective of the dire state of material circumstances in the survey area, close to half of the APL households had consumption expenditure levels lower than the official poverty line. This is consistent with the evidence from other studies that suggest that transition from universal to targeted PDS in 1997, which hinged on the logic of targeting the poor better, on the contrary, has come at the expense of exclusion of a significant bulk of deserving poor from PDS while including the better-off households in its ambit (*inter alia*, Dreze & Khera, 2010; Hirway, 2003; Khera, 2008; Planning Commission, 2005; Ram, Mohanty, & Ram, 2009; Sahu & Mahamallik, 2011; Swaminathan & Misra, 2001).

<sup>75</sup> There is no official data on the number of APL households in Bihar and this figure is arrived at by subtracting the BPL and Antyodaya households from the total number of households in Bihar, which, in Census 2011, were enumerated to be 18.9 million (Registrar General of India, 2011b).

Table 6.2: Background characteristics of surveyed households by PDS card category

	Antyodaya	BPL	APL
Average household size (In persons)	5.21	5.65	6.33
Female respondents	58.3	46.7	45.9
Illiterate respondents	79.2	59.3	55.1
<b>Caste of the household</b>			
Forward Caste	0.0	7.8	10.1
Backward Caste	41.7	32.3	52.8
Extremely Backward Caste	45.8	33.5	20.8
Scheduled Caste & Schedule Tribe	12.5	26.3	16.4
<b>Type of house occupied</b>			
Kutchha	16.7	25.7	13.8
Semi-pucca	66.7	41.3	31.4
Pucca	16.7	32.9	54.7
<b>Land and livestock ownership and migratory labour</b>			
Landless households	62.5	36.5	17.6
Households with less than 1 acre land	100.0	85.8	81.7
Household who own any livestock	54.2	66.5	69.8
Households with one of more members working outside the village	50.0	41.9	55.3
<b>Consumption expenditure and poverty</b>			
Average MPCE (in Rs)	623	838	996
Household with MPCE below poverty line <sup>1</sup>	70.8	59.3	49.7
<b>Total number of households (n)</b>	<b>24</b>	<b>167</b>	<b>159</b>
<b>(%age)</b>	<b>(6.9%)</b>	<b>(47.7%)</b>	<b>(45.4%)</b>

Source: Primary household survey data, 2011-12. All data in percentage terms unless specified otherwise.

<sup>1</sup>MPCE = Monthly Per Capita Expenditure. The Planning Commission's recent revision of state-specific poverty lines for 2009-10, based on Tendulkar committee's estimates, pegs the rural poverty line in Bihar at Rs. 655.6. The same has been applied to this survey data to estimate consumption poverty.

This problem persists at a large scale in rural Bihar where disadvantaged segments of the population often find it hard to press their claims on PDS eligibility due to powerful social hierarchies of caste and class. During my fieldwork in Siwan, a senior villager, aware of the BPL enumeration process, told me:



People who have pukka houses, two-three acres of land, whose members are in stable jobs (some even in government jobs), have BPL cards. On the other hand, there are families left out whose stoves do not burn the day they do not find work.

Disappointed with the way BPL cards are distributed, another villager sarcastically suggested, "I thought we were poor but it seems all the landlord families belonging to high-caste Rajput are poorer than us. After all, they all have a BPL card whereas we do not."

The severity of this problem from the perspective of the role of the PDS in improving the food security of vulnerable households is reflected in the data on household food insecurity. Table 6.3 depicts various indicators of self-reported food insecurity by type of PDS card held by the household. The surveyed households were asked a range of questions to assess if at any time during the year preceding the survey they faced food shortages. The data in Table 6.3 refers to the proportion of households who reported having faced food inadequacy and food unavailability at least once in the past year.

A few points from data in Table 6.3 need consideration. First, while the percentage of APL households reporting food inadequacy and food unavailability is almost half as that of BPL and Antyodaya households across most self-reported food insecurity parameters, a considerable proportion of APL households remain food insecure. Second, lack of dietary diversity appears to be a major problem among both BPL/Antyodaya and APL cardholders. More than 60 percent of BPL/Antyodaya households and 30 percent of APL households reported having meals without vegetables and having meals that did not have the basic combination of cereals, pulses and vegetables. Village-based observation revealed that the day-to-day diets of many households comprised only of rice and a potato-based meal of some form. Third, coping strategies were diverse and sometimes extreme (including selling valuable household assets like jewellery, and engaging in distress-induced migration).

Furthermore, irrespective of the householder card status, the PDS in Bihar is afflicted by woeful delivery inefficiencies. The PDS in Bihar has historically been

Table 6.3: Household food security by PDS card category

	BPL & Antyodaya (%)	APL (%)
<b><i>Food was not enough (defined by the following situations)</i></b>		
Household ate meals without vegetables	60.2	31.4
Household could only afford to consume food from PDS	38.2	-
Household members consumed single meal a day	17.3	16.4
If all three main food categories (cereals, pulses, vegetables) were not available	61.3	30.8
If household members got less food than the amount to satiate hunger	50.3	27.7
<b><i>Food was not available (defined by the following situations)</i></b>		
Household borrowed money from friends and/or relatives to buy food	22.5	16.4
Household borrowed money from local traders, money lenders or lifted ration on credit to acquire food	40.3	17.6
Household sold jewellery or other personal assets to buy food	1.6	0.6
Someone in the household out-migrated for work	18.3	15.1
Consumption rationing (members ate less food than usual)	59.2	28.9
<b>Total number of households (n)</b>	<b>191</b>	<b>159</b>

Source: Primary household survey data, 2011-12

riddled with huge problems of pilferage and leakage. A nationwide performance evaluation of the scheme by the Planning Commission estimated that 75% of PDS food grains did not reach the intended beneficiaries in Bihar, compared to the national average of 57% (Planning Commission, 2005). Comparable National Sample Survey data analysed by Khera (2012) suggested that in the same year (2004-05), 91% of the PDS food grains in Bihar were diverted from their eligible recipients. Five years later, in 2009-10, while most major states had improved their PDS performance (the incidence of grain diversion in Chhattisgarh, for example, fell from 52% to 10% between 2004-05 and 2009-10), the progress in Bihar was much slower, and in 2009-10, 75% of the PDS food grains in Bihar still failed to reach their intended beneficiaries (Khera, 2012). The FPS-beneficiary interface is the core site where PDS leakage occurs. The Planning Commission (2005, p. ix) calculated (conservatively) that more than 50% of food grain diversion in Bihar occurs at the FPS level.

These contexts have framed extensive attempts to reform the PDS in Bihar. The election of a new Government in 2005 is widely interpreted as heralding an opportunity for dramatic institutional reforms within the state. It is certainly the case that since 2005 there have been wide-ranging governance reforms in Bihar (Singh & Stern, 2013; Sinha, 2011) and the arena of food-based safety nets has not been untouched by it. To contain corruption and illegal diversion of food grains from the PDS, in 2007, the then Chief Minister of Bihar, Nitish Kumar, introduced a system of PDS coupons as a transparency measure. The system is supposed to operate as follows. Every beneficiary household is provided with 12 coupons annually for wheat, rice and kerosene which specify their entitlements and the price they have to pay for each commodity. Coupons are distributed through village camps, organised by the local GP under the monitoring and surveillance of officials from the Block Development Office (the process of coupon distribution is video-recorded). Every month, beneficiary households redeem one coupon each against each of the specified PDS commodities at a local FPS (beneficiaries can ostensibly choose the FPS they use). Then, the FPS owner forwards coupons to the Block/District level authorities in order to get the next month's supplies. Given much of the PDS leakages are found to occur at the FPS level (Planning Commission, 2005), a guiding principle behind the introduction of the coupons scheme was that by tying the next month's supply of PDS commodities to coupons, it was considered that coupons would prevent the FPS owners selling the PDS supplies in the open market as they would now need to have the requisite coupons to claim their stock.

The coupons system represents a well-intentioned reform attempt to prevent the corruption and pilferage in PDS. However, findings from the household survey in Siwan reveal that they have hardly changed the grounded realities of the PDS operation. Maladministration and rent-seeking remains widespread and ubiquitous. In the household survey, information was collected from respondents on their PDS coupon use during the three months (January-March 2012) preceding the survey. The survey results on coupon use are presented in Table 6.4. Only 10.5 percent of BPL and Antyodaya households reported that they had successfully used coupons to acquire food grains in each of the past three months, and just 1 percent (a mere two out of 191 BPL and Antyodaya households) reported getting their full food grain

entitlements. The reason why the surveyed households were unable to obtain their PDS ration on the regular basis was because of maladministration at various layers of PDS governance.

Table 6.4: Functioning of PDS ration coupons: a summary

	BPL and Antyodaya households (%)	APL households (%)
Household received food grains in each month in the past three months preceding the survey*	10.5	n.a.
Household received kerosene in each month in the past three months preceding the survey*	58.1	82.4
Reason 1: Household couldn't utilise all PDS coupons	48.2	9.5
Reason 2: FPS owner asked for more coupons	59.7	22.8
Both reasons	26.2	6.3
<b>Total households (n)</b>	<b>191</b>	<b>159</b>

Source: Primary household survey data, 2011-12

\*The reference period for this study was April 2011 to March 2012 (Appendix 1). Since these surveys were conducted in April-May 2012, the three preceding months here refer to January, February and March 2012.

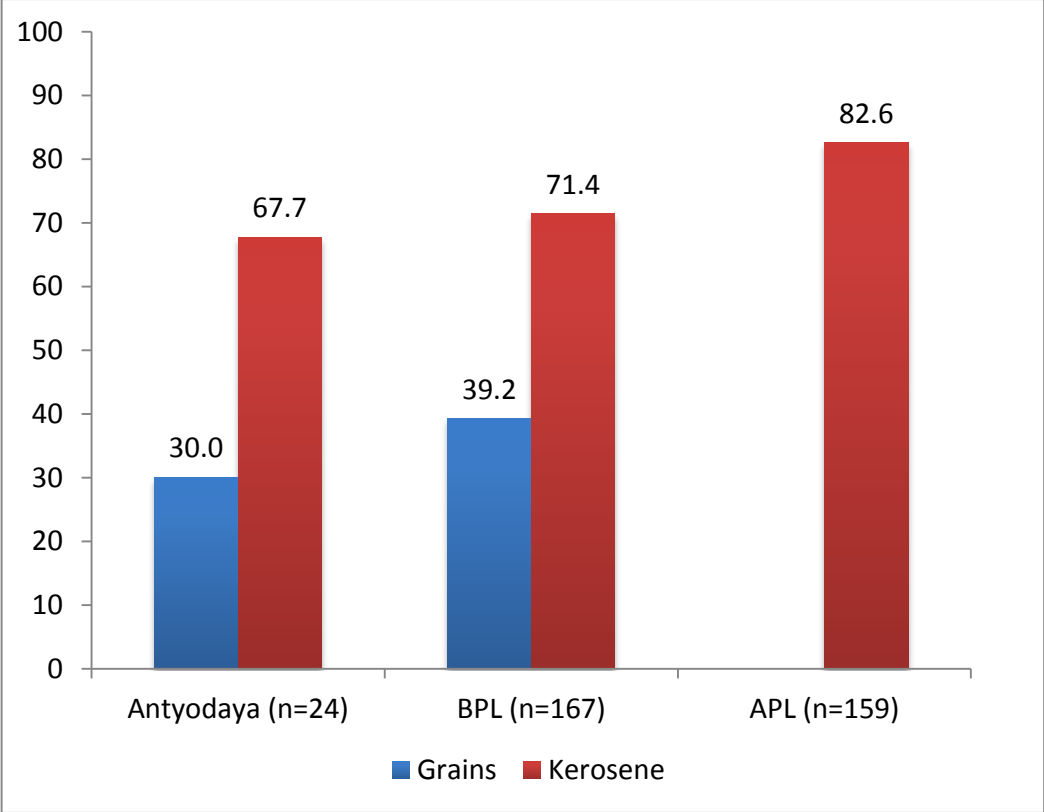
Almost 50 percent of the BPL and Antyodaya households (92 households) reported that they could not use all their PDS food coupons during the past 12 months because of PDS maladministration. Among these households, 33 percent reported that they could not use the coupons because they were distributed after their validity had ended (some households even stated that coupons were provided to them as long as 6 months after they expired). Another prominent reason for coupon underutilisation was that the FPS owner turned away the beneficiaries on account of insufficient stock, with 52 percent of the households reporting this reason. While some of the FPSs genuinely faced shortages in the supply from the higher end of PDS supply chain, on occasions these claims were bogus. According to informal testimonies from a number of village stakeholders, it was still common for many FPS owners to sell PDS grain on the open market, thus creating induced shortages for

legitimate beneficiaries. In these situations, it was often the case that FPS owners demanded beneficiaries use more than one coupon to obtain their ration entitlement.

The propensity for FPS owners to demand additional coupons from beneficiaries was a widespread problem. As indicated in Table 6.4, 59.7 percent (114 households) of the 191 BPL and Antyodaya households in the sample were asked to provide more than one coupon for a month's ration supplies. Out of this, 109 households provided food grain coupons for two months or more, including 15 households who provided 3 months coupons, in order to receive just one month's ration.

These shortcomings of the coupon system are reflected in the PDS allocations obtained by the beneficiaries. To assess the operational efficiency of PDS at the household level, Figure 6.1 presents the average 'purchase-entitlement ratio' (PER) for the past three months for foodgrains and kerosene. The PER is the proportion of full entitlement obtained by beneficiary households (Khera, 2011b, p. 40).

Figure 6.1: Average PDS purchase-entitlement ratio for the past three months



Source: Primary household survey data, 2011-12

A rather confounding finding emerges from the PER data for food and non-food items. As displayed in Figure 6.1, while the PER for food grains for both Antyodaya and BPL household is extremely low, 30 percent and 39 percent respectively, the PER for kerosene is relatively high. While it is higher still for APL households (who are relatively better-off, as data in Table 6.2 above suggests), the overall impression from the PER data is that cardholding status does not exert a huge influence on kerosene allocations (also see Table 6.4 above). This highlights a considerably higher incidence of pilferage/leakage in food grains than for kerosene. What is especially striking about this is that discussion with FPS owners in the case study villages revealed that the price differential between PDS-subsidised and open market kerosene was greater than that for food grains, hence suggesting (*ceteris paribus*) that kerosene would be a more profitable item to pilfer than food grains.<sup>76</sup>

A likely explanation for the differing PERs between food grains and kerosene is the fact that the allocations of these two items are connected to quite different local politics. With kerosene, APL households have a direct stake in the efficiency of the PDS system. Through the interlocked village-based networks of caste and influence, this stake translates into strong pressures on FPS owners to ensure high allocations. The qualitative evidence gathered during the field work supports this observation. In most of the study villages, FPS owners tended to class and caste allegiances that were separate from those of beneficiaries. This might also be the case in much of rural Bihar. Bihar has more than one-third of India's most backward districts (26 out of 69) (Debroy & Bhandari, 2003). In these pockets of deprivation, Antyodaya and BPL beneficiaries are often ill-equipped to understand or assert their rights, and for FPS owners, ignorance and disempowerment represent avenues for exploitation. To quote a respondent from one of the surveyed village, operating a FPS:

...is a profitable business. The dealer here makes a lot of money by selling the grain in the open market, so much so that when his son was elected as a

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<sup>76</sup> In some areas of India, a low PER for food grains is indicative of low quality which encourages households to not take up their PDS rations (Khara, 2011b, p. 40). However in the survey villages, this process is extremely unlikely because of the extreme poverty of most Antyodaya and BPL households.

ward member of the GP, he had to ask him to leave that job to retain the license as you can't have a PDS shop license if anyone from your family is an elected member of GP. And believe me, he didn't want to lose out on a goldmine of grain.

The fieldwork, however, also revealed that while culprits, the positions of the FPS owners are connected, in turn, to wider anomalies in the operation of the PDS in Bihar. For example, in one of the sample villages, when the villagers united to demand from the FPS owner their full ration entitlements, he got his license transferred to another village nearby because the bribes he was compelled to pay to the higher authorities in the PDS chain meant that distributing actual entitlements was not possible if he were to stay in the business. A GP Mukhiya very candidly suggested:

“All the dealers [FPS owners] have to pay bribes to higher authorities to keep themselves in the business. It's not the dealer's fault. He cannot possibly pay from his own pocket. These bribes then are ultimately passed on to the PDS beneficiaries.”

Most of the FPS owners informed me that each 50kg bag of wheat and rice obtained from PDS depots typically weighs around 44-46kg. Furthermore, FPS owners alleged they did not receive adequate compensation for the costs of transporting rations from depots to village ration stores. Nevertheless, as the survey data indicate, where local circumstances contrive in ways that give greater scope for FPS owners to exploit their powers, this will occur with greater abandon and those most in need of the PDS will suffer most.

Clearly, these findings reveal that the problem of PDS governance run deep through the various layers of administration, with the overall effect being that they prevent deserving poor households from benefiting from this important safety net.

### **National Rural Employment Guarantee Scheme**

The National Rural Employment Guarantee Scheme (NREGS) is a public works, social safety net programme which emanated from the constitutional act of the same name, National Rural Employment Guarantee Act (NREGA), passed by the Indian

Parliament in 2005. The scheme was first implemented on 02 February 2006 in the 200 poorest districts of India, and later extended to the whole nation on 01 April 2008 (Dreze, 2011, p. 14). The main aim of NREGS is to enhance the livelihood security of rural households in the country, while also creating productive assets in rural areas. It is premised on the principle of a legal right to work and provides a constitutional guarantee of at least 100 days of wage employment per year to every rural household who demands this. The NREGS provisions stipulate that the employment is to be provided within 15 days of a household submitting its application for work (upon which they are provided with a job card). In the event of failure to provide employment within this period, the applicants are entitled to receive the daily unemployment allowance in lieu from the relevant state government. Aiming also at the financial empowerment of rural women, upon its inception, NREGS envisaged having women constituting one-third of total beneficiaries (Government of India, 2005). The projects undertaken through NREGS include, *inter alia*, rural connectivity through road building, water conservation and irrigation, community land development, and social forestry, with the overall purpose of creating common assets at the village level. The administration of the scheme is highly decentralised, with GPs being the principal planning and implementation authorities. The GPs are responsible for identifying suitable projects and reviewing their progress and they also act as intermediaries between the beneficiaries and the higher echelons of bureaucratic apparatus.

It is important to note that like PDS, public works programmes as a means to redistribute income and enhance the livelihood security of the vulnerable rural populations have a rather long history in India. For instance, in early 1970s the state of Maharashtra in western India implemented the Employment Guarantee Scheme (EGS). The EGS was implemented in the context of severe drought in the state from 1970 to 1973 which disrupted lives and livelihoods of between 15 and 30 million rural dwellers in the state. Between 1970s and 1980s, the EGS is estimated to have provided employment to nearly 5 million people on a daily basis. Although the EGS also operated in the framework of judicial right to employment, NREGS takes the idea of right to work even further to address other important social objectives, such



as reducing caste and gender disparities (Bagchi, 2005; Dreze & Sen, 2013, pp. 191-201; Subramanian, 1975).

As per the latest official statistics, in 2013-14 the total government expenditure on the scheme amounted to INR 40837.92 crores (approximately US\$ 60 billion) generating 220 crores (2.2 billion) person-days of employment. During the same period, 47.8 million households worked under the NREGS, of which more than one-third (39 percent) belonged to Scheduled Castes (10.9 million) and Scheduled Tribes (7.7 million). About half (53 percent) of the NREGS beneficiaries were women in terms of their share in total person-days of employment (all data, Ministry of Rural Development, 2014; also see Table 6.5 below).<sup>77</sup>

Although NREGS is a rural employment programme, it holds crucial significance for rural food security. Most of the beneficiaries of the scheme belong to socially and economically marginalised sections of the population (Dreze, 2011; Dreze & Oldiges, 2011), who often lack the physical and financial resources to meet their food and nutrition needs all-year round. In fact, the genesis of the NREGS was closely connected with heightened concerns around persistently high levels of food insecurity and under-nutrition in rural India. The scheme was implemented in a context when the sustained economic growth for nearly a decade and a half had failed to bring about significant improvements in the living standards in rural areas. Contrarily, the first few years of economic reforms were characterised by the rising rural distress in many parts of India. While the 1990s, the first decade of rapid economic reforms, were in general characterised by the phenomenon of “jobless growth” (faster economic growth associated with low employment elasticity: Bhattacharya & Sakthivel, 2004), deceleration in the growth of employment and wages in the rural areas was sharper. Agricultural growth more than halved from an average of 3.2 percent a year observed between 1980 and 1996-97 to 1.5 percent per annum subsequently (Planning Commission, 2006, p. 5) which had a detrimental effect on the growth of rural employment. The two large rounds of National Sample Survey suggested that the overall rural employment grew at an average rate of merely 0.6 percent a year between 1993-94 and 1999-2000 (Patnaik, 2005, p. 203).

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<sup>77</sup> The expenditure data is up to the 30 July, 2014 whereas the employment statistics pertain to the financial year 2013-14 i.e. from April 2013 to March 2014.

Furthermore, the sluggish growth of the farm sector meant that poor households dependent on agricultural wage work saw their fortunes deteriorate further. Unemployment among farm labour households increased from 9.5 percent in 1993-94 to 15.3 percent in 1999-2000 (Planning Commission, 2008, p. 63). Added to this was the drought of 2002. Measured as the third largest drought in India in the past 100 years (Bhat, 2006), the Indian drought of 2002 intensified the rural livelihood and food security crisis. Numerous cases of hunger and starvation deaths among rural households were reported in many parts of the country around this time (Jha, 2002), and distress migration characterised the rural landscape of many Indian states. This occurred amidst the climate of overall faster economic growth. These events disillusioned the then popular belief of “shining India” (a slogan of the then ruling coalition, National Democratic Alliance, led by the Bhartiya Janata Party) and triggered a rethinking around the need to initiate effective income redistribution measures. A strong civil society action around the *right to food* and more broadly, *right to life*, which had already gained significant momentum by then (for example, PUCL petition in the Indian Supreme Court seeking government’s intervention to prevent starvation deaths in Rajasthan by initiating drought-relief measures, as noted in Chapter 1), furthered the cause of NREGS. In key ways, the implementation of NREGS was thus tied to the politics of food security in India. Indeed, by providing an assured wage employment for 100 days a year, the scheme envisaged to i) provide the poor households with a livelihood option that would boost their income and consumption levels and food security, ii) reduce the incidence of distress migration from rural areas, iii) and by the means of job and asset creation, have a multiplier effect on rural economy.

NREGS has been instrumental in galvanising a politics in which the rights and entitlements of the rural poor have acquired greater significance. Nevertheless, the extent to which the programme has met its desired objectives appears quite mixed. Several implementation issues such as irregularity of work availability, delayed payment of wages to beneficiaries, and issuance of bogus job cards, resulting in misappropriation of wage payments, beset the effective functioning of the scheme (see, *inter alia*, Dreze & Khera, 2014; Ministry of Rural Development, 2012; also see contributions in Khera, 2011). The performance outcomes of NREGS vary markedly,

depending on the choice of indicators used. Important from the perspective of the current discussion is the fact that the performance of the scheme is not wholly uniform and exhibits great regional variation across the states, an issue connected with uneven state-based governance (Dreze & Oldiges, 2011; Dutta, Murgai, Ravallion, & de Walle, 2012a, 2012b; Pritchard et al., 2014).

Using the most recent official data for the year 2013-14, Table 6.5 presents some summary indicators of NREGS performance for 20 major Indian states. It is apparent that the states rank differently on the different outcome indicators. Given NREGS is essentially a demand-driven programme, the proportion of rural households demanding work and the proportion of those availing work under the scheme provide crucial parameters to evaluate the importance of the scheme from the perspective of rural livelihood security. When looked at in terms of the importance of the scheme, a sad irony of NREGS performance is that the demand for work as well as the participation of rural households in the scheme appears relatively weaker in some of the most economically backward Indian states. In particular, the backward northern states of Uttar Pradesh, Bihar, Jharkhand, and Madhya Pradesh (in 2009-10, half of the 278 million people living below the official poverty in rural areas in India were from these four states: Planning Commission, 2012) contributed less than a quarter of the rural households who demanded work during 2013-14. Furthermore, a mere 10 percent of households were able to complete 100 days of work at the national level; and the northern states have person-days employment per household even below the national figure.

These current shortfalls in the provisioning of NREGS employment notwithstanding, trends in the functioning of the scheme suggest (significant) improvements over time. In 2006-07, the first year of NREGS implementation, the person-days employment generated through the scheme was merely 17 days per rural households at the all-India level (Dreze & Oldiges, 2011). The current figure of 46 days is nearly three-times as much. Additionally the available evidence suggests that, through its direct and indirect benefits, NREGS seems to be gradually transforming the contemporary social and economic landscape of rural India, with overall positive impacts particularly on the lives of disadvantaged sections of the rural populations.

Table 6.5: Some summary indicators of NREGS performance for selected Indian states, 2013-14

State	% share rural households who demanded work under NREGS	% share of rural households who worked under NREGS	Total person-days of employment per employed household	Share of employment in total person-days (%age)			%age of households completing 100 days of work
				SCs	STs	Women	
Andhra Pradesh	46.3	42.1	50	23.2	14.6	58.6	12.4
Assam	24.4	23.3	24	6.4	16.1	24.7	1.2
Bihar	14.1	12.2	42	28.8	2.1	35.0	6.0
Chhattisgarh	63.0	57.6	52	8.9	39.8	48.5	13.8
Gujarat	9.5	8.5	40	7.6	41.0	44.0	5.1
Haryana	11.9	10.7	36	48.5	0.0	41.7	4.3
Himachal Pradesh	43.6	41.1	52	28.4	7.4	62.5	10.3
Jammu & Kashmir	45.9	42.3	51	5.7	15.1	23.1	10.2
Jharkhand	25.8	24.1	38	12.9	37.1	31.9	6.0
Karnataka	24.0	18.3	50	15.9	7.9	46.6	8.1
Kerala	40.5	36.7	57	15.7	2.7	93.4	26.7
Madhya Pradesh	28.5	26.2	42	17.8	30.9	42.6	6.0
Maharashtra	9.5	8.6	45	9.6	18.9	43.7	10.7
Odisha	23.4	21.1	42	16.4	40.8	33.6	9.2
Punjab	13.5	12.3	33	76.9	0.0	52.7	3.0
Rajasthan	41.6	38.1	51	19.8	26.2	67.8	12.3
Tamil Nadu	66.2	65.8	59	29.6	1.3	83.9	14.7
Uttar Pradesh	21.4	19.4	35	33.1	1.0	22.2	3.2
Uttarakhand	28.4	27.9	42	18.6	2.6	44.9	7.0
West Bengal	46.6	44.3	37	33.0	9.5	35.5	4.6
India	<b>30.7</b>	<b>28.4</b>	<b>46</b>	<b>22.6</b>	<b>17.3</b>	<b>52.8</b>	<b>9.7</b>

Source: Calculated from the official data posted by Ministry of Rural Development on NREGS public data portal (<http://nrega.nic.in>).

Note: All figures pertain to the Indian financial year of 2013-14. The first two columns are calculated using Indian Census 2011 data on total number of rural households.

Firstly, that nearly half of the NREGS participants come from the traditionally marginalised groups of Scheduled Castes and Scheduled Tribes is significant in itself. Secondly, the scheme seems to be playing a crucial role in attracting women from poor households to join the labour force (*inter alia*, Dreze & Oldiges, 2011; Dreze & Sen, 2013; Dutta et al., 2012a; Khera & Nayak, 2009). As is evident from Table 6.5 above, in 2013-14 half of the total employment went to women. Moreover, there are no overall differentials in the wages of men and women working in NREGS and the wages of women working in the scheme are much higher than in other casual work (Azam, 2012; Dutta et al., 2012b; Jandu, 2008). Given the well-established role of economic independence of women in enhancing their bargaining position within the household (for example, see Boserup, 1970; Sen, 1987), NREGS seems to represent an important tool towards curbing gender inequalities.

Thirdly, Dreze and Sen (2013) note that by guaranteeing a statutory minimum wage, NREGS has positively altered wage relations in rural areas, particularly for unskilled casual labour and women. Between 2005-06 and 2010-11, the real wages of rural labourers grew at an average annual rate of 1.82 percent for men and 3.83 percent for women, which was substantially higher compared with the annual growth rate of real wages of merely 0.01 percent for men and -0.05 percent for women in the pre-NREGS period (between 2000-01 and 2005-06). Furthermore, the annual growth rate of real wages of unskilled labourers increased even faster at 3.98 percent and 4.34 percent for men and women respectively (p. 202). Given that NREGS-participants generally belong to socially and economically fragile groups, this could be viewed as enhancement of the income and livelihood security of poor rural households. Indeed, the evaluations of household-level impacts of NREGS highlight the positive impacts of the scheme. For example, a study by Ravi and Engler (2009), which uses a baseline survey data of 1066 households supplemented with a subsequent panel of 320 households in a single (Medak) district of state of Andhra Pradesh, found that participation in the scheme was associated with enhanced household welfare. They found that the two most significant household welfare impacts of NREGS were that the programme i) improved household food security, as reflected in increases in household expenditure on food, and ii) decreased the level of emotional distress and anxiety among participating households. (For an extensive

review of literature on the impacts of NREGS, see Ministry of Rural Development, 2012; also see the contributions in Khera, 2011.)

The extent to which these positive attributes of the schemes are realised, however, varies widely across the states depending upon how successfully the programme is implemented on the ground. That there is a strong geographical dimension to the scheme's performance is evident from the data in Table 6.5 above. In many places NREGS remains utterly dysfunctional, which acts against rural households joining the programme, thereby undermining its effectiveness. My case study-district of Siwan is one such place. Drawing from the field-research evidence, I now discuss the on-ground functioning of NREGS in Siwan.

In general, Bihar fares rather poorly on most official data parameters of NREGS performance (Table 6.5). Furthermore, independent assessments of NREGS in the state paint an even more dismal picture. For example, a performance audit conducted in 100 extremely backward villages spread across 10 districts of Bihar which covered a sample of 2500 households revealed that in the six years (2006-11) of NREGS implementation: i) the scheme completely bypassed 17 of the 100 villages during the entire period; ii) 36 percent (892 households) of the sample households across all villages did not receive even a single day of work under the scheme; iii) the actual average annual employment was merely 5 days per household per year; iv) 73 percent of the wage component was completely misappropriated; and v) the combined effect of these anomalies was that of the total amount of Rs. 8189 crore (US\$ 1.3 billion) spent on the scheme during 2006-11, nearly 6000 crores (US\$ 0.97 billion, or 73 percent of the total spending) was fraudulently malversated (Rai, 2012). However, the functioning of the scheme is not uniform across the different districts of the state (Government of Bihar, 2014b, p. 223; also see Table A-5.28 and Table A-5.29, pp. 272-74), and villages within the districts.

In my case-study district of Siwan, the small agricultural landholdings and a dearth of non-farm livelihood options (Chapter 5) meant that wage-employment under NREGS was vitally important, and indeed was perceived so by many landless and land-poor households. My fieldwork, however, suggested the on-ground implementation of the scheme was extremely weak, with the overall effect being

that it did not constitute a significant livelihood component of a large majority of rural households. Poor governance and maladministration in the programme provided a disincentive for households to seek work under the scheme. The survey data collected from rural Siwan indicates that of the 47 households who reported having a NREGS job card, 46 worked under the scheme during the past year (2011-12), a participation rate of nearly 100 percent among those who had a job card. However, the overall outreach of the programme seemed insignificant when looked at in terms of the total sample of rural household surveyed. Only 11.7 percent of the total sample of 392 households worked under NREGS during 2011-12. This figure comes close to the official data on rural households' work participation rate of 12.2 for Bihar (Table 6.5) and 7.2 percent for Siwan (Ministry of Rural Development, 2014).<sup>78</sup>

Table 6.6 presents the socio-economic characteristics of sample NREGS participating households. It is worthwhile to note that three-quarters of the participating households had either Antyodaya or BPL PDS card; the average MPCE of these households was 34 percent lower than non-participant households<sup>79</sup>; and close to half of the households who worked under NREGS had a low food diversity score. This is consistent with the evidence at the national level that a significant majority of NREGS participants usually belong to poor socio-economic groups. However, as noted before, with only 12 percent of the total rural households participating in it, the overall work participation in the scheme was very limited. The reasons why the scheme has not been able to provide an effective source of livelihood for a large majority of rural households are rooted in its implementation.

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<sup>78</sup> The work participation for Siwan is arrived at by dividing the official NREGS figure on the cumulative number of households provided employment under the scheme (36499 households) up until the financial year of 2013-14 by the total rural households in Siwan District (507055 households), as enumerated in Census 2011 (Ministry of Rural Development, 2014; Registrar General of India, 2011). Also, because of the sample design, it might be the case that the job cardholder households are under-represented in the present study. The household sample selection was done on the basis of migration status of the households and whether or not household participated in NREGS was not the consideration. Nonetheless, the overall household work participation rate of this survey matches closely with official figures for the district, pointing to the representativeness of household survey sample.

<sup>79</sup> Note that the higher number of households in this category may partly be responsible for the higher average MPCE.

Table 6.6: Socio-economic profile of NREGS-participating households in Siwan, 2011-12

Characteristics of NREGS participating households	Number of Households (%)
<b>Caste</b>	
Forward caste	0 (0.0%)
Backward caste	34 (73.9%)
Scheduled Caste & Scheduled Tribe	12 (26.1%)
<b>PDS card<sup>1</sup></b>	
Antyodaya/Below poverty line	34 (73.9%)
Above poverty line	9 (19.6%)
<b>Migration status</b>	
Migrant households	18 (39.1%)
Non-migrant households	28 (60.9%)
<b>Economic status<sup>2</sup></b>	
Average MPCE of NREGS participating households (In Rs.)	686
Average MPCE of non-participating households (In Rs.)	906
NREGS-participating households with MPCE below the poverty line	29 (63.0%)
<b>Food diversity index<sup>3</sup></b>	
Low	21 (45.7%)
Medium	15 (32.6%)
High	10 (21.7%)
Total number of households who worked under NREGS (%age of total sample)	46 (11.7%)
<b>Total household sample (n)</b>	<b>392</b>

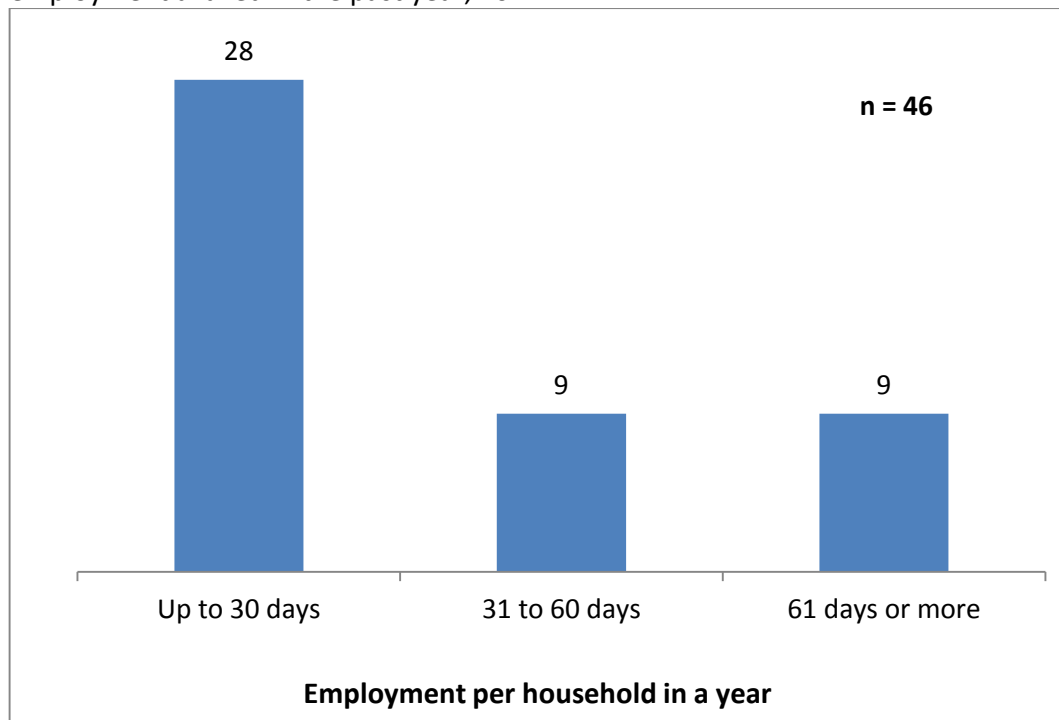
Source: Primary household survey data, 2011-12

<sup>1</sup>Three households did not have any PDS card and hence the total here may not add up to 46 households. <sup>2</sup>MPCE = Monthly Per Capita Consumption Expenditure. Same MPCE cut-off used for poverty as described in Table 6.2. <sup>3</sup>Food diversity index is computed using the Principal Component Analysis of 30 food items that households reported consuming in a week preceding the survey. Depending on the number of food items consumed, rank scores were generated and households were divided into three equal rank tertiles of low, medium and high (see the discussion in Appendix 1; and for the list of the 30 items used for computing food diversity index, see Appendix 6).



In the survey, nearly a quarter of the sample (100 households) reported that they have asked for NREGS job cards but have not been given. On the other hand, most of those households who held cards and worked under the scheme reported facing multiple issues. Firstly, work under the scheme was highly unpredictable and none of the NREGS participating households was provided with 100 days of work. Only nine households were able to avail more than 60 days of employment in the past year (Figure 6.2).

Figure 6.2: Distribution of NREGS-participating households by person-days of employment availed in the past year, 2011-12



Source: Primary household survey data, 2011-12

Irregularity and uncertainty of work were common complaints which discouraged rural households from seeking employment under the scheme. To quote one of the respondents:

Work under NREGS is never regularly available. There is hardly two-three days of work in a month. Moreover, we are unsure when we will get work. The Government launches many schemes and then stops them. In such a situation of uncertainty, we cannot rely on NREGS if we are to survive.

This quote calls attention to the problem, identified by Dutta et al. (2012b), that NREGS' effectiveness must be assessed against considerations of forgone

employment and income by recipients. In Siwan, uncertainty of employment under the scheme meant that many households, particularly those who had other occupational choices available, found NREGS employment less lucrative.

Some households did not, however, have a choice (of occupational diversity) but had to depend, and significantly so, on NREGS. For example, a 60+ years old widow whose son died young and daughter divorced at an early age and on whose shoulders now bore the responsibility of feeding seven people (an unmarried daughter, son's widowed wife, divorced daughter and their four children), as cultural norms did not permit participation of young women of the household in wage work, had little choice but to rely on NREGS employment. However, she too complained of inadequate workdays allotted to her. In her words: "I get 14 days of work in a year and earn in total Rs. 2000. Why cannot the government provide me with more work?"

The lower than mandated person-days of employment actually provided to households is often the result of malpractices of the rent-seekers. In one of the case study villages, for example, many respondents complained that machines such as 'backhoe loaders' were used for road digging work and then, bogus attendances were registered on beneficiaries cards and money claimed. This defeated the very logic of the scheme. In the words of a respondent:

If a job requires 30 days of work from 10 labourers, the machine does it in five days or less with just one operator. That is not the end of it. Our job cards are taken and though I cannot read but people tell me that my attendance is registered too. The only thing missing is the payment.

Secondly, many households who worked under NREGS reported long delays in payment of their wages, with some households not receiving their wages for as long as six months after the work. A few households even reported that they were waiting for their wages for the work they did in 2010-11, a year preceding the reference period of this survey. One such NREGS worker who was not paid for two years of work bitterly told me:

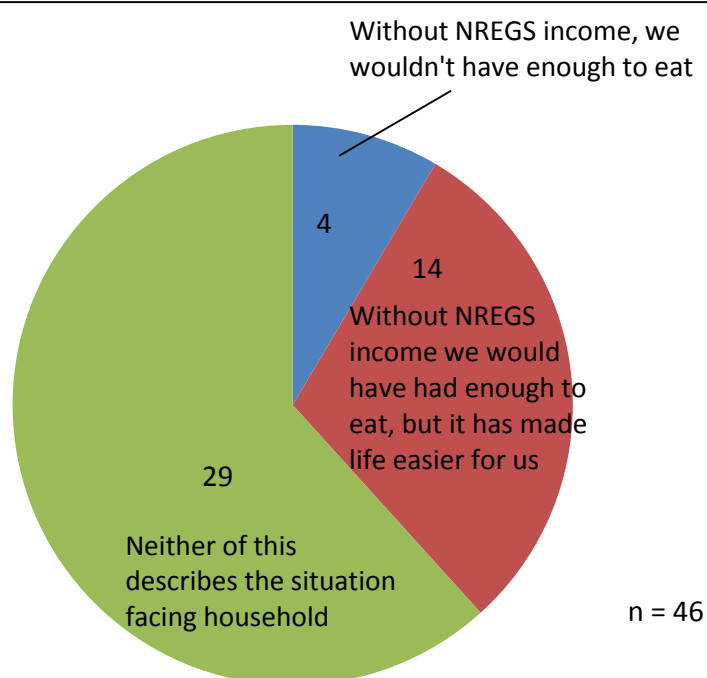
My dues for 84 days of work have not been paid to me. And I am not the only one around here. There are many workers whose outstanding dues have not been cleared. But people here are too scared to complain to higher authorities because we fear that whatever little we earn from NREGS will be snatched away from us. For now, we are making do with the hope of getting our wages someday.

While payment delays were a widespread problem, the extent of delays varied widely across the case-study villages, and indeed often from one worker to another within the same village. Even though the rent-seekers often manipulated and undermined the entitlement franchise of poor workers by fraudulent means, my fieldwork also revealed that NREGS at the same time provided a tool in the hands of the rural poor to understand their rights and entitlements better than before. When asked from the old widow worker (mentioned earlier) whether she faced any problems in wage payments, she replied in a firm, albeit cynical, tone: “I toil under scorching heat, watering the plants. And even if they don’t pay me the money that I deserve for my work, will they not rot in the hell?” The bargaining power of the poor vis-à-vis actors at the higher echelons, however, is still weaker which prevents any meaningful assertion of their rights.

Finally, in terms of the impact of NREGS in reducing out-migration and improving food security of rural households – the two key objectives of the scheme as well as the main themes of the present research – the evidence from Siwan suggests that NREGS has not made any significant dent on both counts in the district. The job cardholder households were asked if any of their members who were earlier working outside the village returned to work in NREGS. Only two households replied in the affirmative. NREGS wages were certainly higher than the wages earned locally from farm and non-farm casual work. However, as Dreze and Khera (2014) also note, long delays in payment diminished the real value of NREGS employment. Furthermore, not only were migration incomes higher but remittances also provided a steady source of income for migrant households. The participation of migrant households in the scheme was contingent on the number of adult members, usually males, present in the household, and if timing of NREGS work did not coincide with the other farm work in the village. The latter applied to the non-

migrant households as well. Even though the wages offered by agricultural work were significantly lower, households tended to view them as more certain than NREGS wages. As regards to gender, barring women from the Scheduled Castes and Scheduled Tribes, most viewed manual labour jobs offered under NREGS (other than plantation work) as “culturally inappropriate” and instead preferred to work as agricultural labourers at a daily wage rate of Rs. 50 (US\$ 1) that was nearly one-third of NREGS wage of Rs. 144 (US\$ 3).

Figure 6.3: Perceptions of NREGS-participating households on the impact of the scheme in improving food security



Source: Primary household survey data, 2011-12

As far as NREGS’s impact on improving the food security situation of the households is concerned, four out of the 46 households perceived that the wage-income from the scheme provided a vitally important source to meet their food needs, and a further 14 households said that even though the scheme did not directly affect their food security, it had made life easier for them. Notwithstanding the massive operational inefficiencies, the fact that nearly 40 percent of the surveyed NREGS participant households perceived the scheme in positive terms highlights its relevance for poor households. At the same time, NREGS had no perceptible impact

on the food security of 60 percent of the households who undertook work in the programme (Figure 6.3).

In conclusion, because of the multiple issues (described above) that beset the effective functioning of NREGS in Siwan (which presumably applies to most, if not all, districts in Bihar) and act as deterrents for households to accrue its benefits in a meaningful sense, many rural households also seemed to be becoming increasingly indifferent to the scheme. Having interviewed a number of local NREGS stakeholders including the elected representatives of village councils, Block Development Officers, NREGS Programme Officers, and most importantly, numerous rural households and NREGS workers themselves (including those who did not form part of the household sample), I came to the conclusion that although there appeared some signs of rural poor pressing hard to make their rightful claims, their pleas often went unheard. By virtue of their low socio-economic status, the power equation was so negatively skewed against them that they were unable to turn things around. In overall terms, real benefits of the scheme for the poor thus seemed quite muted. It is in this context that many households are increasingly detaching themselves from NREGS work. On the other hand, those who are unable to access other gainful employment options, locally or outside the village, continue to stick with it in the hope that things will change some day.

### **Integrated Child Development Scheme**

The final important food-based safety net is the Integrated Child Development Scheme (ICDS). Launched in 1975, ICDS is a crucial intervention that seeks to address nutrition and health deficiencies among children in their formative years, with an overall aim of the programme being achievement of healthy childhood development outcomes. Unlike PDS and NREGS, which are both aimed at generating benefits for poor households, the ICDS specifically targets children below the age of six years and pregnant and lactating mothers. (More recently, the programme has involved in its ambit adolescent girls.) The scheme operates through a nationwide network of 1.33 million ICDS centres, popularly known as Aanganwadis (Ministry of Women and Child Development, 2014). The term Aanganwadi means “courtyard” in Hindi and originated from the idea that effective early child care could be provided

through low-cost local projects with minimal infrastructure such as home courtyards (Pritchard et al., 2014, p. 117). The Aaganwadis form part of the broader public health infrastructure in India. The current norms for Aaganwadis provide for setting up one centre on the population of between 400 and 800 people (Ministry of Women and Child Development, 2014). Each Aaganwadi usually includes two staff members of “Sevika” (centre in-charge) and her assistant called “Sahayika”. The services provided to eligible women and children through the Aaganwadis include, i) supplementary nutrition, ii) immunisation and health check-ups, iii) pre-school education for children between 3 and 6 years of age, and iv) nutrition and health education to expectant and lactating mothers. At the village (or urban ward) level, the Child Development Programme Officer (CDPO) is responsible for monitoring of Aaganwadis.

Although the ICDS provides various (nutrition-related) health services for women and children, as stated above, provision of free supplementary nutrition to the target women and children forms a crucial component of the programme from the perspective of overall focus of this thesis. It must be added that providing free food was not originally as integral a feature of ICDS and the focus was more on the non-food aspects of the child nutrition and development (Ghosh, 2006). However, with cases of malnutrition deaths among children due to lack of food surfacing from time to time in many parts of the country (Jha, 2002; Mander, 2012; Manikandan, 2014; Nayar, 2014; Parulkar, 2012), direct provisioning of food for children has acquired a greater political significance concerning the right to food and child rights (see the various Supreme Court Interim Orders since 2001: Right to Food Campaign, 2014). Indeed, the recently passed right to food legislation (NFSA 2013) that provides constitutional guarantee to right to food, as noted in Chapter 1, also includes provision of free food for children as well as women (Government of India, 2013a, pp. 3-4). The following discussion thus focuses more on this food provisioning aspect of ICDS based on the fieldwork in Siwan. However, in discussing the operational aspects of the programme I shall also provide some general discussion on the broad features of the scheme.

Under the programme, children aged 6 to 36 months and pregnant and lactating mothers are provided with a certain quantity of take-home food rations per month

(entitlement norms vary across states), and children aged between 3 and 6 years are provided with a cooked meal for 6 days a week in the Aanganwadi where they also receive pre-school education. The programme is estimated to cover 75 million children under the age of 6 years and 16.7 million women of child-bearing ages (Planning Commission, 2011b). Several studies have documented the positive impact of ICDS benefits on nutritional status of children (for example, Avsm, Gandhi, Tandon, & Krishnamurthy, 1995; Tandon, 1989). However, like PDS and NREGS, the impact of ICDS varies across states depending on the financial and implementation capacities of the relevant state government (Gragnotati, Bredekamp, Das Gupta, Lee, & Shekar, 2006).

Although ICDS is largely a federally-funded scheme, with the Central government bearing 90 percent of the total programme cost, the supplementary nutrition component of the programme is funded 50:50 between the Center and each State (except in the seven north-eastern states where the same 90:10 format applies) (Ministry of Women and Child Development, 2014). The budgetary arrangements imply that varying financial capacities of the individual states play an important role in explaining the differential impacts of the programmes on child food and nutrition outcomes across states.

In many ways, Bihar suffers from severe deficits both in terms of budgetary capabilities and operational efficiency. In 2012-13, there were 91,677 operational Aanganwadis covering all the 38 districts and 534 blocks of the state. The total ICDS budget of the Central Government for Bihar was Rs. 1393.30 crores (US\$ 253 million roughly), and the state was provided with 82 percent (Rs. 1148.01 crores, or US\$ 208 million) of these total sanctioned funds. The actual spending in that year on ICDS was Rs. 1063.29 crores (US\$ 193.3 million). Compared to previous years, the funds received and utilised on ICDS by the Government of Bihar are indeed significantly higher (for ICDS funds received and utilised by Bihar in 2003-04 and 2004-04, for example, see Nandini & Saxena, 2006). Indeed, when looked at in aggregate terms, these are no mean figures. However, in terms of the funds per Aanganwadis and after factoring in the number of beneficiaries and their monthly entitlements, the ICDS appears to be chronically under-funded in the state. While the average monthly budget of Central Government per Aanganwadi in Bihar was Rs.

12,656 (US\$ 230) (and there does not seem any spending from the state's own exchequer on ICDS in 2012-13, as reported in Bihar Government's Economic Survey, 2013-14), each Aaganwadi Centre actually receives a monthly lump sum amount of Rs. 10,950 (US\$ 200) (Table 6.7).

Table 6.7: A snapshot of ICDS finances in Bihar, 2012-13

Number of Aaganwadi Centers (ACs)	91746
<b>Overall budget versus actual spending</b>	<b>Amount (Crore Rs.)</b>
Total annual budget	1393.30
Total funds released by Central Government	1148.01
Actual spending	1063.29
<b>Budget versus actual spending per Aaganwadi</b>	<b>Amount (Rs.)</b>
Average annual budget per AC (total budget/number of ACs)	151868
Average monthly budget per AC (total budget/number of ACs x 12)	12656
Actual money provided per Aaganwadi per month <sup>1</sup>	10950

Source: Compiled from the Economic Survey of Bihar, 2013-14, p. 187 (Table 5.14)

<sup>1</sup>This figure is based on interviews with Aaganwadi Sahayikas and Sevikas during fieldwork in Siwan.

From this amount, the Aaganwadis are mandated to provide i) a monthly take home ration of 3 kilograms rice and 1.5 kilograms of pulses each to 16 pregnant and lactating mothers, ii) a monthly take home ration of 2.5 kilograms rice and 1.25 kilograms of pulses each to 28 children identified as malnourished, and 4 kilograms rice and 2 kilograms of pulses each to 12 severely malnourished children, iii) morning refreshments/breakfast and hot-cooked lunch for six days a week to 40 children aged between 3 and 6 years who attend Aaganwadi for pre-school education attending, and iii) cooked lunch to three adolescent children aged between 11 and 18 years (based on field work in Siwan; also see Government of Bihar, 2014b).



Simple arithmetic suggests that the amount of Rs. 10,950 is inadequate for the Aaganwadi workers to honour these commitments. Indeed, this was a common complaint of Sevikas and Sahayika interviewed across all the case-study villages in Siwan. Yet the scheme operated. For most Aaganwadi women workers, the scheme provided a sole source of income and with it, self-esteem. Many of the ICDS centres I visited were operated from Sevikas' own homes without government paying any rent. Many workers stick with the job and offer their premises in the hope that the government will make these jobs permanent and they will be provided with tenure security and benefits that accompany it. However, and not surprisingly, the on-ground working of the scheme, from the perspective of beneficiaries, is hardly without problems. Not all problems are because of the practices of Sevikas or Sahayikas.

The household survey data revealed that of the total 170 households who were eligible for the ICDS benefits in 2011-12 across all case-study villages (those with children aged between 6 and 72 months and/or pregnant and lactating mothers), 37 percent (63 households) did not receive any supplementary nutrition benefits under the scheme. It must be added that the cap on the number of beneficiaries per Aaganwadi means that the Sevikas are supposed to screen the households and provide benefits to only those with low socio-economic status; mothers and children are monitored for their anthropometric status and those who are undernourished are provided with nutrition benefits. This means-test aspect of the scheme has received surprisingly little attention in the academic and policy discussion compared to other food safety net programmes such as the PDS (for a useful synthesis of arguments on universal versus targeted PDS, see Pritchard et al., 2014, pp. 120-126). Notwithstanding the low population norms for setting up Aaganwadis, as indicated above, this could exclude a large majority of households where women and children are in genuine need of supplementary food benefits. Indeed, the survey results suggest that of 63 households who did not receive ICDS benefits, only 6 households opted out of choice. In other instances, the deserving poor households from Scheduled Castes and Scheduled Tribes were largely untouched by the scheme because the Aaganwadis were often distant from their settlements (also see Avsm et al., 1995, p. 126). Moreover, caste-based

discrimination meant that, more often than not, children from these low-caste groups were not allowed to enter the Aaganwadi premises. To quote a women respondent from the surveyed household: “The children are often chased away by the Aaganwadi Madam. But when there is a checking, she comes home and takes our children to the Centre.”

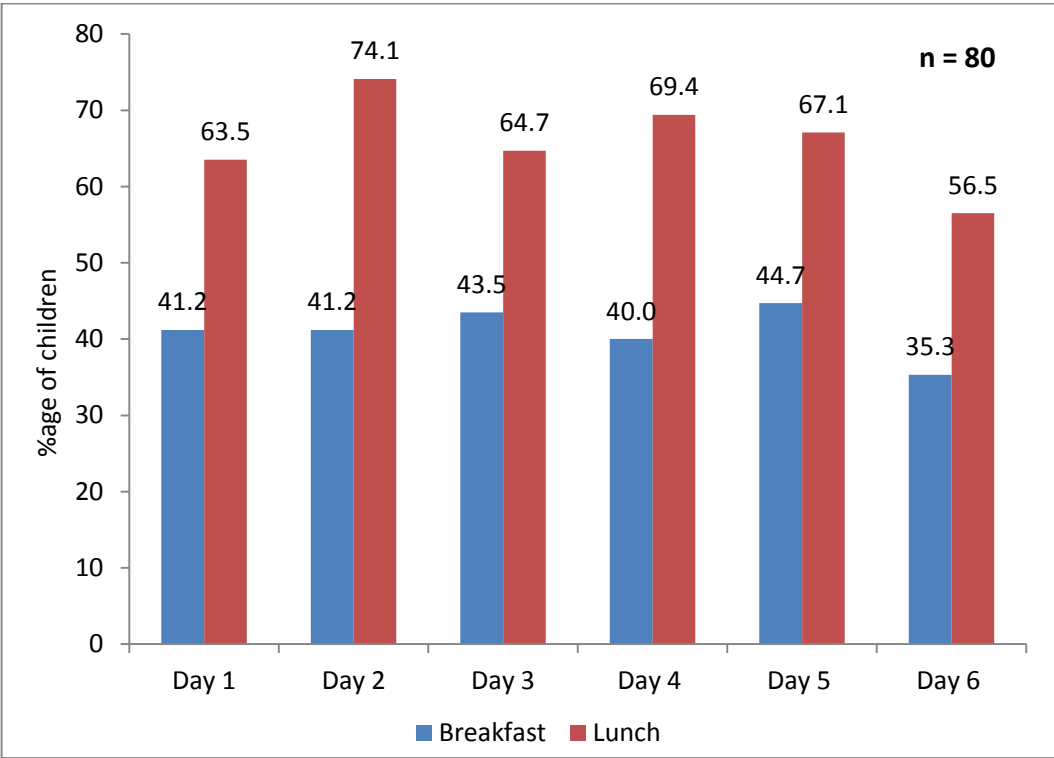
Furthermore, hardly any of those 107 households who reported receiving ICDS benefits received them regularly, or for the entire duration (usually women get take home rations from the time of pregnancy till 6 months after child birth, after which the take-home food entitlements get transferred to children up until they are 3 years old). The ICDS beneficiaries in the 107 households included 56 members (women and children below 3 years) who were entitled for monthly take home rations and 89 children aged between 3 and 6 years who received meals with pre-school education at the Aaganwadi (a few households had both women and child beneficiaries). In all the study villages, the distribution of take-home ration to eligible members was highly errant and often occurred before the monitoring visits of senior District, State or Central government officials. Furthermore, the only sub-district (block)-level CDPO that I was able to interview (see the discussion below) was of the view that the idea that providing take-home ration every month to undernourished children and pregnant and lactating mothers would improve their nutritional status was wrongheaded. In her words:

The monthly take-home ration for combating nutritional deficiencies among women and children is a big failure. Because most beneficiaries come from poor households, the ration given to women and children is often consumed by the entire household. It makes sense for the poor households, for it translates into households not having to buy ration for a day or two in a month. But that is not what take-home ration aims at.

One aspect of ICDS that seemed to be working relatively better was the meals provided to children who attended Aaganwadis. In the survey, the information was collected on whether or not the Aaganwadi-attending child(ren) of the household got their breakfast and hot-cooked lunch meals for each of the past six days.

Figure 6.4 presents the distribution of these children. Out of the 89 children from 107 households, 80 reported going to the Aaganwadi regularly for the food, if not necessarily for pre-school education. Most respondents reported that children were provided with something to eat at least once a day, as the data suggest. However, oftentimes the meals provided to children were inadequate and different from the prescribed norms. In none of the case-study villages did the frequency of cooked meals served to children exceed three days a week, effectively implying that these meals were provided for only half of the mandated 25 days a month (Government of Bihar, 2014c).

Figure 6.4: Percentage of children provided meals at the Aaganwadi in the past week



Source: Primary household survey data, 2011-12

Indeed, many Aaganwadi workers suggested that watertight budgets did not allow them to serve hot-cooked lunches every day, nor were they ever able to provide two meals on all days of the month. The breakfast refreshments of the children *routinely* included two sugary biscuits as against the official instructions to provide seasonal fruits (my interviews revealed that there was also an issue of lack of communication as while the district authorities included “carrots” as seasonal fruits, the Sevikas often tended to interpret the instructions in rather strict literal ways

even though they did/could not necessarily follow them as strictly). The demands placed on Aaganwadis often exceeded their financial capacities. It is striking to note that the *daily official budget provided to each Aaganwadi for the breakfast of 40 children is Rs. 22 (40 cents)*,<sup>80</sup> hardly enough to buy five apples, or 22 pieces of carrots but not 40.

Additionally, there were frequent complaints that from the monthly budget amount of Rs. 10,950, many CDPOs took a monthly cut of between Rs. 1000 and 2000 from each Aaganwadi Centre. The Aaganwadi workers did not openly say this, fearing action against them, but they did allude to it. Indeed, failures to pay bribes often resulted in more monitoring visits to the Aaganwadi by the CDPO. During my repeated visits to the Block Development Offices (concerning the case-study villages: Table 4.1 in Chapter 4) which house CDPOs offices, I could only meet one of the nine CDPOs during their official working time. Each time I was told that by their office staff that the field-oriented nature of their work required them to stay in the villages for monitoring of the Aaganwadi. However, in an interview with one of Block Development Officers, he suggested: “They say fieldwork but are often at their home resting.” It is worthwhile to note that each CDPO usually has anywhere between 35 and 100 centres under their watch. This meant that collective bribes from Aaganwadi Centres were often more than their official salary. Of course, this does not imply that Aaganwadi workers were not at fault but their positions were often connected with the authorities in the higher rung.

In a nutshell, there is no dispute that the programmatic objective of ICDS to improve the food and nutrition security of women and children through supplementary nutrition is well intended. Indeed, evidence suggests that in many states with well-functioning Aaganwadis, ICDS is helping women and children to meet their food and nutrition needs. The southern state of Tamil Nadu has been a leading example of running a successful nutritious meal programme for children at Aaganwadis (Rajivan, 2006). More recently, as part of the noon meal programme at the Aaganwadis, the state has also started providing one egg every alternative day to children aged between 3 and 6 years in order to improve their nutritional status and

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<sup>80</sup> Based on interviews with several Aaganwadi Sevikas and Sahayikas, and the block-level CDPO (quoted above), conducted during January-May, 2012.

achieve better pre-school educational outcomes (The Hindu, 2013). On the other hand, the operational realities of ICDS in Bihar, as revealed from the field research in Siwan, appear starkly different. Budget deficits coupled with maladministration of the scheme make ICDS a weak engine to spur improvements in nutritional outcomes of children. Indeed, although ICDS has been in operation in the country for more than 35 years, India has among the worst levels of child and maternal nutrition in the world. This research has attempted to highlight some of the systematic issues with the scheme. Unless these issues are fixed, ICDS will continue to underachieve upon its objectives.

### **Conclusion**

This Chapter has provided an assessment of the food and livelihood safety nets in Bihar, based primarily on the fieldwork in Siwan District. The persistently high incidence of poverty in Bihar means that the state-assisted safety net programmes hold vital significance in the lives of vulnerable rural populations. At the same time, they are affected by woeful delivery failures. The evidence presented above suggests that PDS, NREGS and ICDS are all plagued by severe maladministration and corruption. The operational inefficiencies in these schemes severely undermine their effectiveness to be able make significant contributions towards the food security needs of rural poor.

That corruption is endemic in most social protection schemes in Bihar is not a secret – far from it. It is encouraging to note the signs of a political will to revamp the dire state of social provisioning in the state in recent years. The coupon reforms in PDS, for instance, reflect this tendency. There are other important non-state, citizen initiatives as well. In Siwan, for instance, a newly-commenced popular community radio called “Radio Snehi” has a programme which, based on people’s complaints, attempts to name and shame the corrupt officials. In one of the prank-playing show formats, Snehi’s Radio Jockey, R. K. Rana, makes phone calls to the village-level providers of social services such as Aaganwadi Sevikas, School Headmasters etc., and pretends to be a monitoring officer from the Central/State government. The usual conversation that follows is that he has received complaints that the concerned official is not dispensing his duties as mandated. Not surprisingly, prank

calls by Rana wreak havoc until he reveals his true identity. What is striking is that many officials, unaware of prank at first, admit to the wrongdoings (of not honouring their duties well), and vouch to not repeat the mistakes in the future. The significance of such initiatives notwithstanding, solutions to curb the corruption to bring about a meaningful change are yet to emerge.

Positing this issue in terms of India's landmark right to food legislation (NFSA 2013), the corruption and rent-seeking in the food-based safety nets pose a significant challenge to the effective realisation of this right. One manifestation of this, as echoed by Chatterjee (2004, p. 38), albeit in a slightly different context, is that "most of the inhabitants of India are only tenuously and only then ambiguously and contextually rights-bearing citizens in the sense imagined by the constitution" (cited in Witsoe, 2012, p. 53).

This is not to say that these safety net programmes are not important. The importance of these schemes in the lives of resource-poor households was all too apparent from the village-level observations and interviews carried out with them. Consistent with the arguments of Dreze and Sen (2013, p. 212), this Chapter does not intend to suggest that leaving poor people on their own is a good policy. Instead, the overall argument pursued here is that the current institutional arrangements on social safety nets in Bihar (and in some other states of India) do not provide a robust food security anchor for a large majority of rural populations. My research findings from Siwan are in sync with evidence from other parts of the state. For example, reporting the findings of a longitudinal study that traces the development contrasts in two socially and economically heterogeneous villages in North Bihar over three decades (since 1980), Datta, Rodgers, Rodgers, and Singh (2014, p. 1198) note:

In both villages, state social policies, previously notable mainly by their absence or ineffectiveness, are now increasingly visible... But this progress in social policy did not seem to be an important source of the differences in development path between the two villages.

In Siwan, the inefficiencies in the social protection nets leave little option for a large majority of rural poor households but to fend for themselves. However, dejected as

they may be with the current state of social provisioning, the rural poor do not appear to be passive actors. They devise multiple strategies to mitigate risks to their income and food security. The weak capacity of the land-based livelihoods and the underdeveloped state of rural non-farm sector means that migration figures as an important strategy within the rural livelihood systems in Siwan. While migration, in large part, represents a response to the broader livelihood deficits that characterise the life worlds of a large majority of the rural dwellers in the district, the inadequacy of social protection aggravate their vulnerability further to income and food insecurity and provides a strong incentive for migration. The complex dynamics of household decision-making matrices make it difficult to precisely decompose the relative effects of lack of proper social protection in guiding households' migration decisions. However, it is certainly the case that the incidence of migration would have been much less in the presence of effectively functioning social safety nets.

Ironically, however, migration appears to further deprive many of the poor households to access these social safety nets. This occurs mainly through two ways. Firstly, the predominantly single male nature of migration from Siwan means that most households have their adult men outside the village for a major part of the year. And the cultural norms restricting the participation of women in the affairs outside the household often result in left-behind women finding it hard to register their claims over their entitlements; those who do are often unheard and manipulated. In the case of PDS, for instance, a migrant respondent who had an ailing daughter (and another one died when she was two-and-half-year old due to jaundice) told me:

I have asked our Mukhiya [GP Chairperson] several times to get our family a BPL ration card. He always says that when the cards are distributed next, he will consider our request. Many families in the village have been issued new BPL cards but we have not gotten ours. I always stay away from the village to earn money and my wife cannot run after these things. A monthly food ration from the government would mean that I can spend some money on my daughter's treatment.

Secondly, the local authorities in-charge of administering the safety nets often regard households with migrant members as having steady income streams, and thus, consider them ineligible for the benefits of these schemes. My interviews with various village-level stakeholders pointed to this tendency. The household survey data also capture these dynamics. The data suggest that whereas the average percentage share of government benefits (including the ones not covered in this Chapter such as pensions, scholarships etc.) in household income was 4 percent for non-migrant households, it was less than half (1.9 percent) for the households with migrants.

Thus, while the dire state of social protection acts as an incentive for migration, the act of migration also appears to result in the exclusion of rural households from the safety net benefits. However, it is equally pertinent to invert the equation and ask whether and how migration helps rural households to cope up with perennial conditions of economic distress to meet their income and food security needs. My fieldwork suggests that while the economic circumstances of many households still remain dire, without migration incomes most of the surveyed households would be worse off. Furthermore, in cases where remittances are significant they also enable households to improve their overall economic standing. The positive impacts of migration are perhaps most pronounced on household food security, and regardless of the background circumstances of the households, migration does seem to translate into improving households' access to food. In the next Chapter, I discuss the role of migration and remittances in influencing food security among rural households.





## **7 MIGRATION, REMITTANCES, LAND AND HOUSEHOLD FOOD SECURITY**



## CHAPTER 7: MIGRATION, REMITTANCES, LAND AND HOUSEHOLD FOOD SECURITY

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### Introduction

The development experience of most countries in the world suggests that economic growth is accompanied by structural transformation. As economies advance, the share of population chiefly dependent on agriculture declines. However the outcomes of this structural transformation on rural and urban economies and societies are far from uniform, and depend on the ways in which “the complexity of national diversity asserts itself” (Timmer, 2007, p. 4).

The Indian experience of structural transformation appears peculiar. The market reforms from the mid-1980s (though beginning in earnest only in the 1990s) put the Indian economy on the path of higher growth and are associated with increased overall prosperity (Panagariya, 2004). This has been accompanied by a structural shift in which the non-agricultural sector vis-à-vis the agricultural sector and urban vis-à-vis rural areas have gained significance in terms of their shares in national income. However, changes in employment patterns have not followed at an expected pace. The rural-urban transition is far from complete, and nearly 70 percent of country’s population still live in the countryside. And despite the fast-growing non-agricultural sector of the economy, the share of labour in agriculture has declined at a slower rate than the contemporary experience of other Asian countries suggest. The source of this apparent contradiction lies in the fact that much of the economic growth of the recent past is accounted for by more capital and skill intensive business and services sectors (Datt & Ravallion, 2009; Kotwal, Ramaswami, & Wadhwa, 2011), constraining the opportunities for the poor and unskilled populations to alter their livelihood pathways more fully.

The “stunted” nature of India’s structural transformation notwithstanding (Binswanger-Mkhize, 2013), the fundamental shifts that have characterised the Indian economy over the past three decades are rapidly altering rural livelihood trajectories in the country. Although agriculture still remains the single-largest employment provider, the relative importance of agriculture as a *primary* source of

income and food security has weakened. Agriculture workers declined by 27 million between 2004-05 and 2011-12, with nearly half (13 million) of this decline occurring between 2009-10 and 2011-12, hence producing, for the first time in the history of independent India, an *absolute* decline in the agriculture workforce (Mehrotra et al., 2013, p. 88). On the other hand, while the recent growth trajectory in India has tended to favour capital and skill intensive sectors, the nonfarm sectors that are also intensive in unskilled labour such as construction and unorganised manufacturing have also grown during the same period, leading to a rise in aggregate demand for labour in these sectors (Datt & Ravallion, 2009). Importantly, although the significance of the rural nonfarm sector has increased, the urban-centric nature of economic growth in the recent past, with much of the addition to national income now emanating from urban areas (Planning Commission, 2011a, p. 378), means that urban areas have assumed more significance in the overall framework of economy and job creation. Indeed, it is the spillover effects of urban growth on rural incomes and employment that seem to have become increasingly more crucial for rural poverty reduction in recent years (Datt & Ravallion, 2009; World Bank, 2011b).

This Chapter asks what implications these broad changes have in shaping household livelihood pathways, and how they correlate with household food security. In alignment with the broad objective of this research, the focus here is on the ways in which migration as a livelihood strategy affects household food security in the case study district of Siwan. Needless to say that the impact of these national, macro-level changes is unlikely to be uniform across and within different states of India, possibly varying even from one village to another, and thus they necessitate a place-based contextualisation and understanding. These changes, however, have particular relevance for Siwan (and Bihar more generally). In Siwan, rural-urban linkages, although never absent due to the long-history of migration, have assumed greater significance in recent years and are fundamentally altering social and economic relations at the village and household level with direct implications for household food security. The decreasing returns from agriculture-based livelihoods suggest increased importance of migration incomes for rural livelihoods. Yet however, the precariousness and uncertainty of urban jobs and a complex mix of

socio-cultural reasons mean that migrants continue to maintain close relations with their origin villages; they invest their earnings and remittances in the origin villages. In turn this implies that rural land and resources continue to play a vital role in households' incomes and food security. At the same time, the capacity of rural land and agriculture to meet household food security needs is becoming increasingly contingent on urban remittances. In other words, complex interactions between rural and urban economies exist at the household level, which warrant examination to understand more fully the food security outcomes of migration. However, not all households are involved in migration and it is important to understand the factors shaping migration decisions and how those households without migrants fare compared with migrant households. The sub-sample of non-migrant households allows this comparison.

This Chapter is structured as follows. In the next section, I explore the decision-making matrices of households in terms of whether livelihood diversification occurs locally or at a distance. Secondly, I discuss whether there are differential gains from diversification within the rural and urban sector. I then explore the type of linkages that migration creates between rural and urban economies, and how they relate to food security at the household level in Siwan. In particular, my focus will be to highlight whether and how remittances correlate with household food security. In the final major section, my attention then turns to the village-level changes in land and agrarian relations and their significance for food security.

### **Who migrates, who stays and why? Conditions, intentions and motivations to migrate and stay put**

As noted in Chapter 5, the economic landscape of rural Siwan is marked by the notable absence of gainful employment opportunities. Average landholdings are exceptionally small, and the cash-income generating potential of land and farming is very limited. Moreover, despite some growth in rural nonfarm employment in recent years, the rural nonfarm sector remains highly underdeveloped still; the jobs in this sector are errant and less remunerative. The few regular, better-salaried non-agricultural jobs, particularly in the social service sector run by the government (such as teachers, doctors, clerks, health workers etc.), presuppose a certain level of

education and skills which most poor households do not possess, and are thus cornered by the socially and economically better-off groups, mainly upper castes.<sup>81</sup> Additionally, while the return to normalcy of law and order and the high growth rates of the Bihar economy after the election of new state government since 2005 has led to more rural poor commuting daily to the District and Block headquarters to work in activities such as vending and hawking, rickshaw pulling, picking up labouring duties in construction work etc., local labour supply far exceeds the work demand and employment availability. As a result, a considerable proportion of rural households engage in long-distance, interstate migration. The survey data show that out of the 280 migrants belonging to 197 migrant households, only three migrants worked in other districts within Bihar. Much of the interstate outmigration from the district is to the Tier 1 Indian cities which dominate the country's economy (Figure 5.5 in Chapter 5).

Table 7.1 presents the socio-economic characteristics of surveyed households in Siwan by migration status. The data suggest minimal differences in the propensity to migrate across most socio-economic variables, with the notable exception of household type. Nuclear households were much more likely not to include one or more migrants, when compared with joint households.

My fieldwork however also points to important new developments in household composition in rural India. At one level, it is not surprising that joint families with more members provided a migration-facilitating structure. In these cases, it has traditionally been the case that remittance incomes were jointly shared, with the left-behind wives and children of migrants looked after by the stay-put members, mainly the elderly parents. However, this is no longer always the case. From interviews with households, I also found some evidence of an increased reluctance of migrant individuals, and their wives, to share the remittances with the less productive stay-put members of the households. In turn, this is leading to increasing intra-household tensions over cash management, which is impacting on family structure. The upshot is that many migrants are separating themselves from joint

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<sup>81</sup> Though positive discrimination policy of reserving a quota of jobs has somewhat reduced this imbalance it is the better-off within the lower caste groups that have an edge. Equally, a considerable proportion of resource-less upper caste households also find it difficult to access these jobs.

households. New types of familial arrangements are fast emerging which could aptly be characterised as the ones *where the roof is shared but income and financial responsibilities are separated* (I discuss this in Chapter 8).

A second issue, evident in Table 7.1, is the association between income and wealth on the one hand, and propensity to migrate on the other. My survey data suggest that migrant households fared relatively better than non-migrant households on measures of economic well-being. The average Monthly Per Capita Income (MPCI) and Monthly Per Capita Consumption Expenditure (MPCE) among households with migrant members was approximately 30 percent more than their non-migrant counterparts; 66 percent of the non-migrant households had MPCE below the state poverty line as compared to 47.7 percent of the migrant households; a higher proportion of migrants lived in pucca (concrete) houses than non-migrant counterparts. However, these data reflect post-migration economic outcomes, and alone cannot be used to infer pre-migration differentiated propensities to migrate. Thus, whereas previous studies have pointed out that poorest households are often least able to migrate because of their inability to bear the initial costs of migration (Connell et al., 1976), which in turn increases intra-village inequality among the households (Lipton, 1980), my field research in Siwan does not suggest that the initial economic position of the household is a major explanatory variable for migration. Interviews with households revealed that while many faced difficulties in financing the initial costs of migration, this did not deter migration among the poorest. For example, a wife of one migrant informed me that for her husband's first trip to the city 10 years ago, they mortgaged her silver anklets to borrow money from the local moneylender. Similarly, other households borrowed money from their relatives and friends to send their members to the cities; in turn having a member in the city enhanced the creditworthiness of migrant households who were able to borrow money in months when migrants did not send remittances. In any case, the high incidence of poverty in Siwan (as the data in Table 7.1 also suggest) meant that economic constraints to migration applied almost equally to all households.



Table 7.1: Background characteristics of surveyed households by migration status

	<b>Migrant household</b>	<b>Non-migrant household</b>
<b>Household size (in person)<sup>1</sup></b>		
Average household size	7.3	5.7
Average number of persons aged 20 to 50 years	2.9	2.1
Average number of males aged 20 to 50 years	1.6	1.0
<b>Religion of the household</b>		
Hindu	77.7	79.5
Muslim	22.3	20.5
<b>Caste of the household</b>		
Forward Caste	7.1	7.7
Backward Caste	46.7	40.4
Extremely Backward Caste	28.4	28.7
Scheduled Caste/Tribe	17.8	23.1
<b>Type of household</b>		
Nuclear	47.2	74.4
Joint/Extended	52.8	25.6
<b>Type of house occupied</b>		
Kutcha	16.2	24.1
Semi-pucca	37.1	38.5
Pucca	46.7	37.4
<b>Agricultural land ownership</b>		
Landless households	33.0	31.8
Households with less than half acre land	66.7	67.7
Households with less than 1 acre land	83.3	85.7
Average land size (in acre)	0.65	0.58
<b>Income and expenditure</b>		
Average monthly per capita income (in Rs.)	970	654
Average monthly per capita expenditure (in Rs.)	1021	735
Household with MPCE below poverty line <sup>2</sup>	47.7	66.2
<b>Total number of households (n)</b>	<b>197</b>	<b>195</b>

Source: Primary household survey data, 2011-12. All data in percentage terms, unless specified differently.

<sup>1</sup>Includes migrant members. <sup>2</sup>MPCE = Monthly Per Capita Expenditure. Same MPCE cut-off used to estimate consumption poverty as described in Table 6.2 and Table 6.6 above.

Like their rural counterparts, most migrants worked in casual jobs in the urban informal sector. However the average migration incomes were higher than the local earnings, which allowed households with migrants to fare better economically than their non-migrant counterparts. The survey data suggest that the average annual

income of households with one or more migrant member from remittances alone was Rs. 43,563, which was slightly higher than the total annual income of Rs. 43,507 among non-migrant households, and households with primary dependence on remittances as a source of income had higher incomes and expenditure as compared to the household who chiefly depended on local farm and nonfarm incomes (see Table 7.2 and Figure 7.8 below).

This is further corroborated by the data on the duration of migration. Most households reported that their migrant members had been going to the cities for work for a long time. Of the 280 migrants, 85.7 percent had at least two years and more of migration history, with 64 percent (197 migrants) having a duration of stay away since first migration as five years or more. The higher urban incomes and the savings they allowed meant that it is the repeated trips to the city for a few years that affected these income differentials between migrants and non-migrant households.

Furthermore, it is important to note that the incidence of migration did not vary much by mutually inter-linked categories of landholding size and caste, two key predictors of poverty and migration in India. Evidence from large-scale surveys and village studies suggests that in many parts of India it is generally the landless and land-poor communities of lower castes who partake in unskilled seasonal/circular migration (Breman, 1996, 2010; Keshri & Bhagat, 2012; Mosse et al., 2002; Srivastava & Sasikumar, 2003). However, my survey data on caste composition of the household sample suggests that there were no significant differences in the proportion of migrant and non-migrant households by the caste status, and migrants came from all castes. Studies from other parts of Bihar also suggests the same (Karan, 2003; Sharma, 1997). However, the gains of migration varied, with households from upper castes faring slightly better than the lower caste households in Siwan. Indeed, colonial records of migration from western Bihar indicate that migration was widespread across different caste groups (de Haan, 1997a, 1997b, 2002; Hagen & Yang, 1976; Yang, 1979, 1989). My fieldwork suggests that the long history of migration from the western Bihar region has further loosened the caste basis of migration over time. In fact, while the landless and land-poor communities belonging to lower castes have traditionally relied more on the income from menial

jobs elsewhere (de Haan, 2002) in addition to the wages (both cash and in-kind) from local farm labour, in recent years the incidence of migration has increased among the upper castes. Following the abolition of Zamindari system and related, albeit partial, land reforms carried out in Bihar in the post-independence period, the land loss among the upper castes has been greater. Further diminishing the capacity of land-based livelihoods has been the continuous fragmentation of landholdings due to high population pressures. Village-studies from other parts of Bihar suggest that landholdings of upper castes have reached a point where farming no longer provides a viable income option (Sharma, 2005, p. 965). By reducing the wage income opportunities locally, this has also propelled migration among the traditionally disadvantaged communities of Scheduled Caste, Scheduled Tribe and Extremely Backward Caste groups. The exceptions included the lower caste communities of Bansfor and Mushahar (two traditionally marginalised caste groups in Bihar) who did not show a high migration propensity from the case study villages (see below).<sup>82</sup>

Personal histories of many lower castes households in Siwan revealed that many had members who earlier worked as 'attached labourers' in the fields of Forward Caste landowners. However this is no longer the case; in none of the 10 case-study villages was the incidence of labour bondage reported.<sup>83</sup> The cross-sectional nature of the survey bars a quantitative assessment of the magnitude of the attached labour that prevailed before in case study villages in Siwan. Nonetheless, longitudinal studies from other parts of Bihar confirm that attached labour no longer characterises agrarian and land relations in Bihar. Reporting the findings of a longitudinal study that traces the changes in social-economic relations in two contrasting villages in north Bihar over 30-year period, Datta et al. (2014, p. 1199)

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<sup>82</sup> It should be noted that the propensity to migrate among different social groups is not the same across the different regions of the state. For instance, in their study of migration in six districts of Bihar, Deshingkar, Kumar, Chobey, and Kumar (2006, p. 18) found high rates of seasonal migration among Mushahars of Nalanda district who mainly migrated to neighbouring states of Uttar Pradesh and West Bengal to work in the brick kilns for 6-7 months a year.

<sup>83</sup> In one of the case-study villages, a woman respondent from the lower caste reported that when she demanded higher farm wages from the local landlords they threatened to kill her and her family. In reality, however this did not happen. The respondent reported that she now commuted to another village during the peak agricultural seasons where she got the daily wage of Rs. 150 (US\$ 3), three-times as much as she got locally.

found that between 1981 and 2009, both ‘attached labour’ and ‘pure landlords’ disappeared in the two villages. In the case of Siwan, the progressive reduction in the already meagre size of landholdings has weakened the erstwhile feudal relations. Moreover the caste basis of land ownership has also progressively eroded, as noted above. In the sample of 392 households, while the incidence of landlessness was lower and average land size higher among the Forward Castes and Backward Castes than the Scheduled Castes/Scheduled Tribes and Extremely Backward Castes, the differences were not significant; across the sample most landed households had average landholdings of less than an acre (Figure 7.22). At the same time, the gradual erosion of the caste basis of land ownership is leading to new land dynamics whereby the erstwhile landowning communities are leasing out their land to pursue more remunerative non-local, nonfarm livelihoods in the cities. How these land relations have a bearing on food security of the land-poor households is discussed in the later section of this Chapter.

At this stage, however, it is important to note that the motivations to migrate as well as well as to stay put in the village were complex. In the case of migrant households, although economic reasons figured prominently in most, and almost exclusively in many, households’ migration decisions, they conflated with several other motivations such as personal desires of migrants’ to experience the outside world. That said, connections with family and village at place of origin remained strong and most migrants showed a strong leaning toward village life.

To most households long-distance migration to urban areas inevitably provided the route to make up for livelihood deficits in the origin villages. The predominance of push induced by unemployment notwithstanding, higher urban incomes also provided the pull motives to many households. In fact in myriad instances the classic push and pull dichotomy was often obscured as the responses of most respondents often reflected a combination of the distress-push and income-pull factors. During my interviews with migrants at places of destination, a common response to the question of the migration trigger that “we-don’t-have-much-employment-available-there [in the village]” often followed, at times in the same breath, that “incomes-here-are-much-better”. In other words, the escape from the

economic drudgery in the village often coincided with the inherent desire among migrants to better themselves.

Furthermore, and this is important, there was a great degree of differentiation in the ways in which different migrants and households perceived and pursued the economic gains of migration. To some households, often the very poor with no land and other assets in their places of origin, migration served the immediate goal of meeting food consumption needs. For Ahmed (name changed) and his family, for instance:

I often wonder what would happen if I did not come and work here. My family would die of starvation... My daughter died two and half years ago when she was just two and half years old. She had jaundice and I asked my wife if I should come back so that we could see a good doctor for her but she told me not to. Few days later, she called me to inform that my daughter is no more and I must come now. If I had gone earlier, she could have been saved. But I could only go to bury her. I do not blame my wife either, as she probably thought that me not earning for a month (or may be longer) and thus not sending money home would have killed her anyway.

For others, migration provided a way to save and accumulate money for longer-term goals such as dowry (for daughters' wedding), via the mechanism of buying a piece of land (interviews with a few migrants revealed that they bought land when their daughter(s) were growing up, and sold later to meet dowry demands). Thus, to quote another migrant respondent:

My family's day-to-day expenses are provided by the cash income from the milk we sell. But selling milk can never pay for my daughter's marriage. So the money that I earn here is used for bigger expenditure... whatever I have been able to do is from the money I earn here. I married two daughters, spent money on my parents' treatment and funeral, and am now educating my younger children.

In a handful of other cases, work migration, although occurring due to distress circumstances at home, and with the broad purpose of maximising household

welfare, also coalesced with individual migrants' desire to experience the outside world away from the watchful eyes of family and village elders. Seen this way, mobility also provided an avenue for partial individualisation of migrant members' lives. Personal narratives of such migrants revealed that they often combined broad household goals with their own aspirations, though the former was almost always more important than the latter. To quote another migrant:

My father did not have much and so I had to start working even before I hit puberty. But I wanted to move out of the village and experience the outside world. I was always curious to meet and interact with people from other regions and cultures. But I had to earn some money to support my aspirations, and more importantly, I had my family to support too. So I started working outside but now I realise that I have been away from the village and my family forever.

The lack of gainful employment opportunities in Siwan notwithstanding, most of the migrants that I interviewed were of the view that while they could find work in and around the village, migration allowed savings that local work did not. Indeed, saving was the single biggest reason reported by the migrants. For example, Bhim (name changed), who worked as a carpenter in Faridabad, Haryana, told me:

I know here in the village I can earn as much money as I make staying 500 miles away from home. But I will not ever be able to save single penny here, whereas in Faridabad I save between Rs. 4000 and Rs. 5000 every month. This money helps my family when they need it. What is the point of earning and not saving anyway?

Not all migrants (and the households they belonged to) were able to improve their economic standing over time in any significant manner (e.g. Ahmed's case above). Most migrants worked in the urban informal sector and thus had precarious jobs. Indeed it is one of the important reasons why migration from this region (or from Bihar as a whole) has remained circular, as well as intergenerational in nature with old members in the household passing the baton to the younger members of employable age. However, it is also true that without migration the rural populations of western Bihar would be much worse off. Furthermore, as I discuss

below, remittances are playing an (increasingly) important role in the lives and livelihoods of Siwani dwellers. From the specific perspective of food security, while food security circumstances were dire across the survey sample, having a member outside was invariably associated with improved access to food and dietary diversity.

On the other hand, decisions by some respondents not to migrate were not because they were any better-off and thus did not have any need. Nor, in most cases, did they lack the information and networks. In all the 10 case study villages the ubiquity of migration (and its circular nature) meant that information on work availability, destinations and wages flowed quickly, and the long history of migration from the region meant that networks were well established. Yet, many households stayed in the village. This was because, firstly, as noted above, a larger proportion of non-migrant households came from nuclear families, and had lower average family sizes. For instance, Munni Lal, a 45-year-old man from Kushwaha community (cultivator caste) who combined cash incomes from farming and sharecropping with repairing/fixing irrigation pumps, told me: "I wanted to go and work in the city but I could not do it because I was alone. But when my son grows up, I want him to go and live in one of the big cities." Households with fewer members found it difficult for someone to move out. Secondly, attachment with village life, local networks and agricultural land kept several households embedded in the village economy and society.

Thirdly, some of the surveyed non-migrant households earlier had members who migrated but returned because either they developed health problems or faced exploitation and abuse at the destination places. The latter reason was particularly true for some of the most disadvantaged households, such as Bansfors and Mushhars (Box 7.1 and Figure 7.1 to 7.6). Many had no networks and depended on the work agents/contractors to change their fortunes. The way agents recruited men from these lower castes was to provide an advance sum of a few thousand rupees to the cash-starved poor families. Although this advance amount varied from one village to another and, within the village, from one household to another, it ranged between Rs. 3000 (US\$60) and Rs. 8000 (US\$160). As per the verbal contract and commitment by the agents, it was meant to be the payment worth one month

of work. However, in interviews, many return migrants told me that this amount was all that was paid for the duration of work ranging between 6 to 8 months, in addition to the weekly sum of a few hundred rupees for their food expenses. High levels of exploitation at the destinations also often including long working hours, and less than promised pay, and sometimes no pay at all reduced the benefits of migration for these households. To quote one such return migrant, Teja Bansfor (first name changed):

I am a poor and illiterate man. When it came to settling my account towards the end of the working period, my contractor would show me a huge paper and tell me that instead I owed him money which I must return. Upon hearing that, my heartbeat would stop. I worked with four different agents in Kolkata, Chennai, Guhawati and Cochin [Kochi] but this happened with me each time. So I am better-off living in the village.

In a nutshell, the decisions of surveyed households to migrate as well as stay put were complex, and were also guided by a range of non-economic factors. However, it is pertinent to understand how migrant households fare vis-à-vis non-migrant household, an issue to which I now turn.

### **Landholding patterns, nonfarm income diversification and income differentials between migrant and non-migrant households**

As noted in Chapter 5, in Siwan, landholdings are sub-economical. Out of the 392 surveyed households, 32.4 percent of household had no land, 57.4 owned landholdings of less than an acre, and only 10.2 percent had land sizes of one acre or more (Figure 7.7). These landholding patterns implied that for a large majority of surveyed households the productive capacity of land to provide cash income was quite limited, though land was invariably valued highly by all households as a critical livelihood asset, a source of security, and a vital foundation for own provisioning of food security. The weak income-generating potential of land meant that cash incomes from nonfarm sources were important not only to supplement the gains of land-based livelihoods but also for maintaining and sustaining the small land parcels that most poor households owned. The small landholdings provided a strong incentive for migration. At the same time, as I discuss below, the connections



between non-local, migration incomes were rarely one-way and remittances were invested in household-owned land and agriculture.

#### Box 7.1: Mushahars and Bansfors: a brief profile

##### **Socio-economic conditions**

Officially recognised as the Scheduled Castes in the Indian constitution, Bansfors and Mushahars are mainly found in the two Indian states of Bihar and Uttar Pradesh. My fieldwork in rural Siwan suggested that in a village structure, members from these lower caste communities formed the contingents of socially marginalised, economically and educationally backward and geographically isolated people. As outcasts, they lived on the village margins and were segregated from the main village habitations. Most families had sub-humane living conditions, dwelled in kutchra (mud/bamboo) houses, and had no land or any other productive resources. The incidence of hunger and food insecurity was extremely high among the Mushahars and Bansfors and most families were seldom able to eat three meals a day every day. Due to the lack of resources and networks, migration was very low among these caste groups, and most families depended on local income options.

##### **Livelihoods**

Also Known as “rat eaters”, Mushahars occupy the lowest rungs of caste hierarchy in India. The livelihoods of Mushahars are gender segregated. Most Mushahar men work in the local Brick Kilns for about five months a year (February to June). During my interviews with Mushahars in one of the study village (Jagarnathpur Village: Chapter 4), I was informed that they received Rs. 300 on every 1000 bricks they made. On an average, an adult man makes between 500 and 700 bricks every day, thus earning close to Rs. 150 as daily wages. During the peak agricultural season, women work as agricultural labourers in the fields of landowners at the daily wage rate of between Rs. 30 and Rs. 50 a day for 4-5 hours of work. In the slack period when the work is available under the NREGS, both men and women work under the scheme.

The main livelihood activity of Bansfors is making bamboo-based small products by hand, such as baskets. ‘Bans’ is a Hindi word which means bamboo, and Bansfors are commonly known as bamboo workers. The whole family, including young children, is involved in making baskets, and a family can usually make between five and eight baskets a day. Depending on the size, type and quality, each basket is sold for anywhere between Rs. 10 and Rs. 30. Like Mushahars, Bansfors women also work as agricultural labourers earning the similar daily wages of Rs. 30 and Rs. 50 a day. Some of the households I interviewed also informed me that oftentimes they beg for food from the neighbours in the village.

Figure 7.1: Settlement of Bansfor community in Gay Ghat village



Figure 7.2: A Bansfor family in Gay-Ghat village making baskets



Figure 7.3: A Bansfor woman in Chakmahmuda village making baskets. The neighbours' children wanted to be in the frame too!



Figure 7.4: Settlement of Mushahar community near a brick kiln in Rachhopali, a village adjacent to one of the study villages of Jagarnathpur, where Mushahars from both villages worked.





Figure 7.5: Mushahar men working in the brick kiln

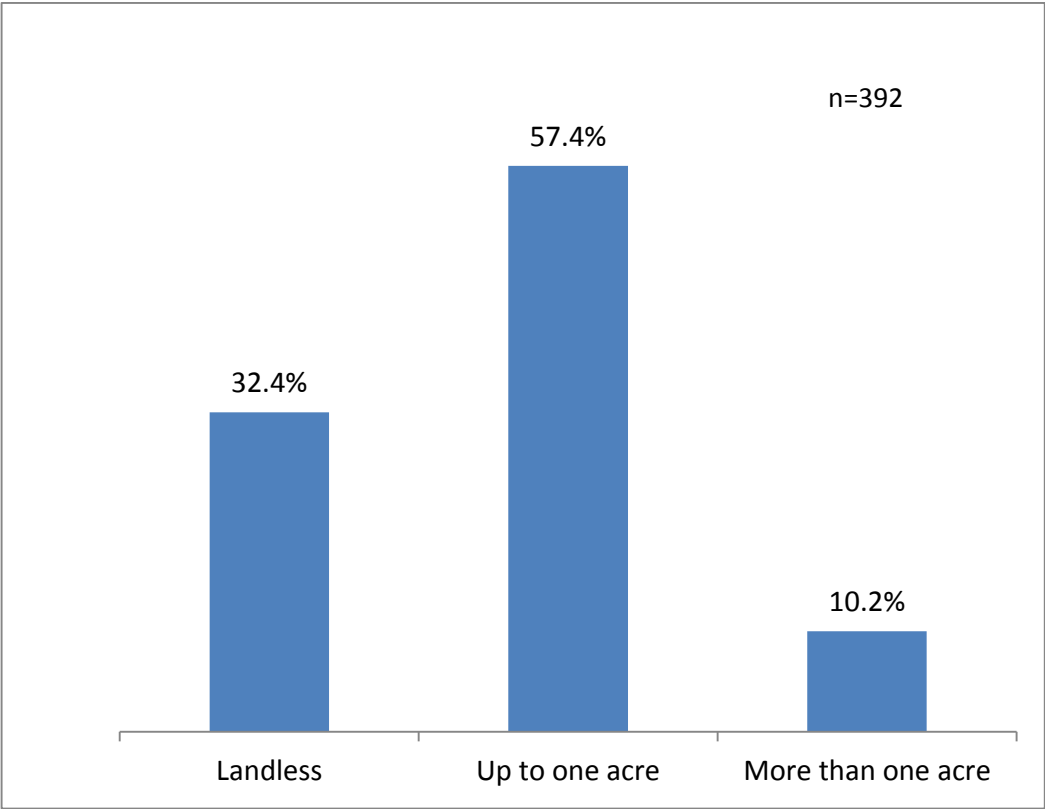


Figure 7.6: Mushahar kids who owned one pair of shirt each which their mothers had washed that day.



Source: All pictures taken during fieldwork in Siwan.

Figure 7.7: Percentage distribution of surveyed households by land ownership status in Siwan



Source: Primary household survey data, 2011-12

The survey data on income composition suggests that farm income constituted a very miniscule proportion of the overall income of surveyed households. On the other hand, nonfarm sources contributed more than three-quarters of households' annual cash incomes. For migrant households the combined share of rural and urban nonfarm incomes accounted for more than 90 percent of the average annual income. In terms of income differentials by migration status, migrant households had higher incomes than their non-migrant counterparts, largely owing to the fact that wages and earnings in urban areas were higher than rural incomes. The annual per capita income of migrant households was 32 percent higher than of households without any migrant members (Table 7.2).

It is apparent from the data in Table 7.2 that the surveyed households had their incomes spread across multiple sources. However, they varied in terms of the degree of dependence. Indeed the relative contribution of the source has important bearing in terms of explaining the income differential between the migrant and non-migrant households.

Table 7.2: Average percentage share of income by source among migrant and non-migrant rural households in Siwan

Source of income	Migrant HHs (n=197)	Non-migrant HH (n= 194) <sup>1</sup>
Farm	1.5	7.7
Livestock	1.6	4.3
Rural nonfarm	17.4	76.2
Off-farm	1.4	5.6
Remittances	75.4	0.0
Government benefits	1.9	4.0
Others	0.8	2.1
Total	100.0	100.0
Average annual income (In Rs.)	60232	43507
Average annual per capita income (In Rs.)	11629.0	7844.0

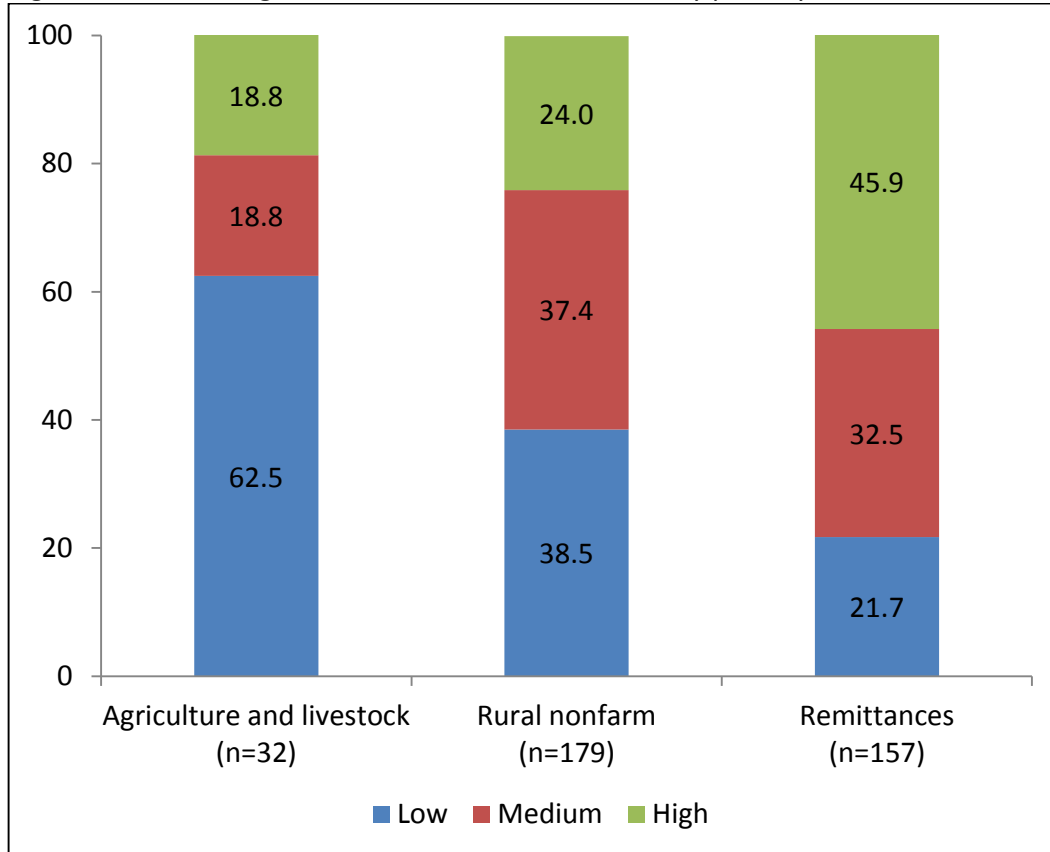
Source: Primary household survey data, 2011-12

<sup>1</sup>Total non-migrant sample included 195 households but one of them did not share income details.

Figure 7.8 shows the distribution of sample households across the MPCl tertiles (distribution of households into three equal parts based on their income) by their primary source of livelihood. The primary source of livelihood is defined here as the sector or occupation which accounted for 50 percent or more of total household income in the year 2011-12. This has been classified into three broad categories that include: a) agriculture and livestock (including off-farm wages from agriculture work and tending animals), b) rural nonfarm, and c) remittances. The logic of such classification was that together they accounted for 96 percent of average household income; the remaining 4 percent came from other sources such as income transfers from government (eg. old-age and disability pensions, scholarships). The cut-off points for MPCl tertiles obtained from the survey data include Rs. 485.12 and Rs. 767.12. Using these cut-off points, the classification thus follows: 1) Low – Rs. 0 to 485.12; 2) Medium – Rs. 485.13 to 767.12; 3) High – Rs. 767.13 and above.

The data suggest that while a relatively small proportion of the overall sample (32 households) depended on income from farm and livestock, most of these (62.5 percent) were in the low-income tertile, suggesting the farm incomes were low. On the other hand, 46 percent of 157 households which depended primarily on remittances were in the high income tertile.

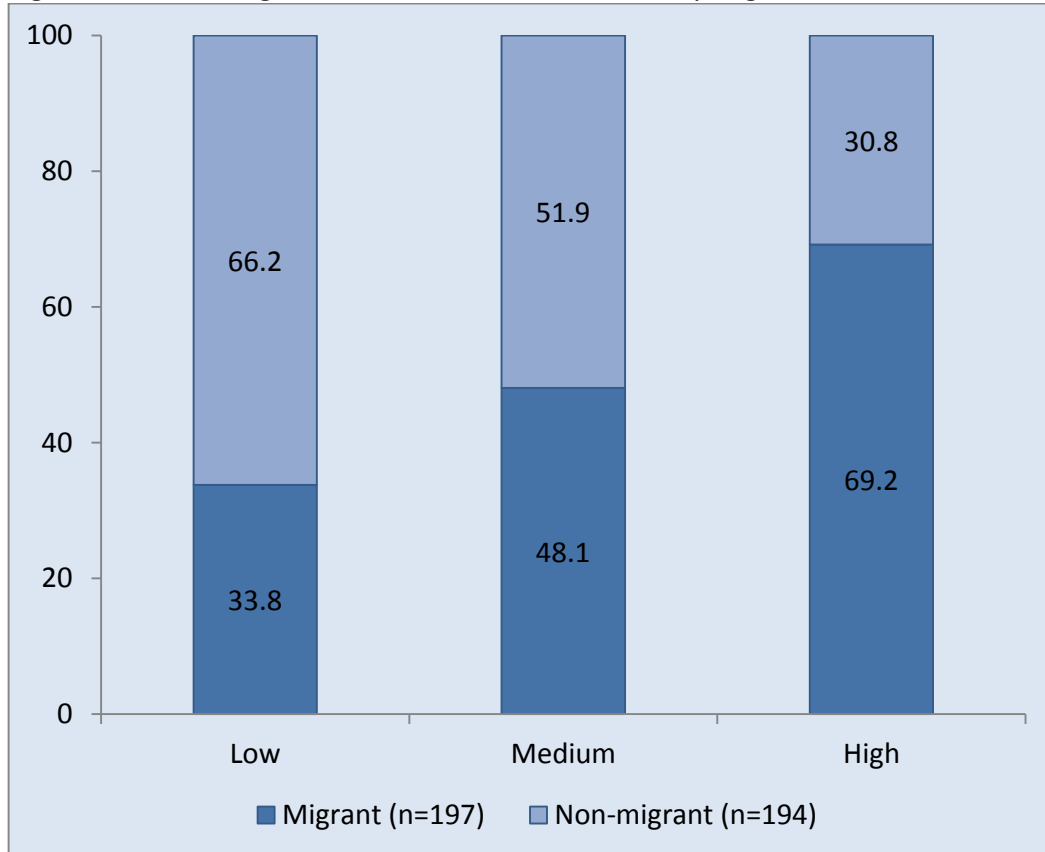
Figure 7.8: Percentage of households in MPCJ tertiles by primary source of income



Source: Primary household survey data, 2011-12

The effects of dependency on remittances as a primary source of income are reflected in the economically advantageous position of migrant vis-à-vis non-migrant households. Figure 7.9 presents the distribution of surveyed households in the MPCJ tertiles by migration status. As is apparent, the proportion of non-migrant households in the low-income category is almost double than for migrant households (34 percent and 66 percent respectively), and these percentages reverse in the high income tertile. Furthermore, comparing the migrants and non-migrant households along the axis of castes also suggests that migration status exerts a positive role on household income.

Figure 7.9: Percentage of households in MPCl tertiles by migration status<sup>84</sup>



Source: Primary household survey data, 2011-12

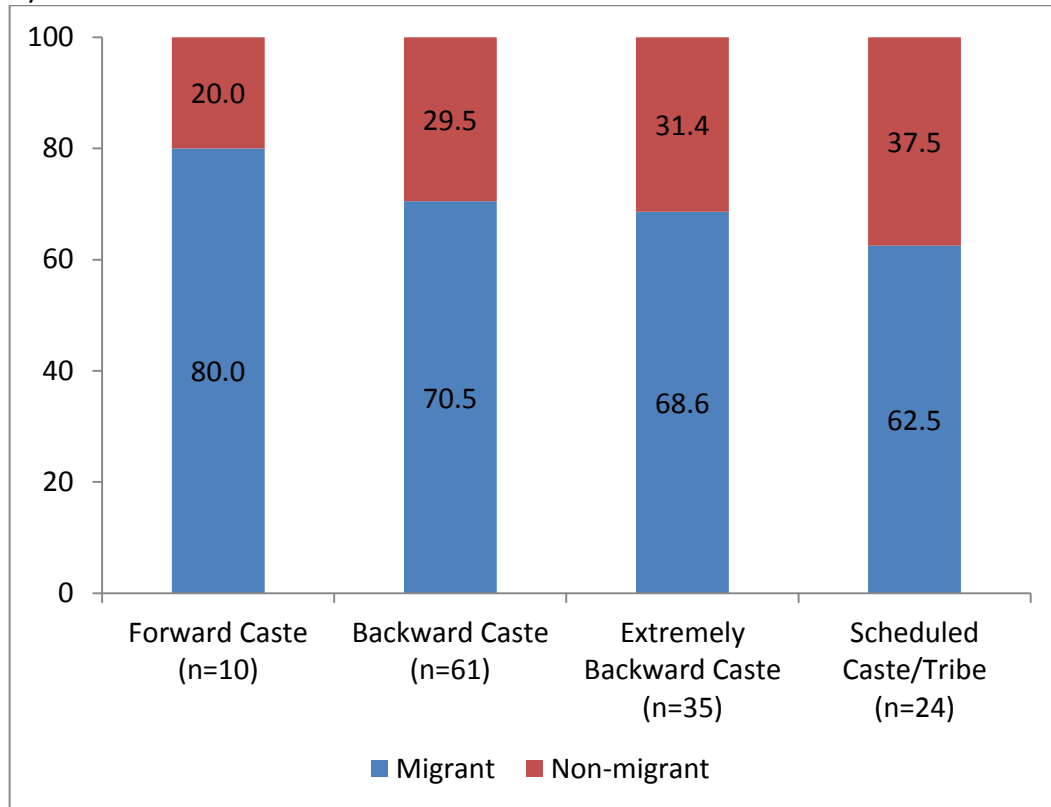
Figure 7.10 presents the households in the high MPCl tertile in each of the broad caste categories by their migration status. As is evident, households who had one or more migrant members fared better than non-migrant households across all the caste categories. It is important to note that the proportion of households in the high income tertile relative to the total sample in each of the caste category did not show much variation; 34 percent of total sample Forward Caste households (10 out of 29 households), 36 percent of Backward Caste households (61 out of 171 households), 31 percent of Extremely Backward Caste households (35 out of 112 households), and 30 percent of Scheduled Caste/Scheduled Tribe households (24 out of 80 households) were in the high MPCl tertile. In other words, the sample households in the high income tertiles were fairly equally spread across the different caste groups. Importantly, however, in each caste category a greater proportion of migrant households was in the high income category than non-

<sup>84</sup> The classification of migrant and non-migrant households in the MPCE tertiles also shows similar results.



migrant households, suggesting that migration exerted a positive role on household income.

Figure 7.10: Percentage of migrant and non-migrant households in high MPC I tertile by caste



Source: Primary household survey data, 2011-12.

Equally, while migrants came from all caste groups and there were no significant differences in the propensities to migrate, the extent to which migration benefited the households varied by caste. As shown in Figure 7.10, a larger proportion of migrant households in the high income tertile were from the Forward Castes, followed by Backward Castes, Extremely Backward Castes and Scheduled Castes/Scheduled Tribes. Although this caste structuring of income gains from migration is not entirely surprising, it is not easily explained by the survey data. For instance, data on the educational and occupational status of 280 migrants suggests almost no differences by caste; most migrants across the different castes had low levels of education and worked in the urban informal sector as unskilled workers. Notwithstanding the general precariousness of the urban occupations in which most migrants belonging to all castes were engaged, the combined proportion of migrants from the Extremely Backward Castes and Scheduled Castes/Scheduled

Tribes was slightly higher at the lower tail of the casual jobs categories (cleaning, sweeping, rickshaw pulling). (31 of the 47 migrants (65 percent) working in the very menial jobs, labelled as 'other casual labourers' in Table 7.4 below, were from these caste groups; the average incomes of these migrants were the lowest except for two agricultural workers.) Moreover, as noted earlier, by virtue of their weak social status, the Scheduled Castes/Scheduled Tribes and Extremely Backward Castes are more vulnerable to social and economic discrimination. At the same time, a relatively larger proportion of non-migrant Scheduled Castes/Scheduled Tribes and Extremely Backward Castes households were in the high income tertile compared to the Forward Castes and Backward Castes.

It is important to note the two-way interconnectedness between nonfarm livelihood pathways and migration. While the rural non-farm sector in Siwan remains underdeveloped, the potential of this sector to offer employment and income seemed to be connected, in part, to the flow of remittances into the district. This is unlike some other parts of India, such as Punjab, where agricultural growth provided the key stimulant to the growth and development of rural non-farm employment (for example, see Bhalla, 1993; Tripathy, 2009). In Siwan, the landholdings are small, and farm incomes constituted, on average, just 8 percent of the cash incomes of the non-migrant households and less than 2 percent for migrant households (Table 7.2).

While much of the outmigration from the district tends to take place within the national boundaries (albeit mostly outside the state), the outflow of labour migrants working in the Gulf countries is significant as well. In some areas such as Chandpali village in Ziradei Block (the birthplace of first president of independent India, Dr. Rajendra Prasad), almost every household has at least one member working abroad. In many villages across the district with a high incidence of international migration, having a member abroad has become a social status symbol; families who do not have any members in *bidesh*, a common metaphor used by the locals to refer to countries outside India (though in the local Bhojpuri folklore, the term is also used loosely to refer to far-off destinations within the country as well: Chapter 8), are often looked down upon within the village. International remittances flows are significant, and are growing, which is reflected in the proliferation of 'Western

Union Money Transfer' centers that could be spotted throughout the district. My conservative estimate is that there are about 100 to 150 such centers in Siwan. The post-office of Siwan, where the first Western Union center was set up, was ranked as one of the richest post-offices in Bihar for three-consecutive years of 2009, 2010 and 2011 receiving the highest number of international money orders in the state (Pandey, 2011).

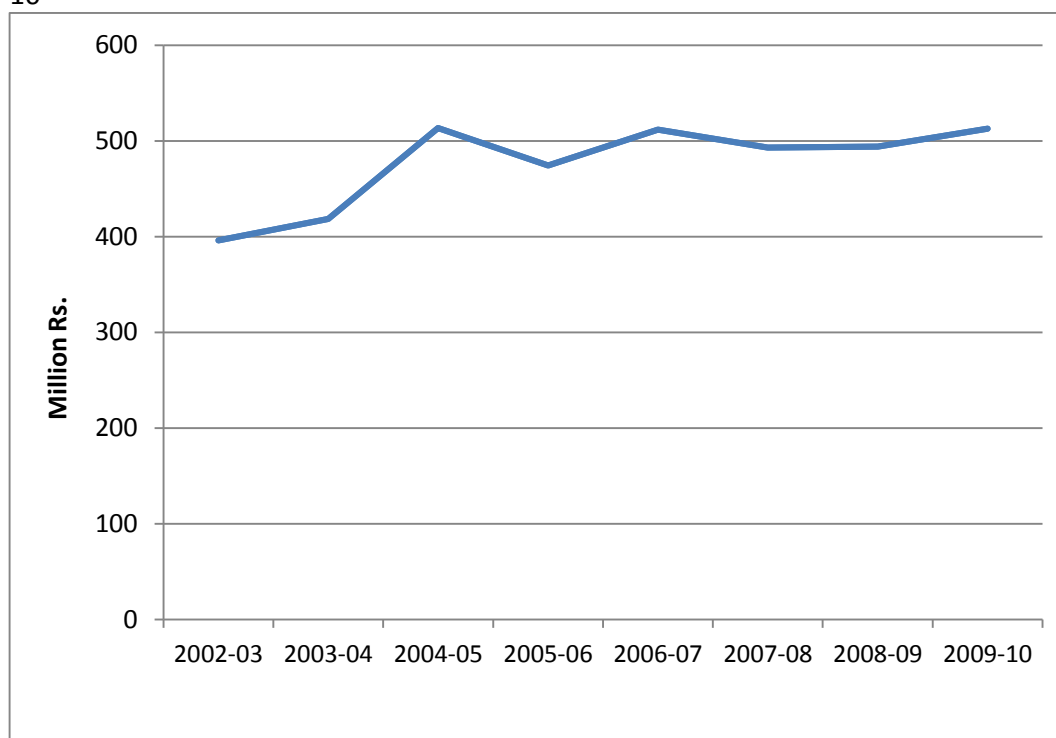
International remittances have had significantly positive impacts on living standards. In-depth personal histories of families with members abroad revealed that even though investment in migrants' moving often required families to sell assets, such as jewellery and land, a trip of three years allowed many households to quickly achieve upward economic mobility, and most households were able not only to reclaim the assets sold to finance migration but also to accumulate additional ones. Remittances have allowed many households to become petty entrepreneurs, engaged in a range of trading and service business. For instance, some of the District Blocks such as Hasanpura and Hussainganj in south Siwan where the incidence of international migration is high, have as large markets and as much trading activity, if not more, as the urban Siwan market. Many households with members abroad have invested in housing which has generated some employment in the rural construction sector. Given the focus of this study was on the mobility within the national borders and its effects on rural lives and livelihoods, I shall not dwell more into issue of international migration.

In any case, international migration however was not the option for all, and most poor households resorted to domestic migration. Given the high magnitude of these within-country flows, domestic remittances are perhaps several times more than international remittances. While remittances are playing an increasing diverse role in rural households' lives and livelihoods, their effects on the food security, the main concern of this research, are perhaps the most discernable. In the next section, I therefore discuss the role of remittances in influencing household food security.

## Remittances, rural-urban linkages and household food security

Figure 7.11 presents the district-level data on the amount of money paid by the Siwan postal office in money orders for the period from 2002-03 to 2009-10. Postal money orders have long been a popular mode of income transfer used by migrants from the Western Bihar region to remit their earnings and savings in the home villages (Yang, 1989, pp. 197-198). These figures pertain to internal transfers to the district post-office from different parts of India, and do not include transfers from overseas (which, as noted above, are significant too). While not all transfers are remittances, the share of non-remittance transfers would presumably be not very high. Indeed because of the significance of this mode of remittance, Bihar is often described as the “money-order economy” (Deshingkar et al., 2009), although increasing penetration of rural banking in Bihar coupled with growing financial literacy among the rural populations of the state in recent years has diminished their overall importance and thus they are used by a relatively small proportion of migrants.

Figure 7.11: Value of money orders paid by post offices in Siwan, 2002-03 to 2009-10



Source: Data obtained from the Head Post Office, Siwan, 2012

Trends in remittance flows in the district suggest that the amount of postal money orders paid by Siwan post-office has increased in absolute terms, from Rs. 396 million in 2002-03 to Rs. 512 million in 2009-10. This represents approximately two percent of the district's GDP for Siwan in 2009-10.<sup>85</sup> However, as noted above, postal money order services are now used by a relatively small proportion of households and thus this represents a tiny fraction of the overall remittance flows in the district.

The household survey data suggest that of the 280 migrants, 275 migrants from 192 households remitted money home in the past year; among those who sent money, only 12 percent (33 migrants) used the postal money orders as against 34 percent (95 migrants) who used banks to transfer their incomes. An even greater proportion of migrants (36 percent) remitted money home through their friends and fellow villagers (Table 7.3). This latter mode of remittances has always been, and continues to be, the most important means of remittances transfer among Siwani migrants, and indeed is one reason why the precise magnitude of remittances is hard to arrive at.

Table 7.3: Mode of remittance transfer used by the surveyed migrants

<b>Mode of remittance</b>	<b>Number of migrants who remitted money</b>	<b>% age of migrants who remitted money</b>
Friends/Relatives	101	36.1
Bank account transfers	95	33.9
Money orders	33	11.8
Self	29	10.4
Others	17	6.1
<b>Total migrants who remitted money<sup>1</sup></b>	<b>275</b>	<b>98.2</b>
<b>Total number of migrants (n)</b>	<b>280</b>	<b>100.0</b>

Source: Primary household survey data, 2011-12.

<sup>1</sup>Five of the 197 migrant households reported receiving no remittances from their members; all five households had only one migrant member working outside the village.

<sup>85</sup> The district GDP was arrived at by extrapolating Siwan's per capita GDP of Rs. 8111 for the year 2009-10 (at 2004-05 prices) (Government of Bihar, 2013, p. 21) over district's total population which in 2011 was 3.31 million (Registrar General of India, 2011c).

Nonetheless, if one were to combine the household survey data on the mode of remittances with the formal data on the postal money orders in the district, some guesstimates can be worked out. Thus, if the household survey figure of 12 percent percent of migrants who used postal money order services to remit money home were to be simply extrapolated on the total money order sum of Rs. 512 million in 2009-10, it suggests that the inflow of remittance in the district is nearly eight times as much. Seen another way, the remittances potentially equal nearly 15-16 percent of the district's GDP. While there are methodological issues in combining these two sources of data, my fieldwork reveals that the total magnitude of remittances is unlikely to be less (and quite likely to be more).

Within this large remittance flow, the magnitude of informal channels warrants consideration. In Bihar, several informal networks of money-transfer agents operate. Originating around the late 1970s when migration from Bihar was directed to the Green Revolution belt states of Punjab and Haryana, these informal networks filled the void created by the virtual absence of rural banking in Bihar at that time (though rural banking still remains quite patchy in many places in Bihar). These networks still operate, and deliver huge sums of money to migrants' families. Indeed, in one conversation with a person who was earlier part of one such network in Siwan, I was informed that three-years ago he was one of the 30 persons in Siwan district, each of whom distributed between Rs. two and three lakhs (US\$ 4000-6000) everyday as remittances sent by the migrants to their families.

Rural households' increased reliance on migration incomes notwithstanding, migrants' connections with origin still remain strong in Siwan. Most of the surveyed migrant households had members who worked in the informal sector where they earned low wages and lacked employment security. The precarious jobs in the informal sector prohibited, in large part, more permanent form of migration from the district (Breman, 1985, 1996, 2010), though various socio-cultural reasons, such as restrictions on the mobility of women, also coalesced with economic reasons to produce this form of migration. For example, when I asked a migrant respondent, who got married two years ago and spent eight to nine months away from the village, if it was financially feasible for him to take his wife along in the city and maintain his family, he replied:

Of course I am capable to take my wife in the city and start a life there. I do feel lonely after work and I miss my wife. But I would not ever take her there. I would rather like her to stay in the village. The culture in the city is not as good as the one we have in the village. In the village people have respect for each other, but in the city the conversations are filled with abuses. I do not want my wife to pick up on those bad things.

Not all migrants, however, were suitably placed to maintain their families at their place of work, and economic reasons often outweighed social and cultural considerations (Chapter 8). The low average wages earned from informal sector jobs coupled with increased urban unaffordability did not allow most migrants to bring their families to the cities, and settle there on more permanent basis (on this, also see Kundu, 2003). In turn the left-behind families in the rural hinterlands augmented circular mobility. To several migrants, the city provided a livelihood avenue but the village was where life belonged. It is important to note that even migrants who successfully trudged the stern demands of work life in urban areas, and were able to achieve upward economic mobility, showed a strong leaning towards the rural way of life. In an interview with Abdul (name changed), a migrant who worked his way up from the manual labourer in his first migration to an 'Assistant Manager' in an export garment factory in Panipat, Haryana (where I interviewed him) and who now had 30 persons working directly under his watch, he suggested: "No matter how much we suffer in the village, it is still better. I have my family and friends there... Sitting under the tree in the village is better than the air-conditioned office here."

While most migrants worked in low-paying jobs in the urban informal sector, migration nonetheless provided a crucial livelihood strategy to cope with employment deficits in the origin villages. Importantly, most migrants sent nearly half of their monthly income home. Even for the very poorest households, remittances as low as Rs. 1000 per month often helped them to stave off hunger and illness at the very least.

Table 7.4 presents the income earned and remittances sent by the migrants to their families by occupation. The migrant members of the surveyed households worked

across diverse casual and semi-casual occupational categories, except 12 migrants who held permanent government jobs (mainly in the army and police). This occupational diversity allowed the comparison of income and quantum of remittances by occupation. As noted in Chapter 5, all, except two migrants who were agricultural workers, worked in the urban areas. The urban construction sector provided the single largest occupational category, absorbing 40 percent of the surveyed migrants, followed by various forms of salaried employment in small and medium private firms (eg. export garment factories in National Capital Region) accounting for a quarter of all migrants, and a similar proportion worked as casual labourers (eg. watchman) and drivers.<sup>86</sup>

While the average monthly income of migrants working in casual and semi-casual jobs may appear to not vary much across occupations, ranging from Rs. 4000 (US\$ 80) for agricultural laborers to Rs. 6100 (US\$ 120) for drivers, they often made huge differences for the recipient households. The difference of Rs. 2000 often allowed the households to invest in land and agriculture (buy inputs, lease-in land etc.).

Table 7.4: Occupation, income and remittances of migrants

Occupation	Number of migrants (n=280)	Average monthly income (In Rs.)	Average remittances per month (In Rs.)	%age of monthly income remitted
Government employee	12	14750	7292	49
Salaried employment in private firm <sup>1</sup>	71	5528	2688	49
Self-employed in petty business	14	4964	2263	46
Construction worker	114	5925	2546	43
Driver	20	6100	3254	53
Other causal labourer	47	4715	2169	46
Agricultural labourer	2	4000	625	16

Source: Primary household survey data, 2011-12

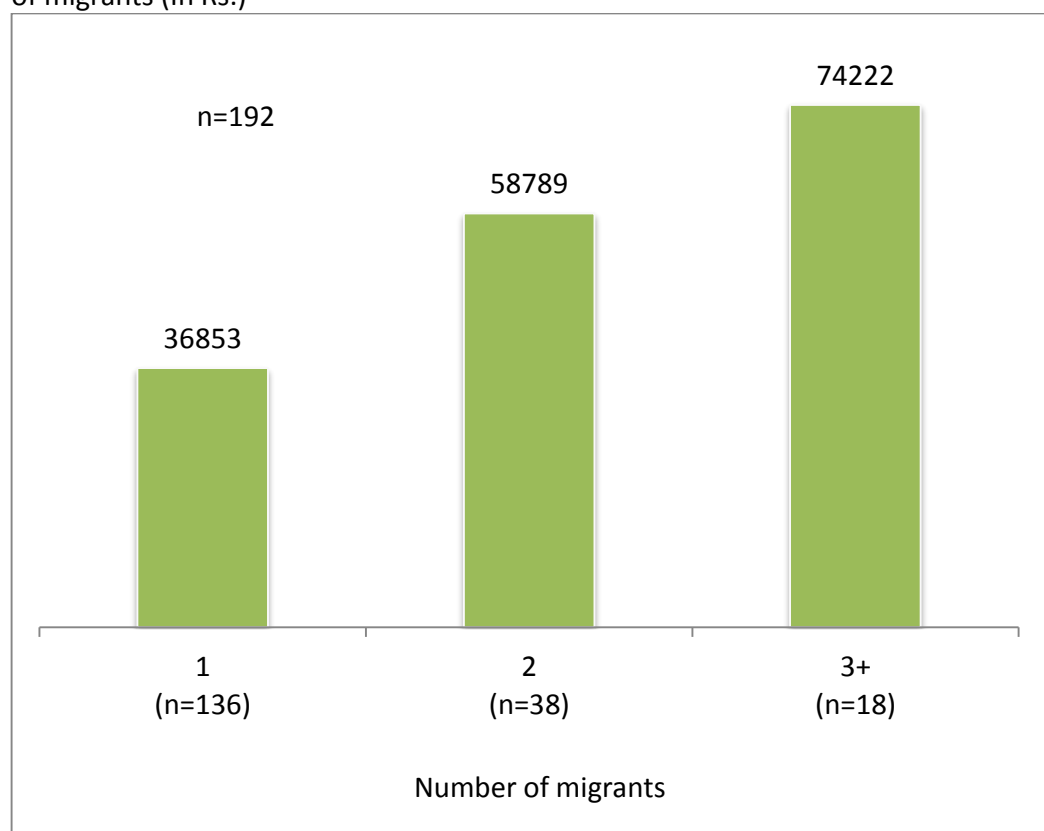
<sup>1</sup>Salaried employment in a private firm were those with fixed monthly income and fixed over-time rates, though they lack the tenure security.

<sup>86</sup> In addition to agricultural labourers, construction workers and drivers who are also casual workers in many respects, sample migrants were found to be performing a number of other causal jobs such as sweeping and cleaning, night watchmen in an urban society etc. Since they were widely spread across occupations, they have been grouped into this single category for analytical purpose.



Importantly, most of the migrants remitted nearly half the share of their income home. It must be added that migrants' incomes were reported by their households in rural areas, and thus it is likely that they represent an underestimation of the total earnings of the migrants as well as the remittances. Indeed in the 10 interviews with migrants at the destination (and many more at the origin), all of them reported incomes which were between 1.5 to 2 times more than what was reported by their rural counterparts. Given most were single-minded about earning and saving more money, many of them often worked overtime and made extra incomes; the pressures to save and send money home also meant that many cut down on their own expenditure even on the most basic needs such as food. Most migrants also brought little hoards of cash when they came home. Another point that deserves a mention is that these are income and remittances by individual migrants but many households had more than one migrant member and thus the collective remittances for such households were significantly higher.

Figure 7.12: Average annual remittance income of migrant households by number of migrants (In Rs.)



Source: Primary household survey data, 2011-12

This is reflected in Figure 7.12. While most of the surveyed migrant households had one member working outside, the average annual income of migrant households from remittances increases in a progressive fashion with the number of migrants in the household. Households with two migrant members received an average amount of Rs. 58,789 which was nearly 40 percent more than the remittances received by households with one migrant member, while remittances received by households with 3 or more migrants was more than double as that of one-migrant households.

The extent of remittances also varied by duration spent working outside the village. Figure 7.13 presents the mean annual remittances received by migrant households by the number of months spent outside the village during the year preceding the survey (between April 2011-March 2012) per migrant member. While most (90 percent) of the remittance-receiving migrant households had members who spent more than half of the year at their destinations, with 70 percent (135 out of 192) among them having members who spent 10 months or more in the destinations, the remaining 10 percent of households with shorter migration durations of 2 to 6 months had invariably lower remittance incomes. Indeed the average yearly remittances received by these households were almost three times less than those who spent more than 6 months away.<sup>87</sup>

This is not surprising as migrants who worked for longer durations outside the village were inevitably better-positioned to remit more. When the data on remittances by number of migrants and duration spent outside the village is viewed in conjunction with each other, this implies that having more migrants in the household does not necessarily mean higher remittance incomes. Other things being equal, the household with three migrant members with each spending two months outside the village would fare worse than the household with one migrant member who spent seven months or more.

While most migrants spent the major part of the year outside the village for work, as the data suggest, my interviews with migrants revealed that many also made

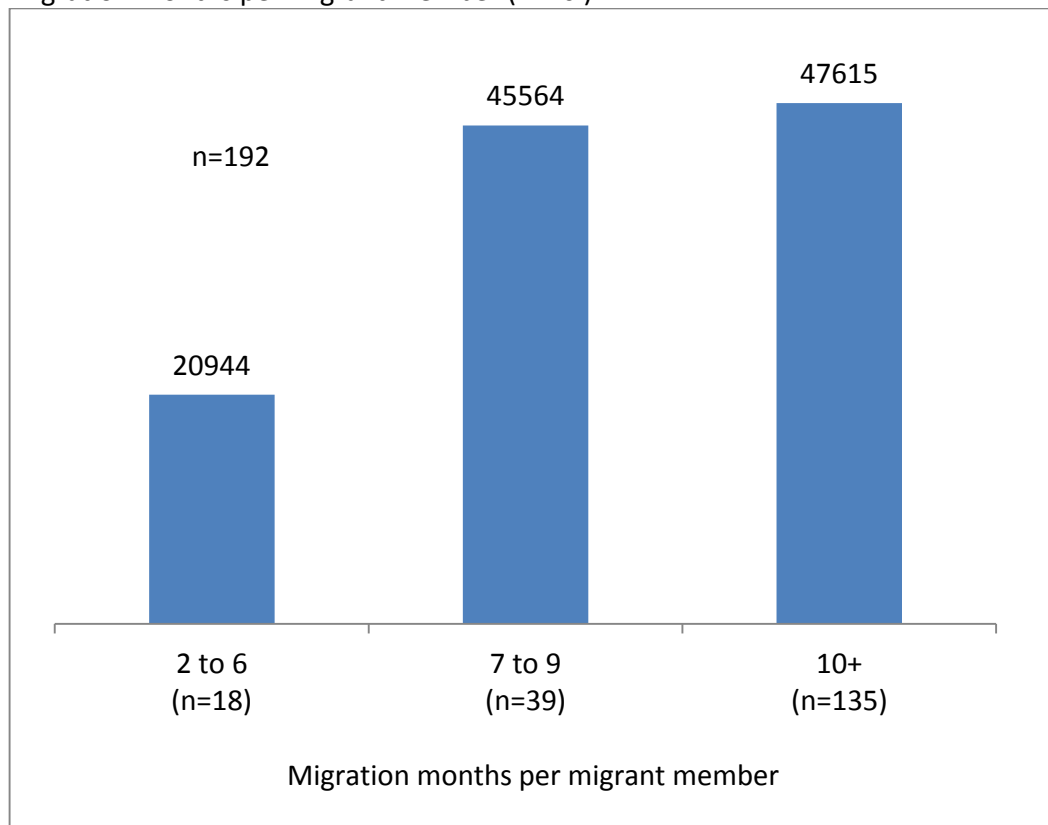
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<sup>87</sup> The differences between the households with migration months of 7 to 9 months and 10 months or more are very small, because in the former 28 out of 38 households had per capita migrant duration of 9 months whereas in the latter the distribution was more concentrated (102 households) in 10 and 11 months.

needs-based, short trips to the cities. For example, a migrant I interviewed at a construction work site in Noida who reported that his length of stay outside the village never exceeded more than 5 months in a year in the 7 years since he first migrated, told me:

I work here for as long as required. If I feel I have earned enough to get my family by for the whole year, I go back to my village. Why stay away from the family when one can be with them. I come back again here when I need money. And this goes on.

Figure 7.13: Average annual remittances received by the household by number of migration months per migrant member (In Rs.)



Source: Primary household survey data, 2011-12

Indeed, despite the higher average returns of longer-duration migration, some of the very poorest migrants spent considerably less time in the cities. For the remainder of the period, they often worked as wage labourers in village agriculture during harvesting for in-kind wages of a few kilos of the crop they helped harvest, and picked up other odd jobs, such as construction, outside peak farm seasons. This kept them in poverty however. Importantly, the generally unpredictable availability

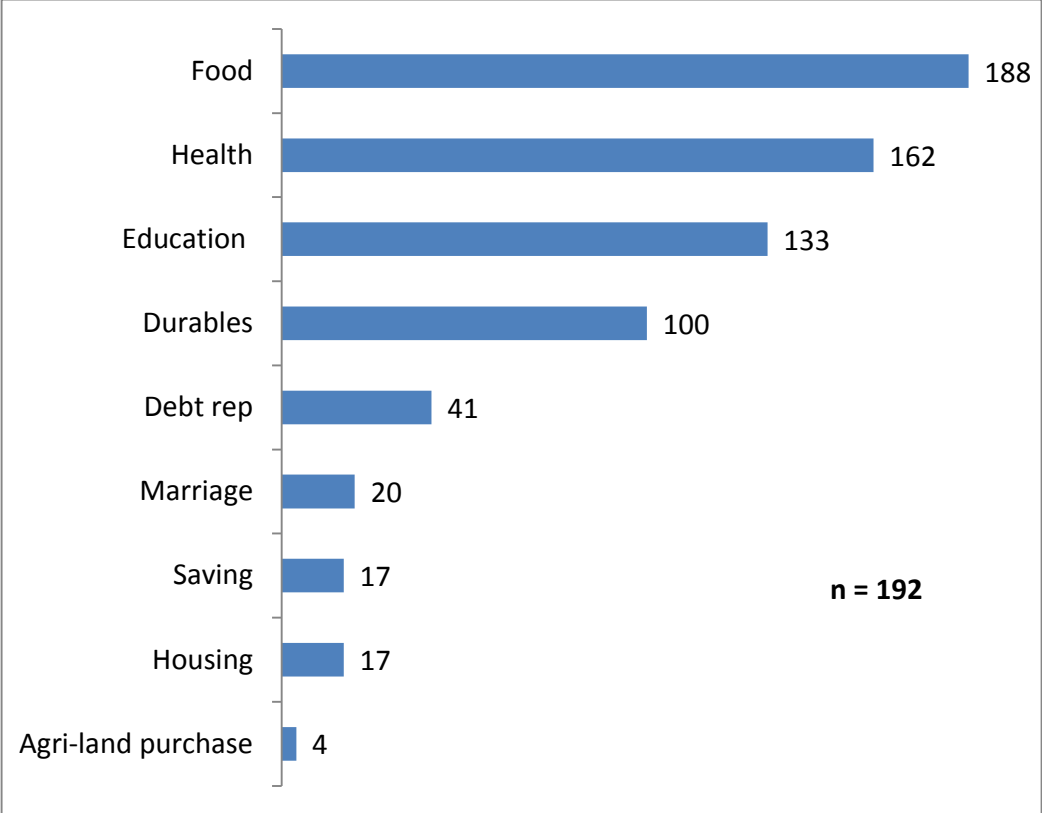
of local employment and poor wages meant that the remittances still accounted for more than half of the total income of many households, even though absolute incomes were low. The survey data suggest that of the 18 households with per capita migration months between 2 and 6 months, the share of remittance in total household income was 50 percent or higher for 11 households.

These differences in remittances notwithstanding, almost all migrant households received remittances from their members. The survey data suggest that of the 197 migrant households, 192 households reported receiving remittances in the past year. The migrants' earnings were used by the recipient households to meet various short-term and long-term goals. It is important to note that, although the uses of remittances varied markedly from one household to another, depending upon the needs and background circumstances of households and the amount of money received, most households reported utilising the money on basic livelihood needs of food, health and education. Out of the 192 households, almost all (188 households) used remittances on food, 85 percent (162 household) spent remittances to finance health care expenses, and two-thirds (133 households) spent on education of household members, mainly children. A break-down of the households by income level suggests that a large proportion of resource poor household tended to spend remittances on these basic heads. (There were 41 migrant households in the poorest MPCl tertile, of which 98 percent of households spent on food, 71 percent on health care, and 66 percent on children's education.) This allowed them not only to stave off the exigencies of starvation and ill-health but also to invest in future livelihood assets (eg. children's education). According to the survey data, migrant households spent more on children's education than non-migrant households. The average annual expenses on the education of children aged between 6 and 18 years among migrant and non-migrant household was Rs. 1570 and Rs. 907, respectively. The other uses of remittances included, buying durables such as kitchen utensils, radio, bicycles, spending on marriage and other ceremonies (eg. funerals, religious functions), renovating and/or building houses, saving money for the future and buying agricultural land (Figure 7.14).

As noted earlier, nearly 98 percent of the remittance-receiving households used the money on food. Indeed remittances provided the most crucial means of food

security for households across socio-economic categories. While the poorest households without any land or financial assets spent a larger share of their cash receipts on food (indeed, food insecurity was one of the key drivers of migration among these households) compared to relatively better-off households, the latter also spent part of the remittances on food, often to improve their diets such as eating meat or fish more often in a week. Migration income-induced changes in diets were also often guided more by taste than the nutritional considerations

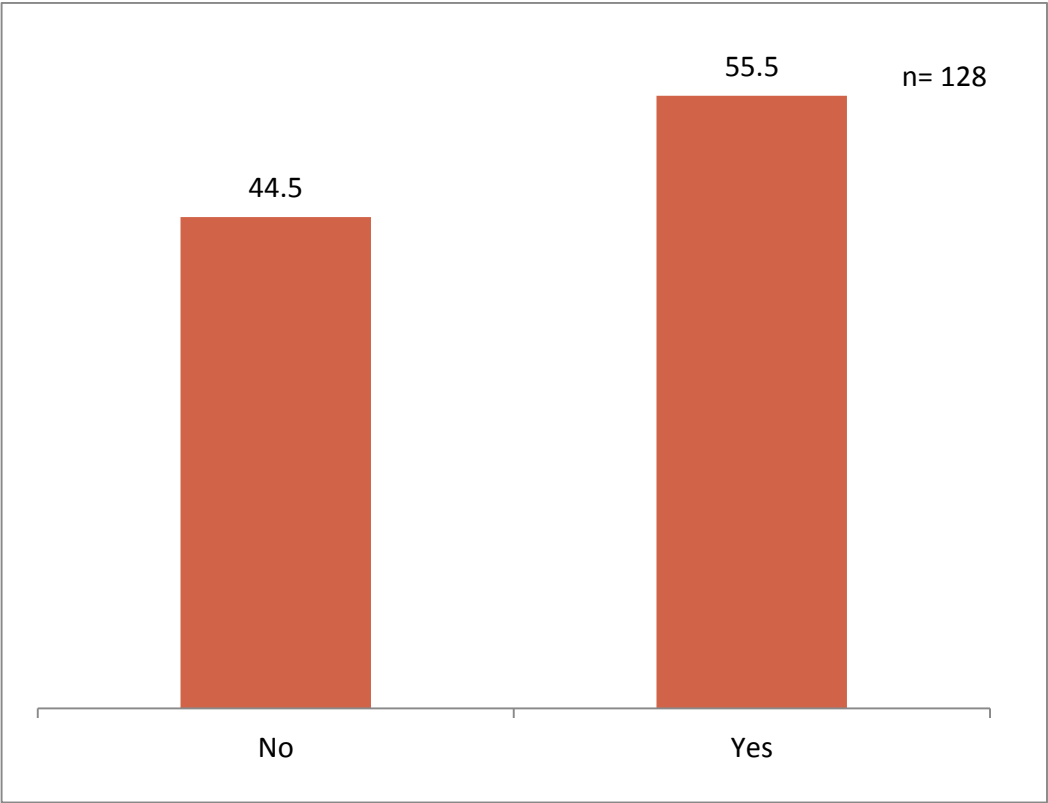
Figure 7.14: Uses of remittances among the migrant households



Source: Primary household survey data, 2011-12

Additionally, migrants’ income also allowed many of the households to invest money in land and agriculture. Seen this way, the relationship between migration and land and agriculture was a two-way one – land poverty and lack of adequate farm incomes provided a crucial prompt for migration and migrants’ earnings were recycled into own-account agriculture. Indeed, in many cases, migrants’ remittances were crucial for the maintaining and sustaining the little parcels that surveyed households owned. In cases where remittances were significant, they also allowed households to buy and accumulate more land and derive better gains from farm work.

Figure 7.15: Percentage of migrant households with land who reported investing remittances to boost agriculture production



Source: Primary household survey data, 2011-12

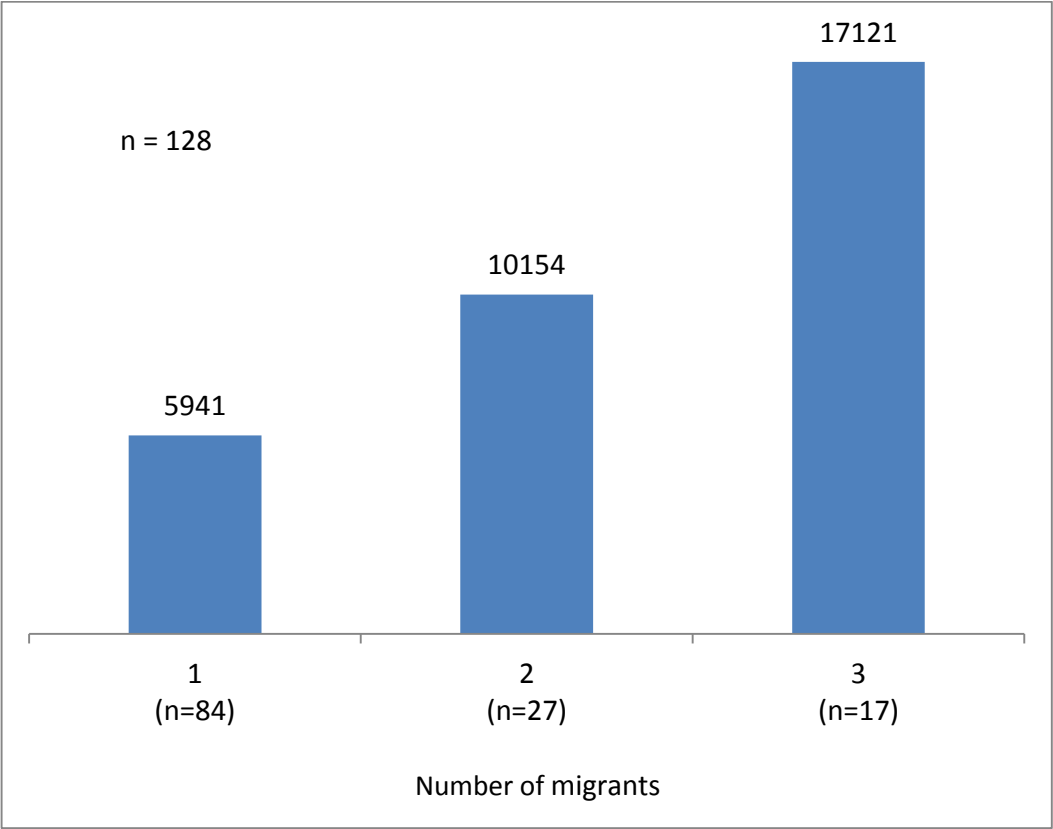
Figure 7.15 presents the surveyed migrant households with land who reported investing part of their remittances on own-account agriculture to boost farm production. Out of the total 128 migrant households who owned some land and received remittances, more than half (56 percent) households reported that they invested money to boost household agriculture.<sup>88</sup> However, because of the small landholdings, the investments were also very small. Most households spent money to buy agricultural inputs such as seeds, fertilisers and pesticides, and to pay the rents for hiring water pumps for irrigation for the paddy crop in times when monsoon was weak and bleak; remittances were also used by some households, often the very poor, to lease in land for sharecropping farming (see below). Some of the migrant households with no young males to tend household agriculture also reported hiring labour, though such cases were very few. With the men now spending more time working outside the village, the women participated in

<sup>88</sup> Out of the sample of 197 migrant households, 192 reported receiving remittances and 132 owned land. Four of the 132 migrant households with land did not receive any remittances, hence this question applied to 128 households.

household farm work much more actively (Chapter 8). While these investments did not necessarily make all the households completely food secure, they nonetheless improved their own-provisioning of food.

Though landholding patterns did not vary significantly by the migration status of the households, higher incomes among migrant households enhanced their investment capabilities. The average annual investment in own-agriculture reported by the migrant and non-migrant households with land was Rs. 8454 and Rs. 7615, respectively. However, within migrant households the investment capacities differed by the number of migrants in the household; the households with more migrants had higher average incomes and this was reflected in the amount of money allocated to agriculture.

Figure 7.16: Average annual investment in agriculture among migrant households with land by number of migrants (In Rs.)



Source: Primary household survey data, 2011-12

As the data in the Figure 7.16 shows, households that had three or more members working outside the village, while constituting a very small proportion of the migrant sample, invested, on average, three-times as much as the household with

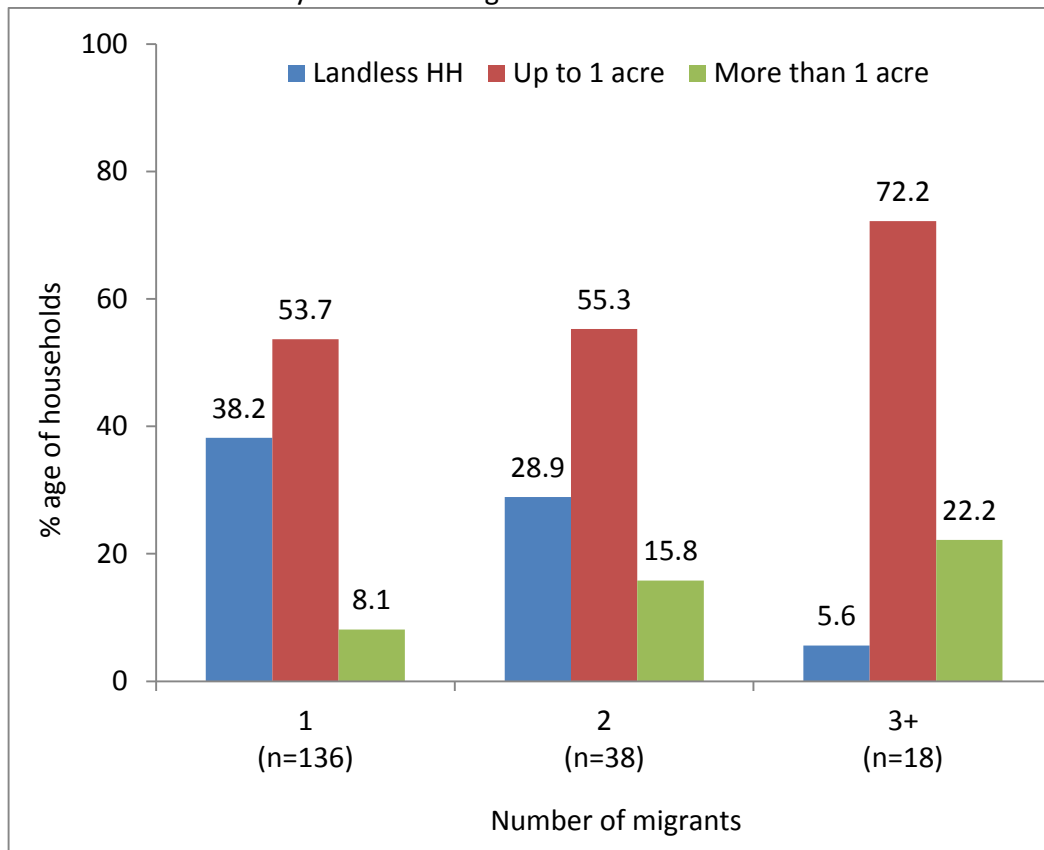
one migrant. Indeed this in turn was positively associated with household food security outcomes – households with three migrant members and more agricultural investment invariably had a low incidence of food insecurity (see below).

In addition to the role of urban incomes in allowing households to maintain their land parcels in the origin villages, remittances also enabled some households to (marginally) increase the size of their landholdings. The cross-sectional nature of the survey presents a caveat to the quantitative assessment of the consolidation of landholding. However, the personal histories of rural households and their migrant members provide strong evidence in this regard. At the same time, although urban incomes were higher than rural earnings, enabling some households' to save, these savings were small, and as a result, it took painfully long for the household to enhance the size of their landholdings. For instance, Raghuram Sah (name changed), a 45-year old migrant from the Scheduled Tribe who was working in Faridabad when I interviewed him, told me that after two-decades of recurring work trips outside the village, he had been able to buy two-acres of land. The data presented in Figure 7.14 above on the uses of remittances shows that only four households reported buying agricultural land. However, the survey recorded the households' utilisation of remittances in the past year (April 2011-March 2012) which means that land bought by the households before the survey reference period, when the savings so allowed, was not recorded and thus, the number of households who made land purchases through savings from migration income will likely be higher than four households.

A great degree of differentiation in savings existed within migrant households. In particular, households with two or more members working outside the village were able to save more and quicker than those with only one migrant member. Furthermore the information on the landholding status of remittance-receiving migrant households suggests that the former had a relatively lower incidence of landlessness and bigger landholdings than the latter. The data in Figure 7.17 suggest that, with the increase in the number of migrants the percentage of landless households declines, whereas the percentage of households with less than an acre and an acre and above increases.



Figure 7.17: Size of agricultural landholding among migrant households who received remittances by number of migrant members



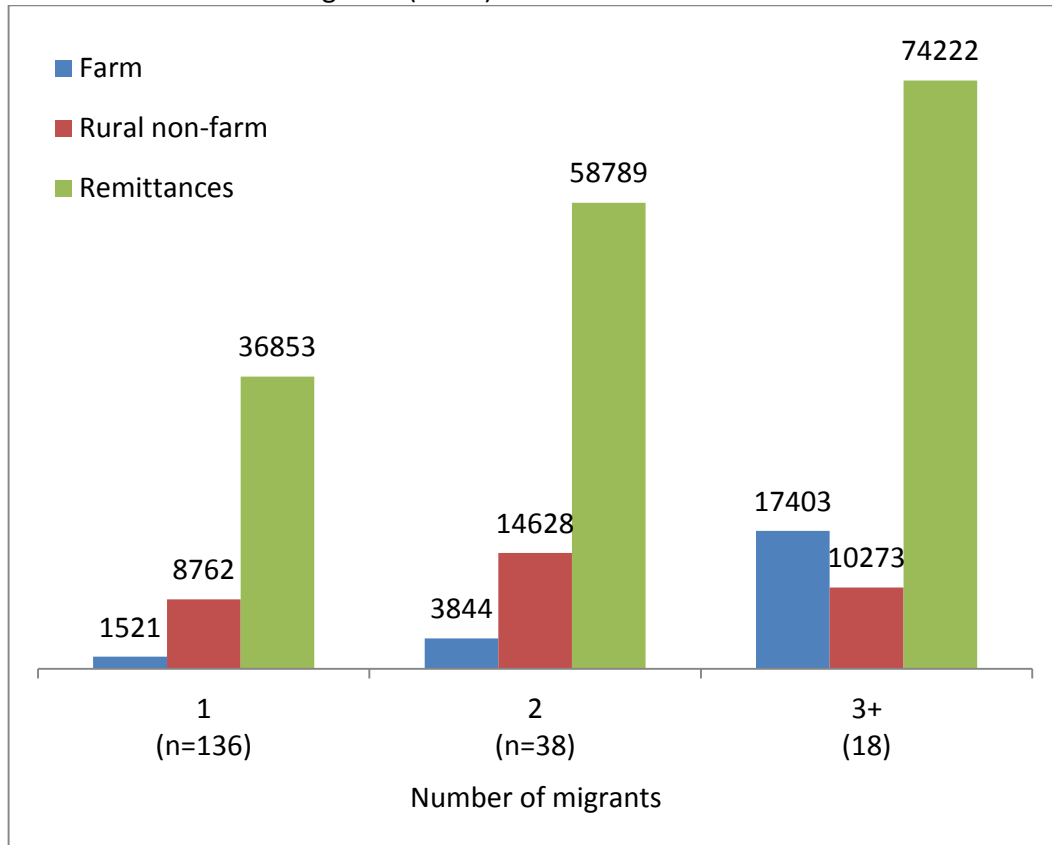
Source: Primary household survey data, 2011-12

Given the cross-sectional nature of the survey, it is, of course, not methodologically feasible to attribute these differences in landholding status as arising from savings from urban incomes over the period. At the same time, this relationship – households with more migrants having relatively better land status – is hardly surprising. Evidence from other parts of India also suggests that the poor migrants often invest the money to save and consolidate their existing landholdings. In his study in South Gujarat, for instance, Breman (1985) found that migration incomes were indispensable for small-cultivator households to prevent them from sliding down into landlessness. Breman (1985, p. xvii) notes:

The income earned outside during their temporary absence from home becomes indispensable for the consolidation of the small peasant holdings which have reached the level of semi-proletarianization; while the departure itself, either temporary or permanent, quite frequently helps to

mask the transition to a completely landless existence among those already vulnerable.

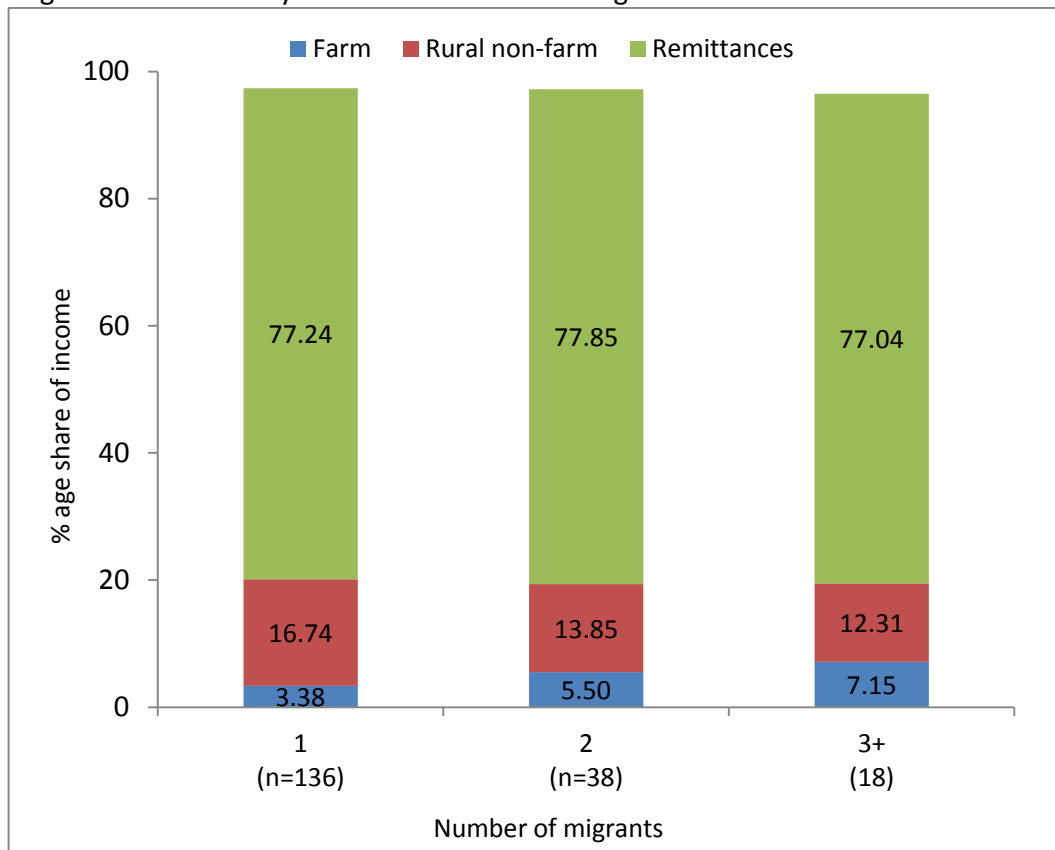
Figure 7.18: Average annual income of remittance-receiving migrant households by source and number of migrants (In Rs.)



Source: Primary household survey data, 2011-12

In Siwan, households with higher urban incomes did not stop pursuing farming; on the contrary, the survey data suggest that the higher urban incomes were associated with their increasing cash incomes from agriculture. This is clearly reflected in the data in Figure 7.18 that shows the average annual incomes of remittance-receiving households from income source and the number of migrant members. Indeed, given the generally smaller landholdings across the survey sample, much of the investment in land and agriculture was for households' own consumption. However, households who were favourably positioned in terms of number of migrants were also able to derive higher incomes from own-account agriculture. The data in Figure 7.18 suggest that while the amount of remittances increases with the number of migrant members, the farm income also increases.

Figure 7.19: Average annual percentage share of income of remittance-receiving migrant households by source and number of migrants



Source: Primary household survey data, 2011-12

Importantly, while farm income was twice as much among households with two migrants as compared to households with one migrant, the households with three or more migrants had significantly higher agriculture incomes. It is also important to note that while the categorisation of farm incomes included income from off-farm labour, no household with 3+ migrants engaged into manual agricultural labour and thus its share in the total farm income was zero for these households. In other words, all the farm income came from selling the agricultural produce grown on the land owned by the households. Another important dynamic that emerges from these data is that the degree of dependence on rural nonfarm incomes also decreased slightly among the households with three or more migrants, both in absolute and proportional terms (Figure 7.18 and Figure 7.19). Thus, higher remittances did not result into households' withdrawing from land and farm-based livelihoods; contrarily they allowed households to engage with agriculture much more actively and derive better income gains. This is an important finding. It points to the fact that the dynamics of rural livelihoods often involve these backward-

forward linkages between farm and nonfarm sector and they need to be understood much more holistically than the “deagrarianisation” thesis allows.

The effects of remittances played out quite differently on the food security of the households, depending on the total amount of money received, size of land owned (and acquired), and money invested in land and agriculture. However, in general, remittances improved the purchasing power of the households which in turn was associated with better household food security.

Table 7.5: Household food security by migration status

	Migrant HHs (%)	Non- migrant HHs (%)
<b><i>Food was not enough (defined by the following situations)</i></b>		
Household ate meals without vegetables	41.1	53.8
Household could only afford to consume food from PDS	36.6	39.4
Household members consumed single meal a day	13.7	21.0
If all three main food categories (cereals, pulses, vegetables) were not available	41.6	53.3
If household members got less food than the amount to satiate hunger	35.5	44.6
<b><i>Food was not available (defined by the following situations)</i></b>		
Household borrowed money from friends and/or relatives to buy food	15.2	24.6
Household borrowed money from local traders, money lenders or lifted ration on credit	28.9	33.3
Household sold jewellery or other personal assets to buy food	0.5	2.6
Consumption rationing (members ate less food than usual)	39.6	51.8
<b>Total number of households (n)</b>	<b>197</b>	<b>195</b>

Source: Primary household survey data, 2011-12

Table 7.5 compares the migrant and non-migrant households on the self-reported parameters of food security. As noted in Chapter 6, the surveyed households were asked a series of questions to assess if at any time during the year preceding the survey (April 2011-March 2012) they experienced food insecurity and food shortages. The data in Table 7.5 refers to the percentage of households who reported having experienced food inadequacy and food unavailability at least once in the survey reference period. As the data suggest, on most food security indicators

the proportion of non-migrant households is nearly 10 percent higher than the migrant households.

Food security also varied by landholding status of the household: a greater proportion of landless households reported having faced food insecurity as compared to households with some land. And within the landed category, the incidence of food insecurity differed by land size. Land provided an important source of own-provisioning of food security as households with more land were better able to avoid the food shortages. However, the positive effects of landholding on food security were much more evident among migrant than the non-migrant households.

Table 7.6 shows the household food security by migration status across the different landholding categories. It is apparent that land ownership generally exerts a positive role on household food security, with the proportion of households declining on all parameters of food insecurity as we move from landless households to the ones with more than an acre of agricultural land. At the same time, migrant households fared better than their non-migrant counterparts across all the landholding categories. Thus no migrant households with land size of one acre or more reported consuming 'single meal a day' and having to 'borrow money to buy food' whereas the proportion of non-migrant households for the same land size group was 11 percent and 18 percent respectively.

Through the household survey, information was also collected on the composition of diets to assess whether migration correlated with dietary diversity. My survey results and field observations revealed that diets of household across all socio-economic strata lacked the requisite diversity, and that non-economic factors, such as cultural habits around food consumption, determined what food is to be eaten. But given that migrant households had higher incomes, it provided them an edge over non-migrant households.

Table 7.6: Household food security by migration status across the different landholding categories

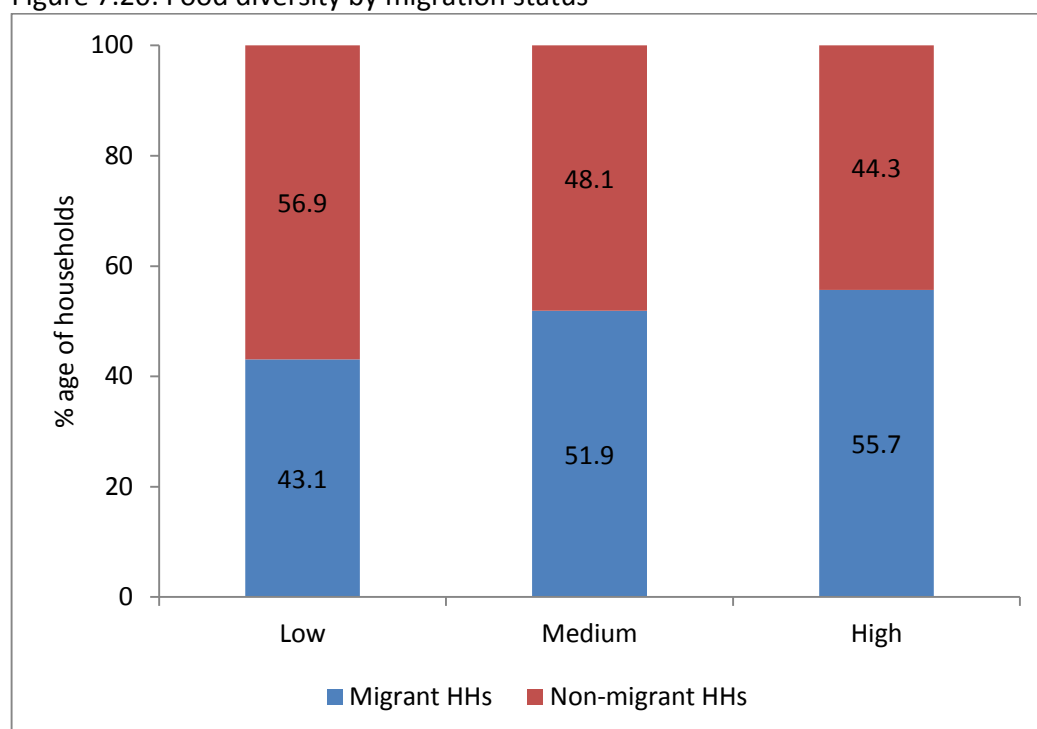
	Landless HHs (%age)		Upto 1 acre (%age)		More than 1 acre (%age)	
	Migrant	Non-migrant	Migrant	Non-migrant	Migrant	Non-migrant
<b><i>Food was not enough (defined by the following situations)</i></b>						
Household ate meals without vegetables	64.6	72.6	33.6	48.7	9.1	22.2
Household could only afford to consume food from PDS <sup>1</sup>	26.2	35.5	10.0	17.4	9.1	5.6
Household members consumed single meal a day	13.8	25.8	16.4	20.0	0.0	11.1
If all three main food categories (cereals, pulses, vegetables) were not available	61.5	71.0	35.5	48.7	13.6	22.2
If household members got less food than the amount to satiate hunger	47.7	59.7	33.6	40.9	9.1	16.7
<b><i>Food was not available (defined by the following situations)</i></b>						
Household borrowed money from friends and/or relatives to buy food	18.5	22.6	16.4	27.0	0.0	16.7
Household borrowed money from local traders, money lenders or lifted ration on credit	44.6	53.2	22.7	26.1	13.6	11.1
Household sold jewellery or other personal assets to buy food	1.5	3.2	0.0	2.6	0.0	0.0
Consumption rationing (members ate less food than usual)	58.5	72.7	33.6	45.2	0.0	0.0
<b>Total number of households (n)</b>	<b>65</b>	<b>62</b>	<b>110</b>	<b>115</b>	<b>22</b>	<b>18</b>

Source: Primary household survey data, 2011-12

<sup>1</sup>A total number of 115 migrant households (32 in landless category, 68 with land size upto one acre and 15 with land size of more than an acre) and 86 non-migrant households (19 in landless category, 56 with land size upto one acre and 11 with land size of more than an acre) had either APL card or no ration card.

Using a Principal Component Analysis of 30 food items that households consumed during the week before the survey, Figure 7.20 ranks the migrant and non-migrant households on the food diversity tertiles. These food items comprised the diverse food groups such as cereals, pulses and legumes, vegetables and fruits, meat and fish (Appendix 6). Comparison of households by migration status on this measure also suggests that proportion of migrant HHs increases from low to high food diversity whereas the opposite is the case for non-migrant HHs.

Figure 7.20: Food diversity by migration status



Source: Primary household survey data, 2011-12

### Migration, changing agrarian relations and household food security

Another important dimension of the relationship between migration and food security that deserves attention is the system of sharecropping farming in Siwan. The land and agrarian relations in the district (and indeed in Bihar as a whole) have traditionally involved a widespread prevalence of various forms of land-leasing and tenancy contracts, and the system of sharecropping, known locally as “Bataidari”, is one of the most common forms. Traditionally, sharecropping arrangements have involved landless and land-poor households from the lower castes leasing in land for cultivating purpose from the landowning communities, usually the upper caste Hindus belonging to Brahmins, Bhumihars, and Kshatriyas. In return for the right to

cultivate land, sharecropper farmers pay a certain percentage of the total crop produce to the landowners as rent, though cash as a form of rent is also practised in many places, and is becoming increasingly popular. The input costs of production, including labour, are borne by the cultivating farmers and the ratio of crop shared with the landlords typically amounts to 50 percent of the total produce. Because much of the sharecropping happens on an informal basis, there are no data sources or studies that provide systematic estimates on the incidence of sharecropping. However the report of the Bihar Land Reform Commission 2006-08 estimated that nearly 35 percent of all cultivable land in Bihar is under sharecropping, and 15 to 20 percent of all cultivating peasants are engaged in Bataidari (Bandyopadhyay, 2008, 2009). The household survey data collected from Siwan for this study suggest an even higher incidence: of the 302 households who reported having been engaged in farming in 2011-12, nearly half of them (48.3 percent) had leased in part or whole of their land for cultivating (there were 37 landless households who had leased in all of the land cultivated). The ubiquity of sharecropping in Siwan suggests that it holds crucial significance in the livelihood and food security of the many rural households. How the dynamics of sharecropping arrangements play out to influence the food security outcomes of rural households, and how migration correlates with these rural production relations, are the key questions explored in this section.

At the outset it is important to note that patterns of landholding and sharecropping arrangements have had a regressive impact on the agricultural growth in Siwan and Bihar, and indeed on the overall economic performance of the state. In 2012-13 agriculture sector still accounted for nearly a quarter of the GDP of Bihar (Government of Bihar, 2014b). Under the present system neither the cultivating farmers nor the landlords have an incentive to improve the productive capacity of the land. Bihar's agriculture sector is marked by a notable absence of innovation, and, despite the natural endowments of high soil fertility and abundance of water resources, the land productivity in the state remains among the lowest in the country (Government of India, 2008, pp. 18-19; Joshi et al., 2012). Additionally, in Bihar land is not just an economic asset but also a symbol of power and status, and sharecropping has often been used by the upper caste landowning communities as a means to maintain and assert their dominance without necessarily engaging in



primary production. In various pockets of the state, sharecropping arrangements have been highly exploitative, with landlords often placing extortionate rent demands on poor peasants, with little or no regard to the land and crop rights of tillers. These issues were appropriately raised by the Bihar Land Reform Commission 2006-08. Headed by D Bandopadhaya (a retired civil servant who is credited with successful land reforms in the state of West Bengal), the Commission recommended wide-ranging reform measures. Important among them were recognising and protecting the land rights of sharecroppers, which, in the Commission's view, will bring about wider efficiency gains in the sector, with overall positive impacts for the living standards in the state. However powerful lobbying by the landowning communities against the reforms means that Commission's recommendations have not been implemented (Bandyopadhyay, 2008, 2009). This issue remains significant in the politics of contemporary Bihar.

The potential of sharecropping reforms to improve the operational efficiency of agricultural economy notwithstanding, it is important to understand how these arrangements are inserted into the life worlds of the poor households. It is certainly the case that the existing arrangements need reform in order to provide the sharecropping families with adequate land rights and improve their bargaining position. At the same time, the lack of adequate livelihood options and the absence of effectively functioning safety nets, such as the PDS (Chapter 6), in the state makes it an obvious choice for many of landless and land-poor households. Although sharecropping arrangements largely favour the landlords, the fact that they have continued unabated is also because they offer the poor access to scarce land resources.

My fieldwork in Siwan suggests that by allowing access to land, unprotected and vulnerable as it may be, sharecropping plays an important supplementary role in the food security of poor households, particularly those belonging to the socially and economically marginalised caste groups. Furthermore, although the cross-sectional nature of the household survey data does not allow me to quantitatively assess changes in the incidence of sharecropping in Siwan over the period, numerous interviews with households belonging to different socio-economic strata and village-level observations suggests intensification of sharecropping arrangements across all

the 10 case study villages. Evidence from other parts of Bihar also suggests a similar situation (Sharma, 2005).

The growing importance of sharecropping within the local livelihoods systems is primarily due to two mutually interlinked processes of increasing land fragmentation and migration: firstly, the progressive reductions of landholdings over the period has provided an impetus for an increasing number of rural households to migrate out of villages to earn cash income; secondly, at the same time, in many instances higher urban incomes are leading to households withdrawing themselves from direct farming. However there are important caste dynamics to sharecropping. Because of the overall high incidence of land poverty in the survey sample, my survey data do not adequately capture the caste basis of sharecropping relations as they also involve the land lease-in and lease out transactions outside the survey sample.<sup>89</sup> However, my observations and qualitative interviews (key informant interviews, interviews with households with large landholdings outside the sample) suggest that it is mainly the upper castes who are increasingly disassociating themselves from direct farming; many of them are also selling their land to seek more permanent forms of mobility in the urban towns. The village-level studies from other parts of the state also support these observations. For example, a follow up study that traces changes in agrarian dynamics over the period of 18 years (between 1981-82 and 1999-2000) in 12 villages of Bihar suggests an increase in the phenomenon of non-agriculturalist households among the upper caste peasants, and with it, a rising tendency of land leasing during this period (Sharma, 2005, pp. 964-965). As noted earlier, land loss among the upper caste has been steeper, reaching a point where farming no longer provides a (viable) livelihood option for them. As Sharma (2005, p. 965) notes:

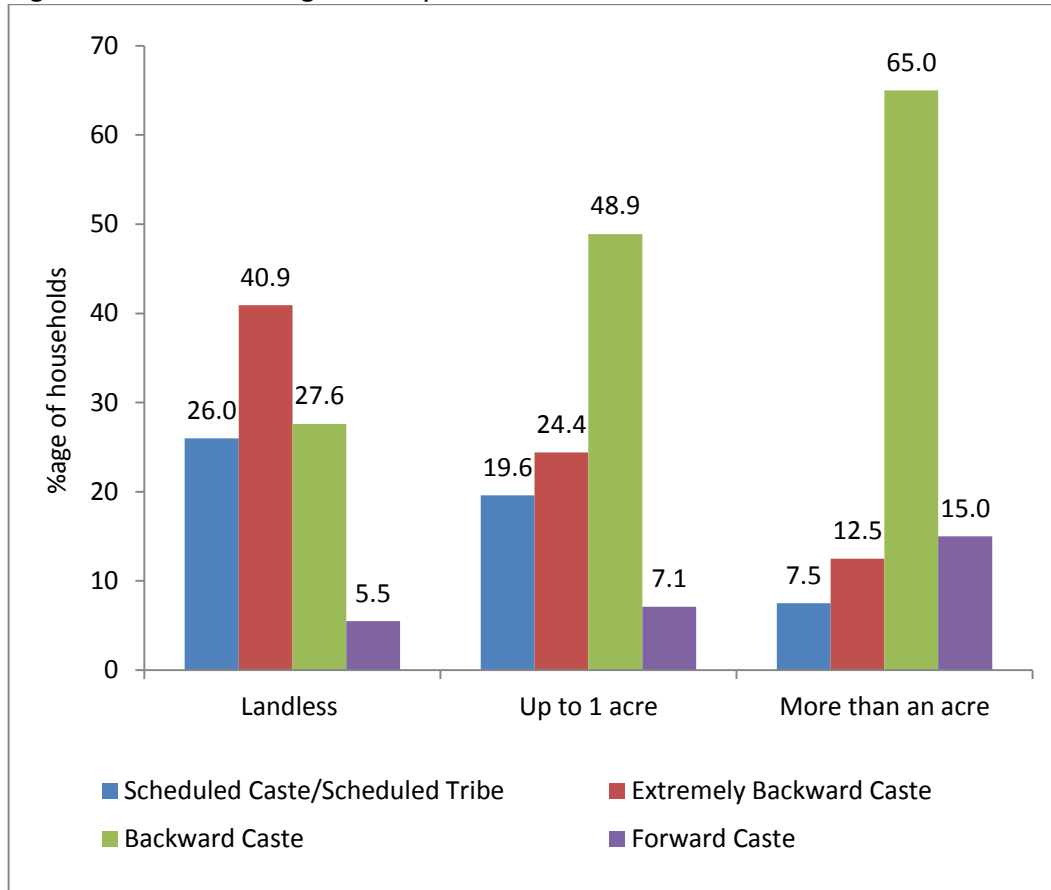
The upper caste peasants, who have lost their land to the point where the land cannot produce a surplus, find themselves in a dilemma as a member of the upper caste. They can neither meet wage demands nor take to the plough for fear of caste opprobrium. However, in recent years, a significant trend towards ploughing and other menial agricultural activities on the part

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<sup>89</sup> The present study was a sample survey involving interviews with 40 households from each of the 10 study villages, and not the village census with complete enumeration.

of poor upper caste males appears to be emerging (although the upper caste women even from very poor families do not venture to work outside the home in their own fields, leave aside in those of others for wages). Hence, they opt for renting out land and migrate.

Figure 7.21: Landholding status by caste

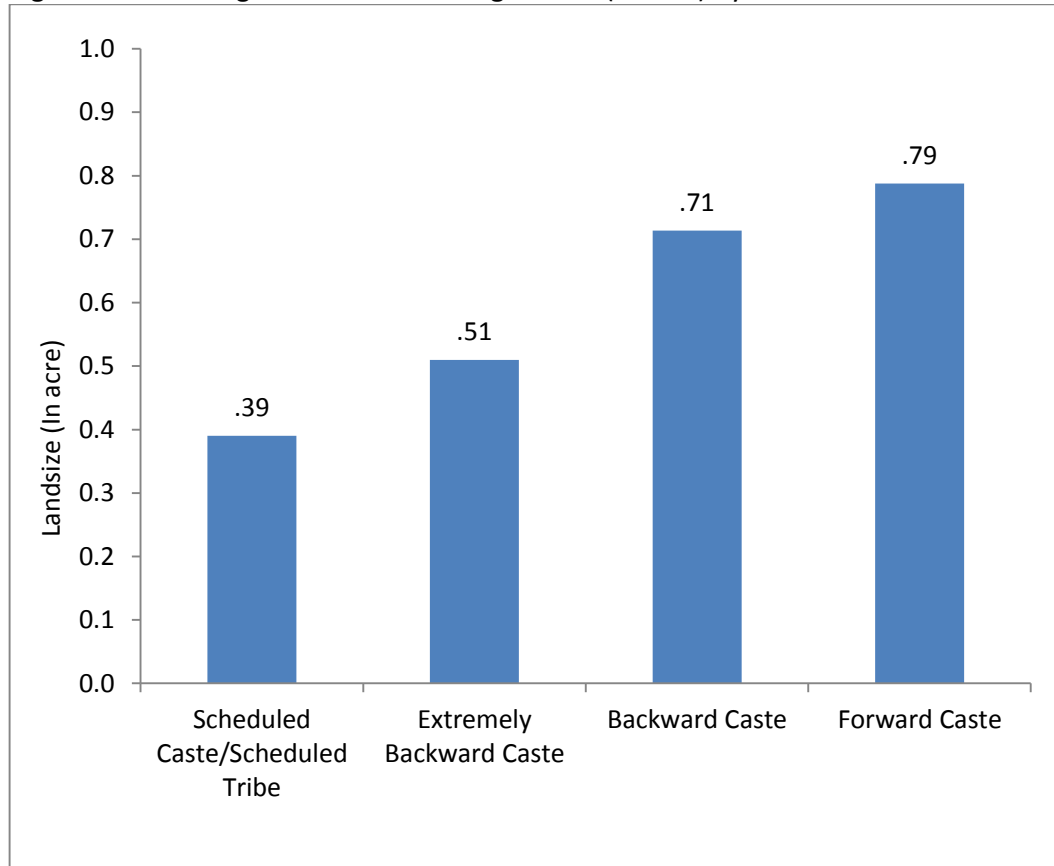


Source: Primary household survey data, 2011-12

Additionally, some of the upper-caste landowner households I interviewed (most of which were outside the survey sample) perceived risks to the own-account agriculture in terms of investment to return ratio being very high; much of the farming in Siwan is rain-fed and depends on the mercy of monsoon. Many households who faced crop failures in the past considered it better to transfer the risks while sharing the rewards in the form of half the produce via the mechanism of sharecropping. For instance, Rajpal Singh (name changed), a well-to-do Brahmin by caste – with his son working with the IBM corporation in Delhi, and daughter-in-law being the democratically-elected judicial head of the local GP (though she lived with her husband in Delhi and Rajpal acted on her behalf) – who had earlier cultivated

four of the six acres of land owned (with hired labour), but had now leased out four acres to six different poor families (One Scheduled Tribe ‘Gond’ household and five Brahmin families), remarked: “Agriculture is like gambling, except that in gambling there is a degree of excitement. The amount of hopelessness is the same in both.”

Figure 7.22: Average size of landholding owned (in acre) by caste



Source: Primary household survey data, 2011-12

It is important to note that in some villages I found that sharecropping had a strong caste element embedded in it in that members of one caste often preferred to lease out their land to land-poor families belonging to the same caste (eg. Brahmins obliging fellow castemen such as Rajpal), and resource- and land-poor families from upper caste Hindus and Muslims also engaged in sharecropping. However, a larger proportion of the households who engaged in Bataidari were from the Extremely Backward Castes and Scheduled Castes/Scheduled Tribes because of their relatively weaker land position. This is reflected in the data presented in Figure 7.21 which shows the landholding status of the surveyed households by caste status. The small landholdings in Siwan notwithstanding, the data suggest a clear patterning of landownership by caste: while the percentage of Forward Caste and Backward Caste

households (the latter were able to appropriate land following the abolition of Zamindari and related land reforms: Chapter 5) increased from landless to more than an acre category, the proportion of Extremely Backward Caste and Scheduled Caste and Scheduled Tribe families progressed in the reverse fashion. Similarly, the data on average landholding size by caste also suggest the same (Figure 7.22).

In terms of the how these landholding arrangements reflect the caste basis of sharecropping dynamics, my survey data suggest that the incidence of leasing in land is much higher among the Extremely Backward and Scheduled Caste and Scheduled Tribe households, compared to the Forward Caste and Backward Caste households, and, conversely, the proportion of the former two caste groups leasing out land is much lower than the latter two. As is evident, the proportion of sample Forward Caste and Backward Caste households leasing out land respectively is five times and two times as much as the Extremely Backward and Scheduled Caste/Scheduled Tribe. It should also be noted that among the Backward Castes, the prominent sub-castes such as Kushwaha, Koeri have traditionally been the cultivators whose attachment to land remains strong which explains in part why, compared to upper caste households, a lower proportion of them leased out land and a higher percentage leased in, to increase their landholdings. In fact household survey data and related fieldwork suggest that some Backward Caste households with significant larger landholdings also leased in land for sharecropping (Table 7.7).

Table 7.7: Sharecropping dynamics by caste

	<b>Number of HHs</b>	<b>%age of landless HHs</b>	<b>%age of landed households who leased out land</b>	<b>%age of households who leased in land</b>
Forward Caste	29	24.1	31.8	32.0
Backward Caste	171	20.5	11.0	43.8
Extremely Backward Caste	112	46.4	5.0	62.5
Scheduled Caste/ Scheduled Tribe	80	41.2	6.4	49.2

Source: Primary household survey data, 2011-12

Insofar as the impact of sharecropping on household food security is concerned, the survey results suggest that the ability to access land and grow food enhanced the food security situation of households, though because the leased in landholdings were too small in most cases (less than an acre for all households) the impact of sharecropping alone in bringing about sustained improvements in the household food security was still quite limited. Thus, while sharecropping resulted in improved own-production entitlements from the land, its positive impact was much greater for households who were able to effectively combine the food grown on leased in land with other productive non-farm sources. Nonetheless, in overall terms, sharecropper households still fared much better than the landless non-cultivating households.

Table 7.8 compares the self-reported indicators of food inadequacy and food unavailability among households who cultivated 50 percent or more land on a sharecropping basis with the non-cultivating landless. The logic of such comparison is that households who leased in half or more of the total cultivated land are land-poor households, and in many respects, similar to landless HHs. Additionally, choosing households with 50 percent or more of total land cultivated being leased in reflects the sharecropper status of households better. The purpose was to understand whether access to land, in whatever small way, had an impact on the food security. The small agricultural holdings notwithstanding, the data suggest that the non-cultivating landless households fared worse than their sharecropper counterparts on all parameters of food security. The differences in some of these indicators are quite significant. For example, the proportion of households who ate meals without vegetables, those who had less food than needed to satiate hunger, and those who reported borrowing money from local traders/lenders is almost 20 percent higher among the non-cultivator landless households than households who cultivated 50 percent or more leased-in land.

It is also important to mention that the fieldwork for this study was conducted in early 2012, when food price inflation in India, and indeed around the world, was still at record levels. In particular, the non-agriculturalist poor households had a greater exposure to the risks posed by high food prices, as their complete reliance on market purchase of food meant they found their food budgets squeezed by the high

food prices. In other words, the same amount of money now bought less food (on the impacts of food prices inflation on non-agriculturist households in India, see Pritchard et al., 2014, pp. 97-102; for a wider review on the rural global South, see Pritchard, 2014).

Table 7.8: Sharecropping and household food security (%age of households)

	Cultivator HHs with 50% or more cultivated land leased in	Non- cultivator landless HHs
<b>Food was not enough (defined by the following situations)</b>		
Household ate meals without vegetables	50.9	72.2
Household could only afford to consume food from PDS <sup>1</sup>	22.4	26.7
Household members consumed single meal a day	17.2	18.9
If all three main food categories (cereals, pulses, vegetables) were not available	50.9	68.9
If household members got less food than the amount to satiate hunger	37.9	56.7
<b>Food was not available (defined by the following situations)</b>		
Household borrowed money from friends and/or relatives to buy food	18.1	23.3
Household borrowed money from local traders, money lenders or lifted ration on credit	32.8	52.2
Household sold jewellery or other personal assets to buy food	0.9	2.2
Someone in the household out-migrated for work	17.2	17.8
Consumption rationing (members ate less food than usual)	46.6	67.8
<b>Total number of households (n)</b>	<b>116</b>	<b>90</b>

Source: Primary household survey data, 2011-12

<sup>1</sup>46 sharecropper cultivator households with 50% or more land leased in and 42 non-cultivator households had either an APL card or no PDS card.

In such circumstances, sharecropping farming can be considered as providing a means for poor households to reduce their exposure to market purchases and in turn food insecurity. Indeed, my fieldwork suggested that sharecropping provided a useful buffer against food shocks and that household with access to land were relatively better able to cope up with the food price rises as compared to non-

agriculturalist landless households. In the survey, households were asked whether they perceived that relative prices of food changed in the past year (April 2011-March 2012). Analysis of this data by land and sharecropping status suggests some differences. Of the 116 households who leased in 50 percent or more of cultivated land, the proportion of households who perceived food prices “increased a lot” in the reference period was 66.4% for cereals and pulses, 73.3% for eggs, milk, ghee and meat, and 79.3% for fruits and vegetables; the corresponding proportions for 90 non-cultivator landless households were 73.3% for cereals and pulses, 83.3% for eggs, milk, ghee and meat and 86.7 for fruits and vegetables.

These differences were small, presumably because of the fact that land sizes leased in by the sharecropper households, although constituting half or more of the total cultivated land, were still small (less than an acre for all households, as noted earlier). In turn this meant that even these households were dependent on market for food purchases, with the degree of dependence varying in accordance with the land leased in and crops grown. Indeed it also explains why the food diversity outcomes of sharecropper and non-cultivator landless households did not differ much in the survey sample. Nonetheless they point to the role of access to land for the food security of the very poor (as data on the self-reported food security parameters in Table 7.8 also suggests). More research is needed, particularly in contexts with similar land dynamics but where the land sizes leased are relatively bigger, in order to understand more fully the impact of sharecropping on food security.

## **Conclusion**

Using a livelihood-centred analysis that weaves together insights from the changing contours of economic and agrarian landscapes at the macro-level in India and the dynamic of household decision-making at the micro-level (though they are not mutually exclusive), the discussion in this Chapter points to the growing importance of migration and remittances for rural households’ income and food security in the case study district of Siwan. However the relationship between migration and food security is not straightforward – far from it. The processes of progressive fragmentation of agricultural land on the one hand, and the rising significance of



urban areas in the overall framework of economy and employment generation on the other, are leading to increased reliance among rural poor households on urban incomes. At the same time, the trajectory of economic growth in India, and a complex mix of individual choices and socio-cultural reasons, have prevented a complete shift away from rural-agrarian to urban-industrial mode of life and work, contrasting with the popular theses of “structural transformation” and “deagrarianisation”. The resultant effect of these processes is to create complex linkages between rural and urban economies which have much significance from the perspective of understanding food security among rural households, and the discussion in this Chapter has highlighted how these linkages play out to interact with household food security in rural Siwan.

Firstly, the diminishing capacity of land-based livelihoods over the period (which is an important push for migration) has led to growing significance of remittances incomes in the lives and livelihoods of rural Siwani households. The most direct impact of remittances is to equip households with purchasing power to source food from the market. The survey data suggest that most migrant households used the remittances on food, and compared to their non-migrant counterparts fared better on income and all food security and food diversity outcomes.

Secondly, the relationship between migration and land was rarely one-way. While landlessness and land-poverty prompted rural outmigration, urban remittances provided much needed cash incomes for own-account agriculture, prevented households to slide down into the state of complete landlessness, and, in some cases, they also allowed households to buy and accumulate more land, with the overall effects on household food security being positive. And while land provided a critical asset in the livelihood portfolios, and thus attachments to rural land were strong, the uncertain nature of urban jobs made holding on to land even more attractive. Indeed the economic security offered by land was unmatched by any other asset. My interviews with many respondents on the land question also indicated that land provided a means through which households reduced long-term livelihood and income risks. In the words of a respondent:

If you [so] want me to tell you what land means to us, I shall put it simply for you. I hope you are following the news about increasing border tensions with China [in the northeast India]. Suppose if China invades our country and changes the currency here all the money we have will be of no value. But no one can change the value of our land.

Indeed, higher urban incomes did not stop households from pursuing farming. On the contrary, they allowed many rural households to maintain their peasant identities. Far from discouraging rural households from farming, higher remittances only deepened their engagement in farm work, as reflected from the data on increased cash incomes from agriculture among households with three or more migrants. This finding assumes importance, and suggests that analysis of rural livelihoods must take into account these backward-forward linkages between farm and nonfarm incomes rather more than the inexorable deagrarianisation thesis allows. Findings of research conducted by Yaro (2006) in the three villages in Northern Ghana involving 600 household surveys (200 households from each village) also found these connections between farm and nonfarm income and flexibility of rural livelihoods. Thus, as Yaro (2006, p. 125) argues: "...deagrarianisation should be seen as a process embedded in social change, bearing in mind the reversibility between farm and non-farm livelihood strategies used by households (reagrarianisation?)."

A third emergent dynamic of migration-land-food security relationship is the (growing) incidence of sharecropping farming in Siwan. Some households, particularly of erstwhile upper-caste landowners, are also increasingly detaching themselves from direct farming and leasing out land to the land-poor households, with important implications on the food security of the latter. The household survey data and other fieldwork suggests that by allowing landless and land-poor households' access to land, temporary and precarious as it may be, sharecropping farming is associated with relatively lower incidence of food insecurity; compared to households who engaged in sharecropping, landless households reported a higher incidence of food insecurity. Furthermore sharecropping assumes particular significance in the wake of high food price inflation, for it strengthens the own-

production food entitlements of the households and reduces, in a relative sense, households' dependence on market purchases of food.

The growing importance of non-local, migration incomes in rural livelihoods in many parts of India (Deshingkar & Akhter, 2009; Deshingkar & Farrington, 2009), and indeed in many developing countries in the global South (for instance, see Rigg, 2006), mean that these findings may have significance beyond the immediate research settings of Siwan, and thus they warrant wider attention to understand the role of migration in influencing household food security in the rural areas. As the analysis in this Chapter has shown, migration and remittances structure and restructure economic and land relations in the origin village, with direct implications for food security of households who engage in migration as well as those who stay put (eg. through sharecropping). This inter-household comparison provides a useful way to delineate the impact of migration on food security. However the migration-food security nexus also involves important intra-household dynamics of altered production and reproduction roles and responsibilities. In Siwan where migration is predominantly undertaken by men, this implies alteration in gender relations at the household level. The next Chapter discusses whether and how these intra-household gender relations relate with household food security.

**8 OPENING THE 'HOUSEHOLD BOX': MALE  
MIGRATION, LEFT-BEHIND WOMEN AND  
HOUSEHOLD FOOD SECURITY**



## CHAPTER 8: OPENING THE 'HOUSEHOLD BOX': MALE MIGRATION, LEFT-BEHIND WOMEN AND HOUSEHOLD FOOD SECURITY

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### Introduction

In India, migration is highly gendered. Much of the long-distance work-related migration from rural areas continues to be predominantly undertaken by men while the women stay behind.<sup>90</sup> Indeed, rural outmigration from the two large states of Uttar Pradesh and Bihar (the latter being the geographic focus of the present study), which account for a large bulk of migratory moves in the country, is almost exclusively a male-only phenomenon. In India the social and cultural attitudes and norms around the work participation of women remain highly rigid. Despite the sustained high economic growth of past two decades, and the fact that an increasing number of women is now receiving education in the country, India has among the lowest levels of female labour force participation in the world (ILO, 2013). These low levels of work participation are considered to be an important cause of women's weak bargaining position vis-à-vis men within and outside the household (*inter alia*, Bardhan, 1974; Boserup, 1970; Sen, 1987), and reflected in relative female disadvantage in many aspects of well-being (Sen, 1987, 1990, 1992).<sup>91</sup>

An understanding of intra-household power relations is particularly important for the analysis of the relationship between migration and food security. If social

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<sup>90</sup> It should be noted however that in India while the population census and large-scale national surveys severely underestimate the true extent of labour migration in general (Bremner, 1996, 2010; Deshingkar & Akhter, 2009; Deshingkar & Start, 2003), women migrants are more likely to be underestimated because respondents are often asked to give one reason for migration and female migration is mostly associated with marriage. However many women work after marriage (Mazumdar, Neetha, & Agnihotri, 2013; Santhi, 2006). Secondly, "in the Indian cultural setting it is [considered] inappropriate for a woman to emphasise her economic role especially if the interviewer is a stranger and a male" (Santhi, 2006, p. 5).

<sup>91</sup> Gender inequalities in survival, health, education and income are more pervasive in India than most other countries in the world. For instance, on the United Nations Gender Inequality Index 2014, India was placed at 127<sup>th</sup> position, a rank it shared with Pakistan. By comparison, Mali had the lowest rank of 148. It should also be noted that barring Afghanistan, India fared worse than all other countries in South Asia (UNDP, 2014, pp. 172-175).

arrangements determining the access to productive economic opportunities and control over household resources favour men over women, gender differentials in access to food and nutrition can follow (for studies that highlight the relative disadvantage of females vis-à-vis males in intra-household allocation of food in India, see, *inter alia*, Bardhan, 1974; Das Gupta, 1987; Miller, 1981; Sen & Sengupta, 1983; for a review on South Asia, see Miller, 1997). However, migration has the potential to alter the power dynamics at the household level. The male-only pattern of migration often triggers fundamental changes in the gender roles within the household. As noted in Chapter 2, the available evidence suggests that male-migration leads to rise in female autonomy, with women participating more proactively in the management of household affairs, including decisions regarding cash management (Gulati, 1987, 1993; Paris et al., 2005). These autonomy effects may prevail even after men's return (Yabiku et al., 2010). There is now overwhelming evidence that women tend to use household resources in ways that better optimise household welfare for all members (Quisumbing & McClafferty, 2006; UNICEF, 2006).<sup>92</sup> In terms of food security, this implies women may use household food and cash resources (remittances sent by men) to improve their household's food security outcomes. The male migration-gender-food security nexus is however highly complicated, and other factors, such as structure of the family, also mediate to produce varied household welfare (or illfare) outcomes. For example, women living in nuclear families are found to have greater autonomy over household affairs than the ones living in joint families with their father/mother-in laws (Desai & Banerji, 2008), though the latter form of familial arrangement may provide the left-behind women with enhanced support and care. Migration can also alter these familial structures, from joint to nuclear households and vice versa. As Hewage et al. (2011, p. 204) suggest, albeit in a different context: "migration separates and connects". On the other hand, in cases where remittances are not enough, women from nuclear households often have to assume the role of breadwinner. Evidence from village-level studies in India also suggests that the absence of men can lead to women having to take over tasks in household

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<sup>92</sup> This is one of the important reasons why in recent years social protection schemes for poor household such as cash transfers have increasingly focused on making women as their target beneficiaries.

agriculture that were traditionally performed by men (Jetley, 1987; Paris et al., 2005) which also carries potential implications for household food security.

Against this background, the aim of this Chapter is to look into the 'household box' in order to gain broader insights on the relationship between migration and household food security in the case study district of Siwan. As already noted in Chapter 5, labour migration from Siwan (and Bihar more generally) is largely the preserve of men while the women stay behind. And this pattern of migration has remained virtually unchanged throughout the past century as reflected in the more feminine general sex ratio in the district which stands in sharp contrast to the all-India pattern where males outnumber females (Table 5.5 in Chapter 5). My fieldwork suggests that while the cultural norms still guide the role of women within and outside the households, the long history of male-only pattern of migration from Siwan has significantly transformed gender relations, and the aim of this Chapter is to understand the bearing of these altered gender relations on household food security. In particular, I focus on the impacts of male-only migration on the role, responsibilities and position of left-behind women in the origin villages, and their implications of household food security. Drawing on the field research data, my aim is to suggest the possible pathways of linkages that exist.

The structure of the Chapter is as follows. In the next section, I discuss the gendered nature of outmigration from rural Siwan and the factors underlying male-dominated pattern of migration. Secondly, I discuss the effects of male migration on intra-household relations. In doing so, I dwell on the women's roles and responsibilities in household affairs and explore the female autonomy versus responsibility aspects of male migration. I suggest that both outcomes can and often do exist, even within the same household and for the same women. The discussion in this section also highlights the impacts of migration in altering the traditional form of family organisation in Siwan. Finally, I discuss the relationship between male migration, gender and household food security. Given the focus of this chapter, the data presented mainly pertains to the sample migrant households.



## Gendered livelihoods

Labour migration from Siwan District (and Bihar as a whole) is almost exclusively a male-only activity. Women stay behind in the origin villages and rarely accompany the men. The analysis of Indian Census data for 2001 from 1438 villages in Siwan on the sex composition of population aged 6 years and above – used in this study as a proxy indicator for migration – suggests that although villages varied widely in the intensity of migration<sup>93</sup>, three-quarters (1061 villages) had sex ratios skewed in favour of females (at least 1000 females per 1000 males), suggesting male-dominated pattern of outmigration. In some villages with high incidence of migration, such as one of the study villages Chakmahmuda in Maharajganj Block, it is difficult to sight young men of employable age, and many rural families now comprise of only females and children. It is only during the festivals, such as Chhath and Holi, when a large majority of the migrants return home and when the households' sex and age compositions appear more balanced.

This gender-based segregation of rural livelihoods finds vocal expressions in Bhojpuri (local language) folk tradition and culture. Folksong genres such as *Bideshia*, which translates as “foreigner” (and is an affectionate term used mainly for male members living in far-off destinations), and *Birah*, which means “separation” from the beloved, reverberate widely in the culture. Originating around the mid-nineteenth century when the migration from western Bihar began to gain momentum, these folksongs still remain hugely popular in the region and beyond.<sup>94</sup> They depict the stay-behind women as celebrating the earnings of their husbands in *bidesh* (destination places), mourning the separation that follows their

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<sup>93</sup> For instance, Sadiha village in Bhagwanpur Block, with a total enumerated population of 1195 persons living in 178 households in 2001, had 1500 females per 1000 males in the ages of 6 years and above. In contrast, Barsara village in Barharia Block which, in the same Census year, had a population of 1389 persons living in 184 households had 848 females per 1000 males (Registrar General of India, 2001c).

<sup>94</sup> One of the most influential Saran-born Bhojpuri singer, playwright and lyricist of all times, and in fact the one who is considered to be the originator of *Bideshia* folk and theatre is Bikhari Thakur. In 2012, London-based musical label EMI/Virgin records released a *Bideshia* folk album of Thakur titled “The Legacy of Bikhari Thakur”, with Assamese Bhojpuri singer Kalpana Patowary as the lead vocal. This album was released by the vice Prime Minister of Mauritius (Borah, 2014), a country where many men from Bihar migrated as indentured labourers to work on the plantations and settled on more permanent basis.

men's migration, expressing scepticism about their men's sexual fidelity and loyalty towards them while they are away, and worrying about shielding their own modesty from other men in the origin villages (de Haan, 2002, p. 135; Jassal, 2012, p. 244).

These Bhojpuri folklore genres developed around the time when the transport and communication infrastructure was weak which often meant that it took days of travel to reach work destinations, and while away, male migrants seldom made any contact with their families at the origin; many who went to the British colonies abroad never returned.<sup>95</sup> The huge advancements in infrastructure and communication networks in recent years however mean that this is no longer the case. Travel has become increasingly easier, and technology such as mobile phones – which my fieldwork suggested most rural Siwani households, including many of the very poor, possessed (Table 8.1) – have enabled the Siwani migrants and their families to keep in regular touch with each other. Mobile phones have fostered connectivity between migrants and their wives and have, to some extent, reduced the emotional, if not physical, distance between the places of origin and work. It is nonetheless not hard to imagine that the physical absence of men often results in a restructuring of family relations and realigning of households' productive and reproductive roles and responsibilities, at least for the duration away. Indeed, with an increasing number of Siwani migrants now spending more time away from their place of origin (Figure 5.5 in Chapter 5), the issue of intra-household gender relations in the study of migration, and rural livelihoods more broadly, assumes even greater significance.

In order to contextualise the impacts of male migration on intra-household gender relations, it is useful to first understand the factors underlying the male-dominated pattern of migration and the characteristics of women who stay behind. Table 8.1 and Table 8.2 profile the household and individual characteristics, respectively, of 144 wives of current migrants interviewed in the survey.

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<sup>95</sup> In the mid-nineteenth century, many people from Bihar migrated as indentured labourers to British colonies, such as Fiji, Mauritius, British Guiana (now Guyana), to work on the plantations (Gillion, 1956; Smith, 1959), and settled there. Indeed these countries now have significant presence of Bihari-origin people, and Bhojpuri is one of the national languages of Fiji and Guyana, and is spoken widely in Mauritius (on the last point, also see footnote 88).

Table 8.1: Household characteristics of the left-behind wives of migrants

Household characteristics	Number of left behind women (%)
<b>Religion</b>	
Hindu	104 (72.2%)
Muslim	40 (27.8%)
<b>Caste</b>	
Forward caste	9 (6.3%)
Backward Caste	61 (42.4%)
Extremely Backward Caste	44 (30.6%)
Scheduled Caste/ Scheduled Tribe	30 (20.8%)
<b>Living arrangements and household headship</b>	
Nuclear	73 (50.7%)
Joint/Extended	71 (49.3%)
<i>De facto</i> head of the household	67 (46.5%)
<b>Mobile phone ownership</b>	
Women living in households with mobile phones	131 (91%)
<b>Land and livestock ownership</b>	
Landless HH	49 (34.0%)
Upto one acre	82 (56.9%)
More than an acre	13 (9.0%)
Households who own any livestock	88 (61.1%)
<b>Consumption expenditure and poverty</b>	
Average MPCE (In Rs.)	938
Household with MPCE below poverty line <sup>1</sup>	72 (50.0%)
<b>Total number of left-behind women (n)</b>	<b>144</b>

Source: Primary household survey data, 2011-12.

<sup>1</sup>MPCE = Monthly Per Capita Expenditure. Same MPCE cut-off used to estimate consumption poverty as described in Table 6.2 and Table 6.6 above.

Among the important household-level characteristics of the women include, first, close to half of the left-behind women lived in nuclear households, and almost all reported to the *de facto* household head in the absence of their husband. Secondly, most of these women lived in households that possessed a mobile phone. Thirdly, nearly two-thirds of women lived in households that owned livestock (61 percent) and some land (66 percent), and, finally, 50 percent lived in households with MPCE below the official poverty line (Table 8.1).

Table 8.2: Individual characteristics of the left-behind wives of migrants

Individual characteristics	Number of left behind women (%)
<b>Current age</b>	
15-24	16 (11.1%)
25-34	46 (31.9%)
35-44	59 (41.0%)
45+	23 (16.0)
<b>Age at the time of marriage</b>	
Below 15	23 (16.0)
16-18	85 (59.0)
19+	36 (25.0)
<b>Husband's marital status at the time of first migration</b>	
Never married	51 (35.4%)
Married	93 (64.6%)
<b>Number of children</b>	
No children	9 (6.3%)
1 to 2	33 (22.9%)
3	37 (25.7%)
4	31 (21.5%)
5+	34 (23.6)
<b>Did husband visit home in the past year</b>	
Yes	131 (91.0%)
No	13 (9.0%)
<b>Duration of husband's stay in the village during last visit (n=131)</b>	
Less than a month	62 (47.3%)
1-2 months	50 (38.2%)
More than 2 months	19 (14.5%)
<b>Total number of left-behind women (n)</b>	<b>144</b>

Source: Primary household survey data, 2011-12.

The individual characteristics of the women presented in Table 8.2 show that although two-thirds of the women reported marrying at younger ages, on or before the legal age at marriage of 18 years, an equal proportion of them (75 percent) were, at the time of survey in 2012, in the age groups of between 25 and 44 years suggesting that they have been married and living at the husband's place for a few years. Secondly, my fieldwork suggests that although some men, mainly from the

very poor households, made their first work trip outside the village as early as when they were 15 years old, and were unmarried<sup>96</sup>, a much greater proportion of men migrated after their marriage when they had to assume the financial responsibility of fending for and managing their own family. Many migrants informed me that marriage and subsequent expansion of family put the pressure on them to move out of the village to earn higher incomes. This is reflected in the survey data as well, with 65 percent of left-behind wives of migrants reporting that at the time of their husband's first ever migration trip, they were married. The data on sample male migrants' 'age at first migration' also suggest that only 15 percent (41 out of 280 migrants) were in the ages between 14 and 20 years when they first migrated. Thirdly, the data also confirm the circular nature of migration, albeit men are now spending a large part of the year outside the village for work; 85 percent of women reported that their husband spent up to 2 months in the origin village in their last visit home, and only 15 percent reported they spent more than 2 months.

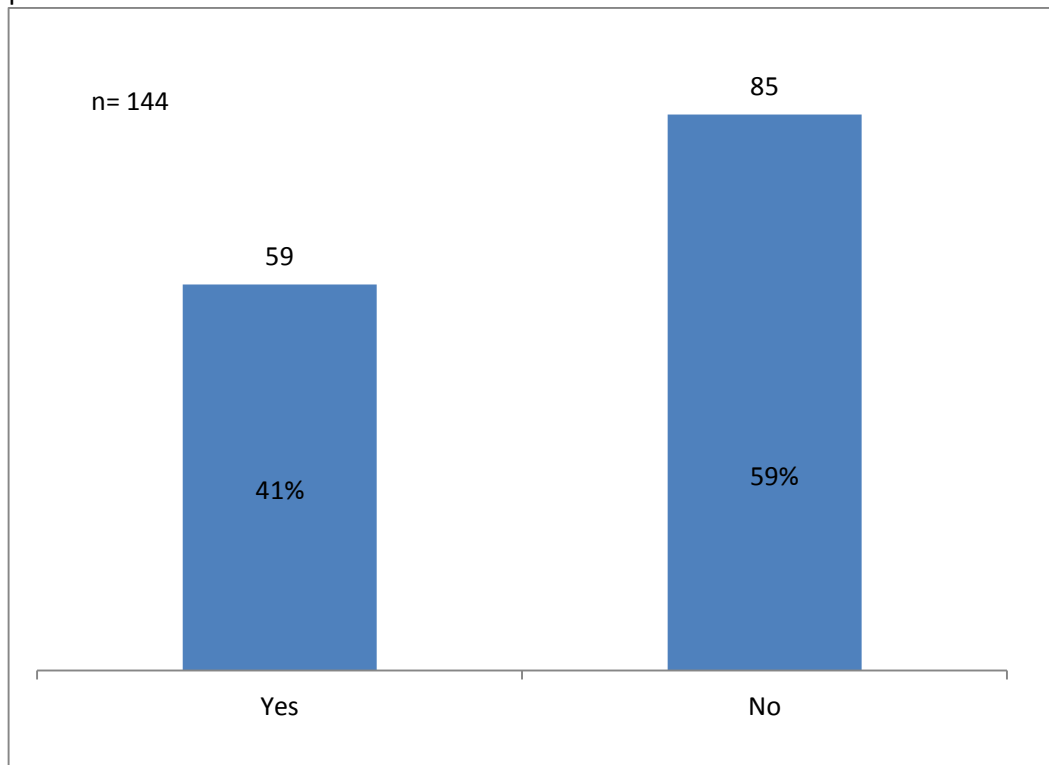
In terms of the reasons for single-male/male-only pattern of migration from Siwan, my fieldwork revealed the primacy of two factors. First and foremost, the social and cultural norms posed the restrictions on the mobility and participation of women in the distant labour markets for cash incomes. As dutiful daughters, wives and mothers, women are expected to stay in the village, and manage the rural end of the household. Single-women migration for work is almost non-existent from Siwan, and the idea of married women joining their husbands on their departure is also considered socially unacceptable. Of the total 144 left-behind wives interviewed in the survey, 85 women (59 percent) reported that they had never visited their husband's place of work (Figure 8.1).

Secondly, my interviews with some long-term male migrants indicated that although years of migration to the cities has brought about attitudinal changes among them on the acceptability of their wives' mobility, the nature of their

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<sup>96</sup> Child marriages are not uncommon in Siwan, and indeed in Bihar as a whole. However, most families follow the custom of "Gauna". Also known as second marriage, Gauna is a ceremony following which the marriage is consummated. Gauna is usually performed when the parents think that groom and bride are adult enough to consummate the marriage. Before the Gauna, the bride stays at her natal place. The 'unmarried' male migrants here refer to the ones whose Gauna was not done.

Figure 8.1: Number of left-behind migrants' wives who ever visited their husbands' place of work



Source: Primary household survey data, 2011-12.

informal sector jobs precluded realistic opportunities. Some of them informed me that they had earlier brought their wives at the destinations, but they returned to the villages after a few years, most of them after the birth of their first child. (Of the 59 women who reported visiting their husband's place of work at least once in the past, several of them had lived with their husbands at the destination.) High costs of living in the cities and the inability of many migrants to access the government-run free services of education and health in the destination places made it difficult for the migrants to bring and maintain their families in the cities. During the village surveys, a woman respondent who never visited her migrant husband remarked: "My husband tells me that in the city he even has to pay for water. Is not it a joke? Look at that government handpump over there; it is all free water." Similarly, a migrant I interviewed in his rented room in Faridabad District of Haryana, approximately 30 kilometres south of Delhi, told me:

In the village, we have our own house. Cooking fuel and water is also free. But here, expenses on these heads cost fortunes; the rent alone for this

shabby room costs me Rs. 1000 a month. It is simply not affordable for a single-earner like me to maintain a family of five people here [in the city].

The pressure to save money meant that most migrants lived in cheap, shared accommodation with other labour migrants, with two-three migrants living in a single room. For migrants engaged in construction work (which employed a large number of surveyed migrants), uncertain job and wage schedules, and constant moving from one site to another added to the challenges of bringing the wives and children to the cities. The newly-wed migrants made recurrent trips to home villages to see their wives, but did not bring them to work destinations. One such migrant engaged in construction work told me:

When I do not get my wages on time, I borrow money from my friends and fellow villagers. But this cannot happen when my wife is around. I need to have sufficient money so that I do not have to worry about it... Besides, my job requires shifting from one place to another. I can just carry my bag and baggage and move, but not my wife.

Table 8.3: Women respondents' reasons of not ever visiting husband's place of work

Reason	Number of left behind women (%)
Financial problem	42 (49.4%)
Housing problem at the destination	11 (12.9%)
Domestic and child care responsibilities	10 (11.8%)
Husband's mobile job	6 (7.1%)
Need to look after family land	5 (5.9%)
Husband says I must stay home	4 (4.7%)
Others <sup>1</sup>	7 (8.2%)
<b>Total number of left-behind women (n)</b>	<b>85</b>

Source: Primary household survey data, 2011-12.

<sup>1</sup> 'Others' combine responses with very low frequencies such as health reasons.

These are reflected in the survey data in Table 8.3 on women respondents' reasons for not ever visiting their husband's place of work. Of the 85 women who reported never having visited their husbands' places of work, 62 percent cited financial and

housing problems. Additionally, the rural land and resources needed to be looked after. In families with all the males working outside as migrants, women took up this job. Indeed, in many families, women carried out all the tasks related to household agriculture – from sowing to harvesting (more on which later).

At the same time, I also found that some women also preferred to stay in the village. Of the 85 women who reported never visiting their husband's place of work, 71 women suggested that they would prefer to live with their husbands, while 14 preferred to live in the village. However, because these factors often overlapped and coalesced with each other it is difficult to ascertain the degree to which each exerted influence. As an example, when I asked Salma Begum (name changed) whose husband spent 8-9 months in Nagpur, Maharashtra for work, if she would like to stay with her husband at his place of work, her response was:

No, I am better here. If I leave the village house, it would soon turn into shambles. The money my husband makes is barely sufficient to manage the most basic expenses of food and clothing. Where would we find the income to build another house?

On further probing when I asked her if she would move out of the village to live with her husband in Nagpur if he was able to buy his own house there, she replied:

I do not mind going and staying with my husband for a month or two but I would not want to live there for the whole time he is there. This house and this village is where I belong and would like to live; this is where my world begins and ends. My children go to school here, and my father-in-law is frail and needs caring.

Similarly, in my interviews with stay-behind wives some suggested that though they did miss their husbands while they were away they still preferred to live in the village to look after the household resources and take care of children and in-laws. It is certainly the case that cultural expectations about the gender roles guided such preferences, and oddly, though not surprisingly, there was an intergenerational aspect to it: younger women of the household were expected to take care of their in-laws, and they in turn expected their future daughter-in-laws to do the same.



Nonconformity to these expectations often led to intra-household tensions and also changes in the familial structure, from joint to nuclear (eg. Ahmad's case described in Chapter 5). At the same time, it was also clear that some women derived their sense of self-worth from managing the rural side of the family. Some male migrants praised their wives for their contribution in the smooth functioning of the household in the origin, and also quite openly admitted that they would not be able to spend so much time away from home had their wives not shouldered the family responsibilities. For instance, to quote a migrant respondent:

I spend nearly eight months a year here [in Delhi]. A few times my wife has asked me that she wants to come and stay with me. I can bring her here, and I would be happy to. But in the village my father is alone and there is no one to look after him. Sometimes my wife and I have arguments over this. But she is a very reasonable person so she understands my point. I do not know what I would do without her.

### **Impacts of male migration on intra-household dynamics and gender relations**

The impacts of male migration on gender relations in Siwan can also be seen in an increased presence of women in the all spheres of rural life; the intra-village mobility of women has increased and a growing number of women are now proactively participating in village affairs.<sup>97</sup> However, the effects of male migration are much more pronounced at the household level. Women's participation in household decision-making has increased, with many women in migrant households acting as the household managers in the absence of men. On the other hand, this has also resulted in a greater burden of work for women in both the domestic and non-domestic spheres. In particular, women from the very poor households, and the ones who do not receive (adequate) remittances from men, are left saddled with managing households' productive and reproductive functions. Additionally, migration and remittances are also causing intra-household conflicts over cash management. One major impact of this has been nuclearisation of families in rural

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<sup>97</sup> It should be noted that gender relations are also in flux because of recent policy reforms in Bihar including the reservation of 50 percent of the seats in GPs and promoting higher education among girls through incentives such as providing free bicycles to girls who attend Grade 9.

Siwan. All of these have implications for household food security. In the next section, I discuss these issues.

### ***Women's participation in household decision-making***

My field research in 10 case study villages in Siwan suggested that in many families, women acted as the *de facto* household heads in the absence of men, hence somewhat dislodging the stronghold of patriarchal norms in this society. It is important to recognise that left-behind wives still regarded the men as the *de jure* household heads and consulted them before they took any major decisions, however they single-handedly managed the household for a large part of the year. Adopting a definition of "household head" as the person who was practically responsible for running the household, managing the family land and resources and looking after other dependent persons<sup>98</sup>, 52 percent of migrant households (102 of 197 households) were reported to be headed by women whereas the corresponding figure among non-migrant households stood at a mere 7 percent (13 of 195 households) (Figure 8.2). Of the 102 migrant households headed by women, 67 households (66 percent) included families where the surveyed migrants' wives directly acted as the *de facto* heads, and they were all nuclear families comprising of the migrants wives and children. The remaining 34 percent were headed by other senior women of the households, mainly the mother-in-laws, and in some cases, the elder sister-in-law.

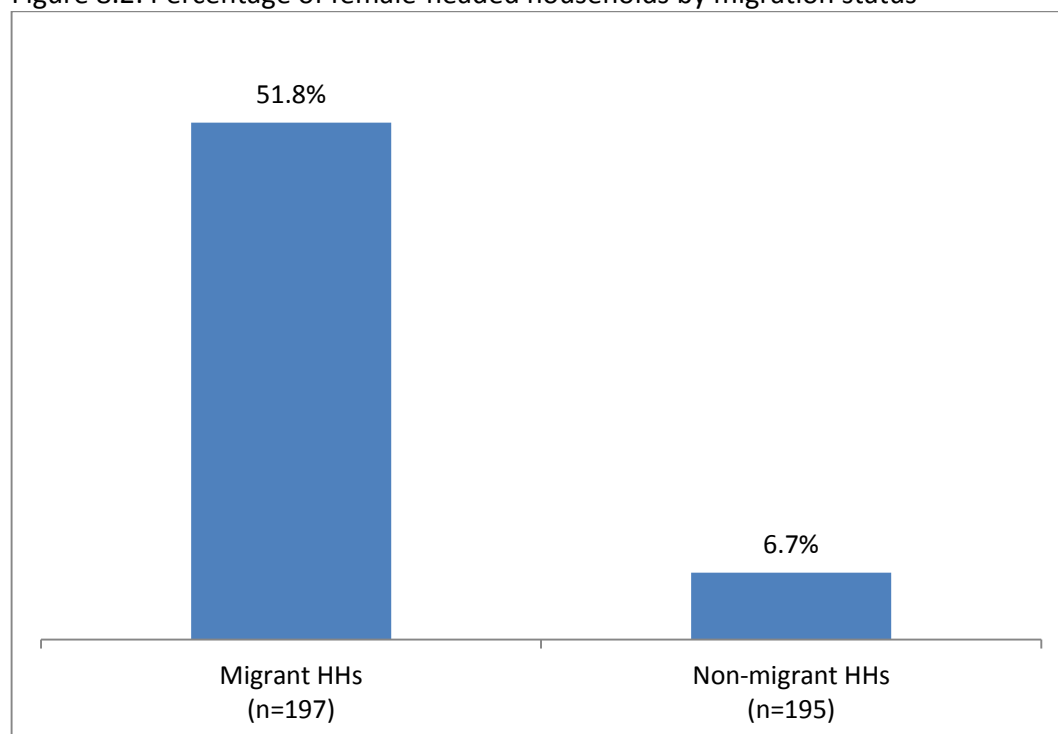
In the interviews conducted with left-behind wives of the male migrants, a few women were very vocal about their role within the household, and tended to emphasise that they headed their households in all broad senses. However, the degree of participation of women within the household varied by the type of familial arrangement, and to some extent, their economic status. In general, the left-behind women in nuclear households enjoyed greater autonomy and decision-

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<sup>98</sup> The conceptual and practical application of this definition in the field was not without problems. At the conceptual level, the definition enumerated, by default, women as *de facto* heads even when they were, in reality, *de jure* heads such as non-migrant households headed by widows. At the practical level, for carrying out the household surveys I was assisted by two local field investigators at a time who initially had confusions about this definition. However, the daily debriefing sessions meant this was resolved fairly quickly. For a useful account of methodological problems in defining household headship, see Sandra (1989).

making vis-a-vis joint/extended families. Women from poor families had lesser restrictions on mobility and were more vocal than the ones in relatively richer households. For instance, on the question of how important women thought their role was within the household, a woman respondent belonging to an economically disadvantaged Muslim Rai caste, also known as Sabjifarosh (vegetable vendors), replied: “Our men only bring home money but we are the ones responsible for managing it, for spending it as wisely and stingily as possible. And besides, we have a whole lot more of other family responsibilities on our plate than men do.” On the other hand, women from Khushwaha caste, a cultivator caste with better income and landholdings but who also sold vegetables in the local market as a supplementary income source were, relatively speaking, less vocal.

Figure 8.2: Percentage of female-headed households by migration status



Source: Primary household survey data, 2011-12.

Table 8.4 shows the response of women on their involvement in the household decision-making among migrant and non-migrant households. In the survey, the most senior women of the sample households were asked about household decision-making processes on different aspects of their family lives.<sup>99</sup> A simple

<sup>99</sup> A total number of 180 and 173 women respondents among migrant and non-migrant households, respectively, answered these questions.

comparison of the degree of women’s involvement in decision-making by migration status suggests that among migrant households, women reported having been involved in household decision-making more than their counterparts in non-migrant households. In fact, among households with migrants, the proportion of women taking decisions alone on matters pertaining to their ‘own health care’, ‘large household purchases’, ‘management of money in the household’, and ‘visits to relatives and friends’ is twice as much as for women from non-migrant households.

Table 8.4: Women's participation in household decision-making among migrant and non-migrant households

Decision type	Migrant households (n=180)			Non-migrant households (n=173)		
	Woman <sup>1</sup> alone	Woman not involved <sup>2</sup>	Joint HH decision <sup>3</sup>	Woman alone	Woman not involved <sup>2</sup>	Joint HH decision <sup>3</sup>
Own health care	62.8	15.0	22.2	34.7	28.9	36.4
Visits to family & relatives	34.5	27.2	38.3	17.9	34.1	48.0
What food to be cooked	82.8	9.4	7.8	71.0	14.5	14.5
Daily HH purchases	68.3	12.8	18.9	42.2	22.0	35.8
Large HH purchases	35.6	21.1	43.3	16.7	37.6	45.7
Overall money management	24.4	23.3	52.3	12.1	33.5	54.4

Source: Primary household survey data, 2011-12. All data in percentage terms.

<sup>1</sup>‘Woman’ in the table refers to the most senior woman respondent interviewed from whom response to these questions were sought. <sup>2</sup>This includes decisions taken by husband and/or in-laws which did not involve the women interviewed. <sup>3</sup>This includes decisions taken by all household members including the women respondent.

These differences notwithstanding, it is important to note that even among migrant households, the percentage of women reporting taking decisions on money matters is relatively lower compared to other aspects. Indeed it is one indicator on which more than half of the women in both migrant and non-migrant households reported that such decisions are taken jointly with their husbands. During my fieldwork I found that many left-behind wives of migrants living in joint families considered it culturally inappropriate to take household finances in their hand when the other males were present. In nuclear families, women did manage cash but called their husbands in the cities each time they made a big purchase. This they did, as many

women respondents informed me, to keep the relations with their husbands cordial and harmonious.

Similarly, these questions were also administered separately to the survey sample of 144 migrants' wives, although in this case the purpose was to understand whether, and to what extent, women's autonomy in terms of their participation in household decision-making process varied in the presence and absence of their husbands, given the circular nature of migration.<sup>100</sup> Table 8.5 presents the percentage of migrants' wives who reported their involvement in household decision-making at times when their husbands were 'around' and 'away'.

Table 8.5: Participation of migrants' wives in household decision-making when their husbands are around and when they are away

Decision type	Husband around (n=144)			Husband away (n=144)		
	Woman alone	Woman not involved <sup>1</sup>	Joint HH decision <sup>2</sup>	Woman alone	Woman not involved <sup>1</sup>	Joint HH decision <sup>2</sup>
Own and children health	10.8	49.6	39.6	60.2	26.8	13.0
Children education	16.5	40.6	42.9	54.1	23.3	22.6
Visits to relatives and friends	11.2	44.4	44.4	30.3	36.6	33.1
What food to be cooked	44.3	45.1	10.6	71.1	25.4	3.5
Daily HH purchases	32.6	42.6	24.8	64.6	24.8	10.6
Large HH purchases	5.7	50.3	44.0	37.6	31.9	30.5
Overall money management	6.3	42.0	51.7	26.6	29.4	44.0

Source: Primary household survey data, 2011-12. All data in percentage terms.

<sup>1</sup>This includes decisions taken by husband and/or in-laws which did not involve the women interviewed. <sup>2</sup>This includes decisions taken by all household members including the women respondent.

<sup>100</sup> In nuclear families, the wives of migrants were also the most senior women of the household. Notwithstanding this overlapping of women respondents, the nature of questions varied and so did their interpretations. At the household level, the most senior women among migrant and non-migrant households were asked about their involvement in family decision-making. On the other hand, in the interviews with migrants' wives an attempt was made to understand whether women's role in family decision-making differed by the physical presence (or absence) of their husbands, and whether the effects of male migration on women autonomy were short-lived or here to stay.

The data indicate that across all parameters, a greater proportion of women reported taking decisions alone in the absence of their husbands compared to when they were in the origin village. Some of these differences were quite large, such as on decisions pertaining to 'own and children's health', 'children's education' and 'household finances'. While these data point to the fact that the effects of male migration on female autonomy and decision-making lasted as long as the men were away, my interviews also suggested that in some cases the effects prevailed even after the men's return. More than 10 percent of women reported that they took decisions on their own and children's health, children's education and visits to family and relatives, with this percentage rising to 33 percent and 44 percent for food cooked in the household and daily household purchases respectively, when their husbands were in the village.

However, cultural norms often mediated these outcomes. Many women respondents informed me that they do not lack the freedom to take decisions when their husbands come back, but they considered it culturally inappropriate to decide on things on their own when their husbands were around; and when they took independent decisions even on small, personal matters, such as going to the hospital in the Block or District to seek health care, they involved their husbands. For instance, Chandmukhi Devi (name changed), whose husband worked as a driver in Kolkata, told me that regardless of whether or not her husband is around, she takes all the decisions on her own and her children's health matters. But when he is around, she would not go to the health facility without him. When I asked if she faced restrictions on her freedom, she replied: "Freedom is not an issue but I would not prefer to go by myself when my husband is around. It is our culture and that is the way it is." Furthermore, as noted earlier, the exposure of migrants to the cities has brought about some attitudinal shifts among some men on women's mobility. In my interview with Shyam (name changed), a return migrant in his late 30s, who earlier worked in Mumbai and Ahmedabad for a total of 12 years but had been working for the past five years as an ambulance driver in a private hospital in Basantpur Block, he told me:

At first I was shocked to see how women in the cities, particularly in Mumbai, carried themselves. The women in the cities were so different

from the women in my village. But honestly speaking, I liked it. Given the societal norms, I may not allow my wife to be as modern as an urban women but I know that she is not supposed to be confined to the four walls of the house either.

This is not to say that male migration has ushered in *absolute* freedom for women. The stronghold of patriarchal norms meant that many women still occupied a subjugated position vis-à-vis men within the household, and outside it, they continue to face considerable restrictions on their mobility. The spread of mobile phones has at once aided in enhancing the role of women in household decision-making and provided a tool in the hands of men to control their women from far away. Thus, while many women informed me that when they faced difficulties performing their new role of household head while the men were away they phoned them to seek their advice (for instance, how to use the banking services to withdraw money that their husbands sent), mobile phones also meant that women hesitated taking independent decisions, particularly on major financial matters and consulted their husbands on whether and how they should spend money. In families where the male migrants did not share cordial relations with their in-laws, the wives called their husbands and sought permission beforehand each time they visited their natal places. Nonetheless, male migration has enhanced the role of women within and outside the household and contributed to the improved agency of women.

#### ***Increasing work burden on women***

On the negative side, male migration has also brought about significant hardships for many rural women, particularly those from the very poor households. In addition to single-handedly managing the household affairs and caring for dependent children and elders while their husbands are away, left-behind women are required to perform increased tasks in household agriculture. Across all the 10 case study villages studied, the participation of women in agriculture was significant, with some women reporting that managing the family farms is solely done by them. Given the generally high incidence of poverty in the survey sample, and the fact that most surveyed households possessed exceptionally small land

parcels, very few migrant households reported hiring labour for agricultural work.<sup>101</sup> In families, particularly belonging to lower Backward Caste groups, women performed all the tasks in family farming – from sowing to harvesting – on their own, and in some cases, with the help of their young children. As has already been noted, the survey data suggest that most male migrants spent a large part of the year outside their origin villages for employment. This meant that male labour for agricultural work was not available for much of the crop cycle.

The survey did not collect quantitative data on whether male migration has had any impact on improving farm wages of women workers (in any case the cross-sectional nature of survey would not have allowed this assessment). However, informal conversations with women respondents from lower backward caste families, such as Mahadalits, who (also) worked as farm labourers suggested that not much has changed. Many of these women reported getting between Rs. 30 and Rs. 45 (less than US\$ 1) for farm labour of 4-5 hours, with some also reported getting two kilos of wheat or rice. Given the shortages of men for local farm work has resulted in increase in women participation in agriculture which should ideally be associated with improvements in their wages, the reasons for why the wages of women workers have remained largely unchanged are hard to understand. In their longitudinal study of two villages in north Bihar, Datta et al. (2014, pp. 1202-03) also found that the gender differentials in the wages had not surprisingly narrowed down in the 30-year period. At the same time, the wages were not same across all the villages and for women from all castes. For instance, as already noted in Chapter 7, in one of the study villages, a Mahadailt woman respondent informed me that during the peak agriculture season she worked in the nearby village where she earned Rs. 150 (US\$ 3), three times more than the wages in her village.

And while most men made at least one visit back to their origin villages during the year prior to the survey, and many timed the visit to coincide with the intensive tasks of *Buwai* (sowing) and *Katai* (threshing), working on the farm was not the main purpose of the visit for a large majority of migrants. Of the 239 migrants who were reported to have made at least one trip back home in the past year, only 34.7

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<sup>101</sup> The household survey data suggest that of the 132 migrant households who owned any land, only eight reported hiring the labour.



percent returned to help/work on the farm, whereas for the remaining 65.3 percent this was not the main purpose of visit. Instead, after a long work trip to the cities in which many migrants also worked overtime to earn and save more money, the home villages provided an escape from the hardship they endured in the cities. As Mahesh (name changed), a seasonal migrant to Hoshiarpur, Punjab where he worked as a 'spinning operator' in a cotton mill but whom I interviewed in his home village (Chakmahuda) when he was on a break, told me:

My work is very demanding. My daily shift is of eight hours but I often work between 10 and 12 hours every day of the week to earn overtime money. Sometimes I do a double shift of 16 hours. And when I go home after work I do not have anyone to interact with. Besides, the *seth* (employer) that I work for keeps changing my work shifts. One day I find myself working in the morning shift and the next day I am asked to do the night shift. This constant changing of shifts disrupts my body rhythm and I feel tired all the time. When I feel too tired and lonely I come to my village to relax. But I cannot stay here forever because I need money to run my household. So I go back again.

Similarly, a woman respondent grudgingly informed me:

My husband's job starts and ends at earning money but I am the one who has to do multiple jobs here including cooking, cleaning, washing, feeding kids, taking care of their education and health and managing the land and animals. Though he is out of the village for work for a major part of the year but even when he is around, he does not do anything.

Table 8.6 summarises survey data on the amount of time they spent 'before' and 'after' their husbands' migration on household agriculture and domestic activities. Core household activities like cleaning, cooking etc. remained the same, but those activities in which husbands and wives were more likely to share responsibilities

Table 8.6: Average minutes spent daily on different activities by migrants' wives<sup>102</sup>

Activity	Average time spent daily (in mins)	
	Before husband's migration	After husband's migration
Collecting water	27	27
Cleaning and mopping the house	45	46
Cooking	100	99
Washing clothes <sup>1</sup>	62	62
Collecting cooking fuel/wood	56	61
Taking care of animals	80	84
Child care	72	79
Agriculture work <sup>2</sup>	120	148
Leisure	165	157

Source: Primary household survey data, 2011-12.

<sup>1</sup>The survey also included 17 Mahadailts households from the washerman caste, locally known as 'Dhobi', who washed clothes of the other families, mainly village elites, in return for cash or in-kind wages (usually a few kilos of wheat or rice). Thus, the average daily time spent on washing clothes is likely to have an upward bias.

<sup>2</sup>Daily time spent on agriculture work is unlikely to be static throughout the crop cycle. Nonetheless, the household surveys for this study were conducted in April-May 2012 which was also the time of wheat crop harvesting in some of the study villages. And thus the average time spent daily on agriculture by women is quite likely to be close to the reported one during the harvesting period, though the number of left-behind wives who reported that they did agriculture work was very less (an issue addressed below), which may have resulted in an overall downward bias in average time spent.

<sup>102</sup> It should be noted that the total number of women (n) varied for each activity. This is because respondents either did not answer these questions or they were not applicable to them. For instance, many households had 'handpumps' installed in their premises which meant that they did not go out of the house to collect/fetch water. In fact, some women found this question rather silly and laughed at it. Pointing to the handpump in her house, one woman respondent giggled and asked me instead: "How long do you reckon it must take me to collect water from this kal [handpump]? In cities you have nals (water tabs), and in villages we have kals; not a lot of difference, you see!" The sample (n) for 'before' and 'after' husband migration categories also varied, and was somewhat higher in 'after' than 'before' as some women respondents reported taking on tasks, such as collecting fuel/wood for cooking, agriculture, that earlier their husbands performed. The number of women respondent (n) for 'before' and 'after' categories respectively, included: 85 and 86 for collecting water; 26 and 29 for animal care; 34 and 37 for agriculture work; 72 and 79 for child care; 35 and 47 for collecting fuel/wood for cooking; 116 for cleaning in both; 114 for cooking in both; and 114 in washing clothes in both.

(like child care and, particularly, agriculture<sup>103</sup>) increased noticeably. Also, leisure time fell.

These data, however, do not fully capture the participation of women in agriculture. That only 37 out of 144 migrants' wives reported that after their husband migration they did agriculture work is a gross underestimation. My village-level observations and in-depth interviews suggested that, barring women from the Forward Castes, most women engaged and laboured, albeit in varying degree, in household own-account agriculture (Figure 8.3).

Figure 8.3: Women from Backward Caste household sorting out onions after threshing in Gayaspur village



Source: Picture taken during fieldwork in Siwan

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<sup>103</sup> When left-behind wives were asked if there were any tasks their husbands performed before, 46 of the 144 women answered in the affirmative. These women were then asked to list the three most important activities their husbands did in the descending order of amount of time spent - from high to low – and time spent on each of the activity. For the first activity on which they reported their husbands spent the most time included: 20 women for agriculture work; 18 women for child care; 4 for livestock care; 3 for collecting food; and 1 for fetching water. The number of women who reported the second and third activity done by their husbands was 20 and 7, respectively. Given the small number of observation, the second and third activity is not reported here. For more information, see Section 23.13 in the *Household Survey Questionnaire*, attached as Appendix 4.

The source of this contradiction in survey data and qualitative insights may lie in the fact that most women in rural Siwan considered work in agriculture as rather ancillary, and often part of their domestic responsibilities. For instance, during my interview with a woman respondent who worked on family-owned land but did not think that it needed to be counted as separate from her domestic duties, she remarked: “I do tend to our agricultural land. But just like this house, that is our land too. So it is part and parcel of my domestic work. Is not it?”

This is also reflected in the responses of women on their occupation. Of the 371 women in the working age group of 15 to 59 years belonging to 197 surveyed migrant households, 75.7 percent (281 women) reported their “primary occupation” as ‘domestic work’, and only 3.5 percent (13 women) reported that ‘agriculture labour in household-owned land’ as their primary occupation. Even the women reporting agriculture work in family-owned land as their “secondary occupation” was also a meagre 5.7 percent (21 women).<sup>104</sup> This does not reconcile with the survey data on the sex composition of available household labour. The data show that of 526 individuals among migrant households in the prime working age groups of 15 and 59 years (excluding migrants), there were 371 women and 155 men. In other words, there was an average of 2.4 women per man in each migrant household. (A comparison with non-migrant households suggests that of the 582 individuals in the same age group, the number of women equaled men i.e. 291 women and 291 men). Indeed, in all the 10 case study villages there was some degree of “feminisation of agriculture”.

However, participation of women in agriculture varied by familial structure, caste, economic class, and age. Across all caste groups, young women in joint families largely remained indoors and rarely stepped out to work in the fields. And usually women from relatively richer higher caste families, such as Rajput or Brahmins, did not do agricultural work, and instead the family land was leased out to the lower caste families in the same village. It was mainly the women from the lower

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<sup>104</sup> Women among non-migrant households also reported ‘unpaid domestic work’ as their main occupation. Of the 662 women aged 15 to 59 years belonging to 392 surveyed households, 74.2 percent (491 women) reported their primary occupation as ‘unpaid domestic work’.

backward castes, such as Harijan and Mahadalits, who worked on owned land as well as being agricultural labourers and sharecropper farmers. The participation in farm work of women from the cultivator caste groups of Koeri and Kushwahas (Backward Castes) was no less significant, and many among the non-migrant households also worked alongside their husbands in the fields. However, unlike the Mahadalit women, they did not work on the others' land as labourers though they also worked as tenant farmers on leased in land.

And while male migrants tended to send their earnings home, this was not universal. Among the most important reason was migrants' spending on alcohol, which left little money to remit. In a few cases, migrants' wives also alluded that their husbands lived with other women at the destinations. Women in such non-remittance receiving households had an added burden of feeding their families in the villages. This was difficult given the relatively scarce employment opportunities outside of agriculture. In the survey, 26 out of the 144 migrants' wives reported working in wage labour activities outside of their owned land for cash or in-kind incomes (a few kilos of the rice or wheat), though 20 of these women worked in agriculture as either farm labourers (17 women) or sharecroppers (3 women). Some women borrowed money from relatives and neighbors to keep the household going. Despite the hardships, rarely did these women talk foul of their husbands, and instead wished for their wellbeing. For instance, during my interview in Baguani village with Ruksana (name changed), whose husband worked as a construction migrant worker, and who alluded to the fact that her husband now lived with another woman in the city (her neighbours confirmed it), when I asked her how much money does her migrant husband send every month, she burst into tears and replied:

My husband has been ill for last three months and thus has not been able to work. But even when he is working, he hardly sends any money home. He uses all his earnings on alcohol and has little left to send. I always have to borrow money from neighbours, relatives, friends which keeps us alive. But all I want at this moment is for him to get better.

Box 8.1: More autonomy or more responsibility: understanding the different impacts of male migration through the tale of two women

**I. Meena Devi**

Meena Devi (name changed) is a 32-year-old married woman from Chakmahmuda village in Maharajanj Block. She was born in an upper caste Rajput family, and is married to the man from the same caste. Her husband, Rajbinder Singh (first name changed), is a migrant. Rajbinder's first migrated for work to Delhi after the marriage. He spent six years in Delhi and Meena lived with him for the most part (Rajbinder and Meena were 18 and 16 years old respectively when they got married). However, two years after the couple had their first child, a daughter, they moved back to the village; they now have four children (three daughters and one son). Rajbinder inherited two acres of agricultural land from his father, and savings from six years of migration allowed him to add another half an acre. The family lived off from the cash income from the agricultural land. However, Meena told me that Rajbinder did not like farming, and for the past three years he has been working in a cellular company in Patna while she and children stay in the village. Being from the Rajput caste, Meena does not work on farms, and the agricultural land has been leased out to three different lower caste families for sharecropping farming. The family gets half of the total produce in return.

Patna is approximately 150 kilometers south of Chakmahmuda. Given the short distance, Rajbinder comes to the village at least once in two months. In fact his decision to work in Patna was so that he could be close to his wife and children as they are no other elder members in the family. However, his visits are short, lasting only for a few days; he mostly visits on the weekends. In the absence of her husband, Meena manages the household. She does not work on the farms and in any other cash income activities but she told me that she felt more independent now than before. She now goes to the village market to make purchases for the house which she would not do earlier when her husband was living in the village. She also takes major family decisions on matters, such as children's education, household finances, though she calls her husband and takes his opinion. She told me that though her husband is very supportive of her decisions, she keeps him in loop to keep the relations cordial and harmonious. Speaking in Hindi, she told me: *Do aadmi mein agar rai ho jaye toh behtar hai* (It's always better if the two of us discuss and decide on things jointly).

Meena is also a GP Ward Member (member of the Village Council), and she also participates in Panchayat activities and meetings. Meena told me that her husband is looking for a house in Patna and their long-term plan is to move and settle there. They intend to sell part of their agricultural land to buy a house in Patna, and keep some land for the dowry of their daughters' wedding.

**Contd...**

## II. Noorjahan Begum

Noorjahan Begum (name changed), a 45-year-old woman, is also from Chakmahmuda village. She belongs to the Mahadalit caste of Muslim-Dhobi (washerman), a socially and economically backward caste and occupational group. Her current family includes her partially disabled husband, three daughters and two sons. The family of seven has hand-to-mouth existence, and they live in their kuctha bamboo hut. Following her marriage, Noorjahan's life has been full of economic hardship. Her husband was a migrant construction worker but a few years ago he met an accident at the work site. The accident caused severe injuries to one of his legs, and he has been in the village ever since. He is also an alcohol-addict and even when he earned money, he spent most of it on drinking and seldom sent money home. He has recently been diagnosed with a damaged liver. Two months ago, Noorjahan sent her 20-year-old son to Delhi for work. But he has not yet started remitting money.

Noorjahan alone has the responsibility of feeding seven members on her shoulders. As a sole breadwinner, she single-handedly does multiple on-farm and non-farm jobs. She farms five katthas (0.1 acre) of family-owned land, sharecrops same-sized tiny land parcel that she has leased in from the Rajput family in the village, works as an agricultural labourer at the wage rate of Rs. 30 a day (for 4-5 hours), and being from the washerman caste, also washes the clothes of families in the village (her daughters help her in washing work). Despite all the work, rarely does Noorjahan's family have days when they eat three meals a day, and there are days when they do not eat any food at all. The family has a BPL ration card which allows them access to the subsidised foodgrains. However, food ration are never regularly distributed.

Noorjahan's bigger concern however is the dowry money for the wedding of her three daughters. She told me that her caste Muslims earlier had the practice of 'mehar' (brideprice) in which the bride side received the money. This, however, has changed in recent times. Initially started by the wealthy Muslim families who considered dowry as 'gift' to their daughters, the practice has now tricked down to the poor families. Noorjahan's only hope is her son who has recently migrated to Delhi. She wishes that he does not follow the footsteps of his father. Despite all these difficulties, Noorjahan wore a smile. At the end of the interview, she told me: "I feel defeated but crying does not help. So I try to make peace with my situation which I know will probably not change anyway."

Thus, the outcomes of male migration were not uniform – far from it. The individual experiences of women differed widely, and whether migration of men brought about greater freedom in decision-making or more work was guided by several intersecting variables such as social caste and economic class (see Box 8.1).

### ***Changes in family structure***

It is also important to point out that the dynamics of migration, gender and family relations were also highly complex. An emergent dynamic of the effects of migration from Siwan that deserves particular attention here is that migration is also leading to changes in familial structure and living arrangements due to intra-family tensions over cash incomes. Migration of young male members was still largely undertaken within the broader context of the joint family structure and remittances (and local incomes) were jointly shared by all household members. This is however no longer always the case. I also found a marked reluctance among migrants and their wives to share the remittances with the economically less productive or unproductive members of the households such as migrants' brothers and their families. This was particularly the case among the poor families that had no land or other resources in the origin, and thus sharing of remittances did not bring any benefits to the immediate family. The household survey data also provides some insights on this issue. Figure 8.4 shows the type of family by the landholding status of the surveyed migrant households. The data suggest that whereas 65 percent of households with no land were nuclear entities, the proportion of nuclear households among the households with land size of an acre or more was only 14 percent. Indeed there is some consistent relationship between family type and landholding status: the percentage of nuclear households decreases and joint households increase in a progressive fashion as we move from the categories of landless to households with an acre or more land.<sup>105</sup>

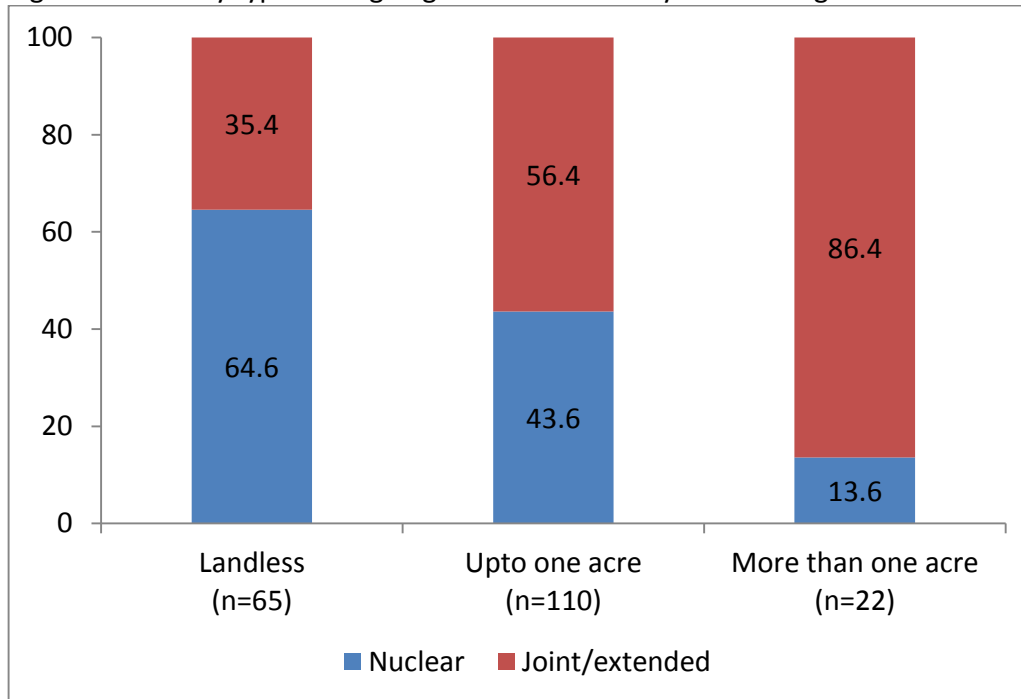
The cross-sectional nature of the household survey means that the quantitative data is not adequate to infer the long-term changes in the family organisation. However, detailed personal histories of several households provide evidence in this

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<sup>105</sup>My fieldwork also suggested that some of the poor households also separated in order to avail themselves of the separate BPL/AAY cards and the benefits, such as subsidised ration, under the PDS scheme that accompanied it.



Figure 8.4: Family type among migrant households by landholding status



Source: Primary household survey data, 2011-12.

regard (see below). Moreover, findings of longitudinal studies conducted in other parts of India also suggest that the emergence of disparate incomes and divergent economic interests are associated with changes in family type and living arrangements. In her longitudinal ethnographic study of the two villages of Dalena and Mangala in Mysore District in the southern Indian state of Karnataka, carried out at the interval of 15-year period (1955 and 1970), Epstein (1973) found the same. Reporting her findings, she noted:

Landless families and those with insignificant size landholdings have for the most part remained elementary units. On the other hand, growing cash income has increased the tensions within joint families in the middle range. A considerable proportion of families which during the last fifteen years have extended to three generations have either already been partitioned or are on the verge, or in the process, of breaking up.

(Epstein, 1973, p. 201)

My fieldwork suggested that these changes in the family structure – from joint/extended to nuclear – also occurred among households where all the young

males, brothers in this context, were earning migrants in the cities but where there were differences in their earnings. These households typically included the ones without the old male patriarch. For instance, in my interview with Kanti Devi (name changed), a 60-year old widow who had three sons who all worked outside the village (eldest one in a textile mill in Kolhapur, Maharashtra; middle son as a truck driver with base in Delhi; and youngest one as a tempo driver in Ranchi, Jharkhand), she told me her middle son made the most money and contributed the most to the family which was not acceptable to his wife. Kanti's daughter-in-law wanted the extra money to be spent on her children's education instead of contributing to the family pool that had to be equally distributed among all members. This led to family squabbles, and all the brothers separated later.<sup>106</sup>

The story of Bhola Prasad's (name changed) family is another case of intra-household conflicts over incomes. An old man in his early 60s from cultivator 'Kushwaha' caste (Backward Caste in contemporary Bihar), Prasad owns four Beegha land (roughly 2.5 acres). His three married sons are all seasonal migrants. While two of the sons (and their wives and children) live with him as part of the joint family and help him on family farms, the youngest son, who spends most time in the city and earns more than the other two brothers, separated from the joint family a few years ago. The wife and children of this son now live with his in-laws, and whenever he returns to the village, he also stays there. Prasad told me that all was well in the family until his wife fell ill. For his wife's treatment (who later died), Prasad had to mortgage 11 Katthas of land (0.4 acre)<sup>107</sup> to take a cash loan from the local moneylender which he has not been able to repay. While the family earns some cash income from the agricultural produce from the owned land, it is not enough to repay the loan. (Over the years, the family size has also increased (his grandsons) which means that more of the agricultural produce is used for their own

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<sup>106</sup> Kanti did not reveal any of this in the first hour of my interview. In the beginning she appeared content with her family and situation but when I was able to build some rapport, she burst into tears and narrated this story of her family break-up. Individual interviews with two of her three daughter-in-laws (the third one was not present at the time of interview) also suggested the primacy of money matters as the cause of changes in the family structure, though, unlike Kanti, they expressed happiness over this change.

<sup>107</sup> Kattha is a local land measurement unit in Siwan. 27 Katthas equal to one acre.

consumption.) From the remittances his three sons sent (two of them still do), Prasad was saving money to get the family land back. However, his youngest daughter-in-law asked her husband to not contribute anything to the joint household income pool over which the tensions erupted. His youngest son now sends remittances to his wife at her natal place. The youngest son has now also started asking for his share of land from the joint property. Prasad however thinks that after what his son did, he is not bound to give him any land. His decision to not give his son any land, however, it appeared, was an effort to save the household from being broken down further as this would mean that he would then have to give his other two sons their shares of land. Prasad told me that this is inevitable after he is no more but he does not want that to happen as long as he is alive.

Similarly, the story of a joint family of Sahs (Backward Caste), a relatively wealthier household which stood on the verge of break-up, is another example. The Sah household comprises of three brothers and their families, who at the time of fieldwork in 2012, all lived under the same roof, had a shared kitchen, and joint income and expenditure. Two of the elder brothers live in the village with their families and mind the family farm land of 10 acres. The youngest one is a labour migrant in Saudi Arabia, but his wife and one son live in the same joint household. He remits money home to his eldest brother (who narrated his family's story to me), who is the head of the household, and also some of his earnings to his wife. However, his wife's spending patterns and money management has caused suspicion that the migrant brother sends more money to his wife than to his brother for the joint household pool. As an example, I was told that whenever her son catches cold or fever, she takes him to the State Capital of Patna (160 kilometers south of Siwan) to seek treatment, whereas the children of her two brother-in-laws see the doctor in the Block hospital for the same health conditions. This has bubbled tensions in the family, and I was told, after the migrant brother returns, they will divide the shared land and property and split. There were numerous other stories of families splitting up due to rising tensions over cash management. As one respondent in one of the survey villages summed up:

The number of families in the village increases almost every day. How do you think that happens? These are not the new families who are settling in

the village from the outside (who would come here to live!) but the old ones who are splitting among themselves. And money is the biggest evil.

It is important to note that separation did not mean that families moved away from the house they previously lived in. While a few migrants with money and homestead land elsewhere moved out of the house and some also moved to their in-laws places (eg. Prasad's son, as noted above), most of them dwelled in the same house, albeit each family now managed their own finances and had separate kitchens. These new forms of familial relations in rural Siwan could be most aptly characterised as the ones in which *the roof is shared but income and financial responsibilities are separated* (Figure 8.5).

Figure 8.5: Emerging familial arrangement in Siwan: a dwelling inhabiting three brothers and their families who all had different kitchens



Source: Picture taken during field surveys in Siwan

### **Male migration, left-behind women and household food security**

Thus far, I have said little about whether and how these alterations in intra-family relations and gender roles as a result of male migration have a bearing on household food security outcomes. In this final major section of this Chapter, I therefore attempt to engage with this question directly. In particular, my focus here

will be to highlight the ways in which the phenomenon of left-behind women and women-headed (*de facto*) households relate to household food security.

There is growing interest in the academic and policy circles on the relationship between the gender of the household head and household food security. However, the extant literature on the relationship between the two is rather mixed and contradictory. On the one hand, there is much literature that suggests that because of widespread gender discrimination in access to social and economic resources and opportunities, households headed by women fall disproportionately among the poorest sections of the society (Buvinić & Rao Gupta, 1997)<sup>108</sup> and thus are more prone to food insecurity (Kassie, Ndiritu, & Stage, 2014). On the other hand, empirical evidence also suggests that when income factors are taken account of, female headship has positive impacts on the food and nutrition outcomes of the individual members, largely because of different consumption behaviors of men and women. When women control household income and resources, they tend to utilise them better than men in order to maximise the household welfare outcomes (Quisumbing & McClafferty, 2006; UNICEF, 2006), with these effects more pronounced among poorer households (Kennedy, 1989; Kennedy & Peters, 1992; von Braun, de Haen, & Blanken, 1991; von Braun, Puetz, & Webb, 1989; for a useful review article, see Buvinić & Rao Gupta, 1997).

The survey data gathered for the present study suggests that the effects of transfer of household headship to women and gender of household head on food security are not direct and play out through numerous intervening factors. Given the heterogeneity of the surveyed sample of left-behind women and female-headed

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<sup>108</sup> Buvinić and Rao Gupta (1997) carried out a review of 65 studies, 61 of which examined the association between female-headship and household poverty across different countries and using different poverty measures (such as households' per capita income and consumption expenditure, ownership of land and assets, access to services). The authors found that 38 of the 61 studies (58 percent) suggested that households headed by women were overrepresented among the poor (p. 263). Indeed, their own assessment of female-headed households in Chile revealed the same findings. However, the evidence on higher incidence of poverty among female-headed households is rather ambiguous because of the methodological issues involved in defining the family headship and wide heterogeneity within the female-headed households (Chant, 2003; Sandra, 1989).

households along the lines of caste, income, amount of remittances received, control over household finances, and indeed the experience of migrants themselves in the cities, it is difficult to decompose the relative effects of each of them here. Nonetheless, the effects of three mutually inter-linked factors through which gender of the household head mediate food security outcomes deserve mention. These include: i) income/economic status of the household; ii) size of landholdings owned by the household; and iii) family structure. The discussion below attempts to highlight the influence of each of these variables on food security outcomes.

### ***Interactions of income and gender***

Research findings of a number of studies indicate that as compared to men, women tend to spend a greater share of their income on food (*inter alia*, Engle, 1988; Guyer, 1980). However, this is often a reflection of overall higher incidence of poverty among female-headed households. Generally, poor households tend to spend a larger proportion of their income on food, and cross-country evidence suggests that the income elasticity of demand for food declines with increase in income and expenditure (Alderman, 1986).

In order to understand how the gender and income of households interact with the food expenditure patterns of the surveyed migrant households, Table 8.7 presents the data on i) average total MPCE, ii) average MPCE on food and, iii) average share of food expenditure in total MPCE, by the sex of the household head across the MPCl tertiles of low, medium and high. As already noted in Chapter 7, the MPCl tertiles here are used as a proxy for household economic status i.e. households in the lowest economic tertile are relatively poorer than the households in the medium category, who in turn are poorer than their counterparts in the high MPCl tertile. The cut-off points for MPCl tertiles obtained from the survey data include Rs. 485.12 and Rs. 767.12.

The survey data confirms a decline in the proportional share of food expenditure with a rise in income. As is evident from the data in Table 8.7, for both male-headed and female-headed households the average percentage share of expenditure on food declines from low to high income tertiles. At the same time the food

expenditure increases in absolute terms from the low to high income categories, which is a product of income.

Importantly for this study, the data show that the gender of the household head appears to significantly affect food expenditure in the highest tertile, but not for the lowest and middle tertiles. Female-headed households in the top tertile had average MPCE on food which was 20 percent (Rs. 79) higher than the male-headed households.<sup>109</sup>

Table 8.7: Average food expenditure among migrant households by MPCl tertiles and gender of household head

MPCl tertiles	Male-headed households (n=95) <sup>1</sup>			Women-headed households (n=102) <sup>2</sup>		
	Total average MPCE (In Rs.)	Average MPCE on food (In Rs.)	Average share of food in total MPCE (%)	Total average MPCE (In Rs.)	Average MPCE on food (In Rs.)	Average share of food in total MPCE (%)
Low	587	265	45	511	231	45
Medium	743	274	37	792	293	37
High	1473	400	27	1380	479	35

Source: Primary household survey data, 2011-12. MPCl = Monthly Per Capita Income; MPCE = Monthly Per Capita Consumption Expenditure.

<sup>1</sup>The number of male-headed households in low, medium and high MPCl tertiles was 45, 37 and 27 households, respectively. <sup>2</sup>The corresponding number of households headed by women was 16, 37 and 49 households in low, medium and high income tertiles.

Based on my fieldwork and available literature, there would appear to be at least two explanations for these expenditure differentials. Firstly, the effects of women spending on food only are realised only in households that are economically better-off because women in these households had less pressure to use and save money for non-food items or future needs, such as daughters' wedding, as compared to

<sup>109</sup> It is worth noting, however, the number of households in low, medium and high tertiles varies by the gender of the household head (Note 1 and 2 in Table 8.7). Also, the average expenditure may hide the variations across the households, though because of the small observations the differences are not going to be large; also there were not many extreme income values in each of the MPCl so as to distort the average.

women from poor households. This is clearly reflected in the individual cases of two stay-behind wives of migrants in Box 8.1. Thus, while Meena from the landowning, Rajput caste informed me that they intended to sell part of their land for their daughter's wedding, Noorjahan, a woman from the lower-backward caste, had no such option (5 Katthas of land would be just enough for the dowry of one of her daughters and that would make the family even more prone to food insecurity).

Secondly, many women with migrant husbands reported that their husbands spent money on alcohol whereas because of the social-cultural norms women did not drink and thus their expenditure on this head was nil. The only exceptions included women from the Bansfor and Mushahar communities; however, as already noted in Chapter 7, the propensity of migration among these social groups was not very high. (All the four households in the survey sample belonging to these castes were non-migrant households). The most common alcoholic beverage consumed by the local is the traditional palm wine, locally known as Tadi (see Figure 8.6). (Most men in Siwan also consumed chewing tobacco.)

Figure 8.6: A Tadi-seller in Chakmahnuda village with his patron



Source: Picture taken during field surveys in Siwan



The survey did not collect expenditure data on alcohol and thus it is not possible here to provide the statistics on the amount and share of expenses incurred on alcohol. In any case, the surveys were conducted with rural households and spending of individual migrants at the destinations, where they spent a major part of the year, was not possible to capture. However, a number of studies conducted in different parts of the world provide strong evidence in this regard. Analyzing the intra-household resource allocation and consumption choices made by farm households in rural Cote d'Ivoire, a country where men and women farm separate land plots, Duflo and Udry (2004) found that rainfall shocks that increased the output of crop (yam) cultivated by women individually was associated with a shift in the expenditure on food, while for shocks that increased the output of yam crops cultivated by men had no effect on the food purchase; and a greater proportion of men's income was used on alcohol compared to women's. In Malawi, detailed analysis of the households' expenditure patterns revealed that while most female-headed households spent a larger share of household budget on food, they spent 25-50 percent less on alcoholic beverages as compared to male-headed households (Peters, Herrera, & Randolph, 1989). In the case of India, a recent study by the World Health Organisation revealed that whereas 90 percent of Indian women abstain from alcohol throughout their lives, this percentage is 60 percent for Indian men. Furthermore, on average a male drinker aged 15 and above drinks three times as much alcohol a year (33 liters) as women of the corresponding ages (Sinha, 2014).

My fieldwork also revealed that in households where women had some control over money, spending on food and children's education was prioritised (Table 8.8 and Figure 8.7). Spending on children's education was guided by their desire that education will enable them to break the shackles of poverty and misery that they have witnessed throughout their lives. And although across the survey sample there was a much greater preference for the education of sons, because of cultural norms, interviews with some women also suggested that they wanted to educate their daughters. However they were mainly better-off, upper caste households. For instance, Meena Devi (mentioned above in Box 8.1), whose eldest daughter was in 9<sup>th</sup> standard, told me:

*Jab mein bazaar mein jaati hai or waha par aurat daroga ko dekhti hu, mein bus yehi sochti hu ki meri betiya bhi pad-likh kar badi afsar ban jaaye* (When I see women cops in the market, I wish that my daughters also study well and occupy the positions of power).

Table 8.8: Average food expenditure among migrant households by women's control over money

	HHs where women managed the money independently	HHs where women did not manage the money independently
Total average MPCE (In Rs.)	1022	933
Average MPCE on food (In Rs.)	396	338
Average share of food in total MPCE (%)	39	36
<b>Total number of households (n)</b>	<b>38</b>	<b>106</b>

Source: Primary household survey data, 2011-12.

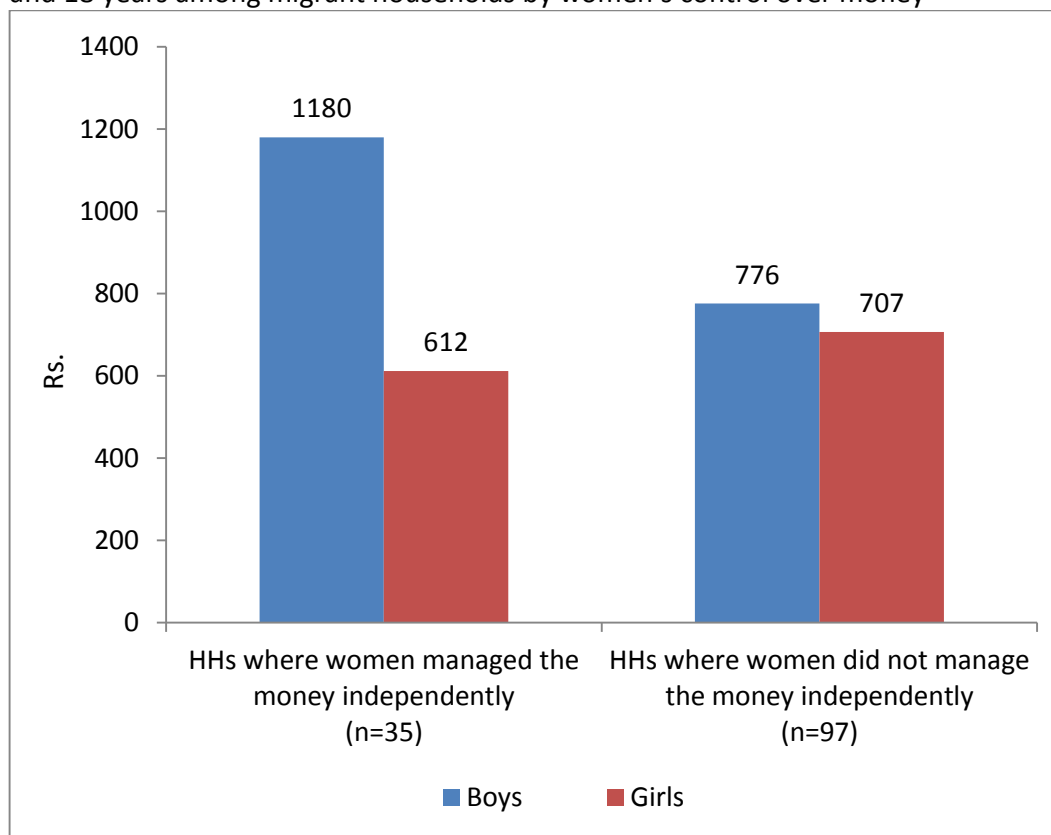
Note that this table has been computed based on the responses of left-behind women on the overall money management of money in the household when their husbands were away (see Table 8.5 above). In the survey, left-behind women were asked who decided what to do with the money in the household when their husbands were around and when they were away. In households where women respondents replied they alone took the decisions are considered to be the households where women managed the money independently. Figure 8.7 below also follows the similar categorisation

Some women, mainly from the better-off households, informed me that when their husbands were outside the village, they went to local markets to buy fresh/seasonal vegetables. But they did not venture out of the house much when their husbands were around, including to the markets. I do not have quantitative data on whether and how this may have a bearing on food expenditure and household food security, however, a study of 204 rural households in three districts of Northern Ghana found that female-headed households spent 1.19 Ghanaian cedi (roughly 50 US cents) more per week on fresh vegetables than the male-headed households (Meng, Florkowski, & Kolavalli, 2012).

Puzzlingly, however, the fact that female-headed households in the high income tertile spent a greater share and amount of money on food, this did not necessarily

translate into better food security among the female-headed household vis-à-vis their male headed counterparts.

Figure 8.7: Average annual expenditure on education of per child aged between 6 and 18 years among migrant households by women’s control over money



Source: Primary household survey data, 2011-12.

As is evident in Table 8.9, the effects of better economic status of the household on food security are quite discernable. Irrespective of the gender of household head, the proportion of households declines on all parameters of self-reported food inadequacy and food unavailability, except the one on affordability to consume food only through subsidised food rations from PDS (for this discrepancy, see the discussion below and footnote 20). However, a comparison of food security situation by gender of household-headship suggests that on all indicators and across all the MPCIT tertiles, a greater proportion of female-headed households reported facing food inadequacy and food unavailability.

Similarly, analysis of household food diversity by the gender of the household head also suggests that male-headed households fared better than female-headed households. Based on a Principal Component Analysis of 30 food items that

Table 8.9: Household food security among migrant households by gender of household head and MPCl tertiles

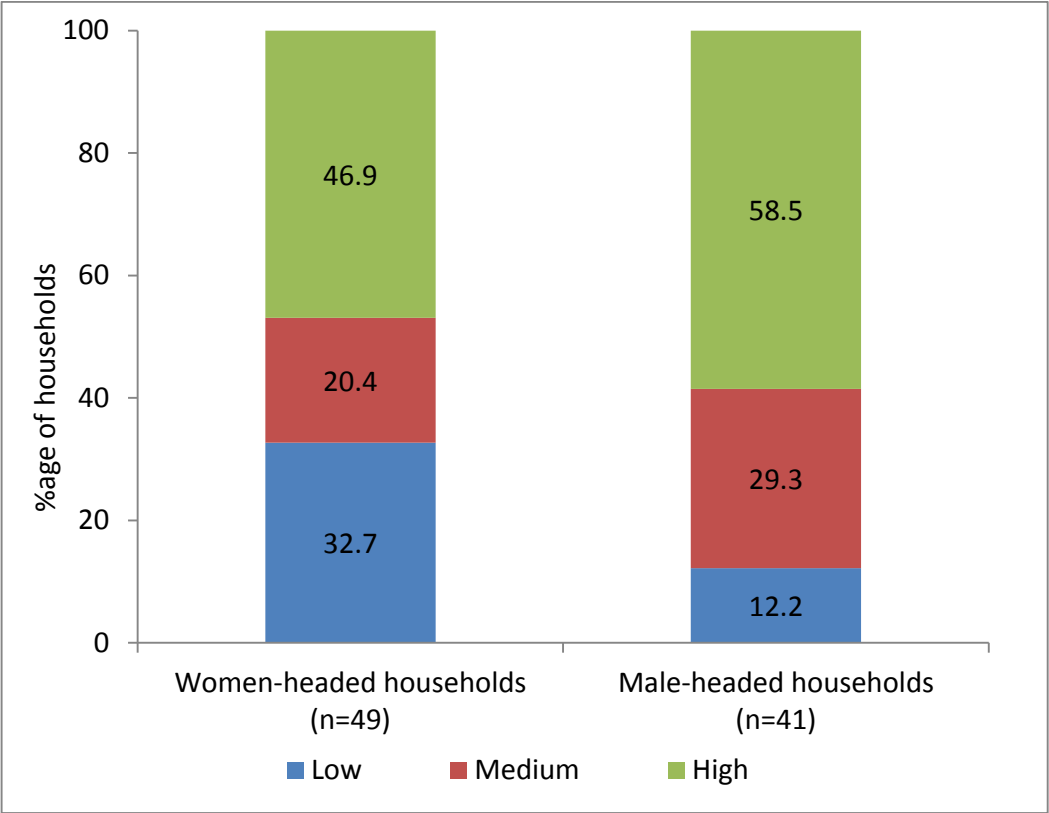
	MPCl tertiles					
	Low		Medium		High	
	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed
<b><i>Food was not enough (defined by the following situations)</i></b>						
Household ate meals without vegetables	46.4	93.8	50.0	54.1	17.1	26.5
Household could only afford to consume food from PDS <sup>1</sup>	14.3	18.8	23.1	18.9	14.6	8.2
Household members consumed single meal a day	32.1	18.8	11.5	18.9	4.9	6.1
If all three main food categories (cereals, pulses, vegetables) were not available	53.6	87.5	46.2	56.8	14.6	28.6
If household members got less food than the amount to satiate hunger	53.6	68.8	42.3	48.6	14.6	18.4
<b><i>Food was not available (defined by the following situations)</i></b>						
Household borrowed money from friends and/or relatives to buy food	17.9	37.5	19.2	21.6	4.9	8.2
Household borrowed money from local traders, money lenders or lifted ration on credit	39.3	43.8	38.5	40.5	12.2	18.4
Household sold jewellery or other personal assets to buy food	0.0	0.0	0.0	2.7	0.0	0.0
Consumption rationing (members ate less food than usual)	60.7	81.3	46.2	51.4	14.6	22.4
<b>Total number of households (n)</b>	<b>28</b>	<b>16</b>	<b>26</b>	<b>37</b>	<b>41</b>	<b>49</b>

Source: Primary household survey data, 2011-12. All data in percentage terms.

<sup>1</sup>See footnote 105.

surveyed households reported consuming during the week before the survey, Figure 8.8 shows the migrant households that were in the high MPCl category (MPCl of Rs. 767.13 or more) in the food diversity tertiles. The data in Figure 8.8 shows that the proportion of female-headed households is greater in the low food diversity category and lower in high food diversity tertile as compared to households headed by men.

Figure 8.8: Food diversity among migrant households in the high MPCl tertile by the gender of the household head



Source: Primary household survey data, 2011-12.

Although at face value these data on differentials in household food security by the gender of the household head do not reconcile with qualitative data on women prioritising spending on food, buying fresh vegetables etc., this is not entirely surprising. Indeed, findings of a recent study based on the primary household survey data of 605 farm households spread across 88 villages in Kenya found that a much greater proportion of surveyed female-headed households were food insecure than their male-headed counterparts. Furthermore, the study revealed a shocking, though not entirely surprising, finding that if the female-headed

households were to remain the same but had one male member, the fact alone would reduce their food insecurity by an average of 3 percent (Kassie et al., 2014).

One important reason for greater food insecurity among female-headed households is relative disadvantages of women in accessing the government-run welfare services such as food rations. A total number of 64 female-headed migrant households did not have BPL and AAY ration-card, and 51 migrant households headed by men were without these ration cards.<sup>110</sup> As already noted in Chapter 6, in the absence of men, many women found it hard to press their claims on BPL cards and PDS rations, and those who did were often unheard and manipulated.

### ***Effects of familial structure and living arrangements***

The structure of family has complex interactions with household food security. My fieldwork and survey data suggest in general women in nuclear families enjoyed greater autonomy and had a greater role in household decision-making compared with joint/extended families where other males were present. Also, the average per capita monthly food expenditure among 75 female-headed nuclear households was Rs. 388, which was higher than women-headed joint households (Rs. 331; n=27). It was also greater than both the nuclear (Rs. 309; n=18) and joint households (Rs. 330; n=77) headed by men. However, the food security outcomes were better among joint and extended households.

Table 8.10 shows the different self-reported food security indicators for female-headed migrant households by the type of living arrangements. As is evident, although nearly three-quarters of all female-headed migrant households were nuclear units, the female-headed joint/extended families fared better than the nuclear households on all parameters of food security (except the one on PDS because of the reason explained above).

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<sup>110</sup> A break-up by MPCIT tertiles of households without BPL/AAY cards or no cards at all included 18, 8 and 25 households in low, medium and high tertiles, respectively, among male-headed households and 12, 25 and 27 households in low, medium and high category, respectively, headed by women did not have these ration cards. This may also explain the discrepancy in Table 8.9 that shows the relative advantage of female-headed household vis-à-vis male headed ones in medium and high MPCIT tertile, because of the lower number of observations.

Based on survey data and fieldwork observations, there are at least three explanations for why this may be the case. Firstly, as already noted earlier, the joint families fared better than the nuclear families in terms of land size (Figure 8.4 above, and Table 7.6 in Chapter 7). Secondly, the nuclearisation of rural households in Siwan over income tensions notwithstanding, the joint household structure seemed to provide a greater buffer against income and food shocks. Of the 27 female-headed joint households, one-third had two or more male migrants; the corresponding percentage for female-headed joint households was 13 percent. From the perspective of household food insecurity, this meant that if one person was not able to remit money home in a month, the income of the other provided a cushion.

Table 8.10: Household food security among female-headed migrant households by type of living arrangements

	<b>Nuclear HHs (%)</b>	<b>Joint HHs (%)</b>
<b><i>Food was not enough (defined by the following situations)</i></b>		
Household ate meals without vegetables	52.0	33.3
Household could only afford to consume food from PDS <sup>1</sup>	13.3	14.8
Household members consumed single meal a day	16.0	3.7
If all three main food categories (cereals, pulses, vegetables) were not available	50.7	40.7
If household members got less food than the amount to satiate hunger	42.7	22.2
<b><i>Food was not available (defined by the following situations)</i></b>		
Household borrowed money from friends and/or relatives to buy food	21.3	7.4
Household borrowed money from local traders, money lenders or lifted ration on credit	30.7	29.6
Household sold jewellery or other personal assets to buy food	1.3	0.0
Consumption rationing (members ate less food than usual)	45.3	33.3
<b>Total number of households (n)</b>	<b>75</b>	<b>27</b>

Source: Primary household survey data, 2011-12

<sup>1</sup>47 of the joint female-headed migrant households had either APL card or no ration card, and this number was 17 for nuclear female-headed migrant households.

Thirdly, and this is important, in nuclear households it was the wives of migrants who acted as the *de facto* household head, whereas in joint female-headed households it was mainly the mother-in-laws. The age and seniority of the women mattered insofar as the participation in affairs outside was concerned. For instance while women in general faced greater difficulties to avail ration cards and subsidised rations compared with men, due to socio-cultural reasons the younger wives found it even harder compared with older women to access these benefits. Also, as noted earlier, many young women did not work outside the home in any income-generating activities or on their owned land, which may affect the food security negatively. For instance, the survey data suggest that of the 26 women who reported working in cash-income earning activities, only three were below the age of 35 years though it should be noted that the households these women belonged to were invariably among the poorest, an issue to which I now turn.

#### ***Women's work participation and food security***

Finally, it is useful to address the question of how participation of women in non-domestic spheres of agriculture work relate to household food security. Using the nationally-representative data from India's NFHS, Headey et al. (2011) examined, among other things, the links between occupation and women nutritional status and found that women agriculture workers had the worst nutritional outcomes in terms of BMI compared to women who worked in other occupations, including unskilled manual labour. It was difficult to shed light on this phenomenon in the present study because even though most women worked in agriculture, very few women reported it as either their 'primary' or 'secondary' occupation. Nonetheless, as mentioned earlier, in the survey 26 of the 144 migrants' wives reported working in income-generating activities outside of own-account agriculture, though most worked as agricultural labourers. It is, therefore, useful to see how the households these women belong to fare in terms of food security vis-à-vis the households where migrants' wives did not work in any income-generating activities other than household agriculture.

Table 8.11 presents food security among female-headed migrant households by women's involvement in income-generating activities. As is evident, the households



where women reported working had invariably higher incidence of food insecurity than the ones where women did not work.

Table 8.11: Household food security among female-headed migrant households by women's involvement in income-earning activities

	HHs where wives did not work in income earning activities (%)	HHs where wives worked in income activities (%)
<b><i>Food was not enough (defined by the following situations)</i></b>		
Household ate meals without vegetables	39.8	61.5
Household could only afford to consume food from PDS <sup>1</sup>	13.6	15.4
Household members consumed single meal a day	13.6	19.2
If all three main food categories (cereals, pulses, vegetables) were not available	39.8	69.2
If household members got less food than the amount to satiate hunger	32.2	57.7
<b><i>Food was not available (defined by the following situations)</i></b>		
Household borrowed money from friends and/or relatives to buy food	13.6	30.8
Household borrowed money from local traders, money lenders or lifted ration on credit	27.1	46.2
Household sold jewellery or other personal assets to buy food	0.0	0.0
Consumption rationing (members ate less food than usual)	38.1	61.5
<b>Total number of households (n)</b>	<b>118</b>	<b>26</b>

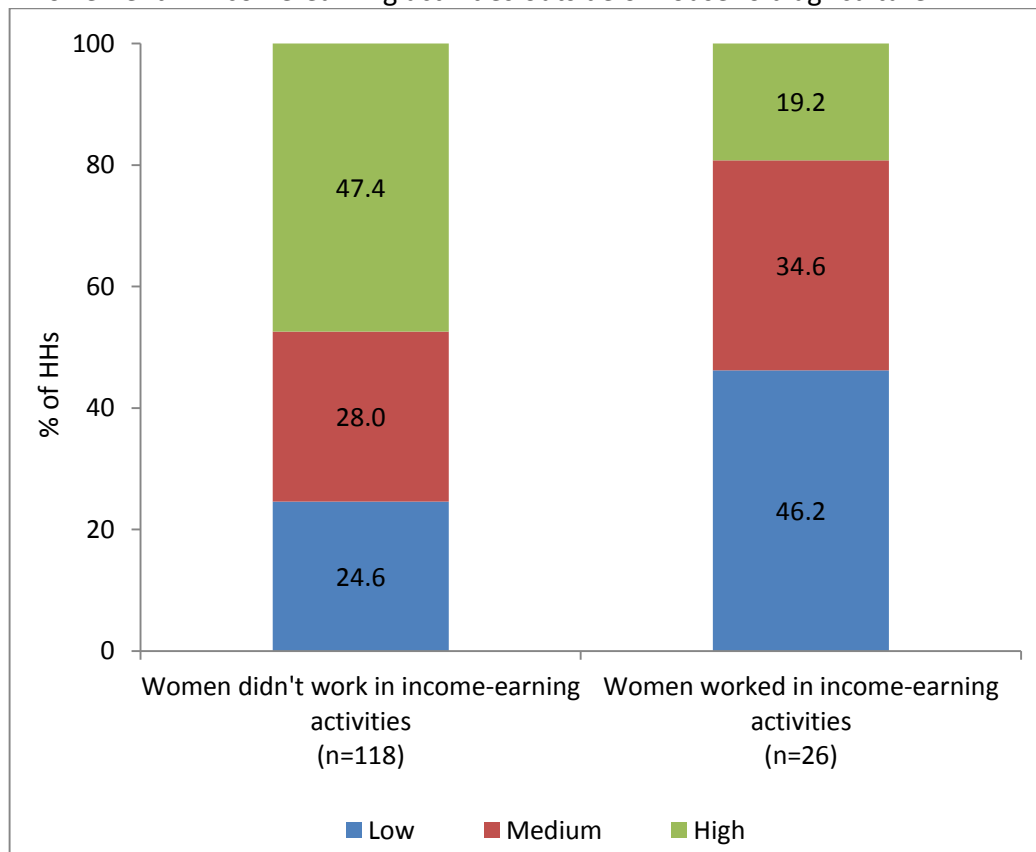
Source: Primary household survey data, 2011-12

<sup>1</sup>Among the households where migrant wives worked, 74 had either APL card or no card and this number was 16 households among those where women worked.

A comparison of these female-headed migrant households on dietary diversity also suggests the same. Figure 8.9 shows that whereas the proportion of female-headed migrant households where the women reported not working increases from the low to high tertile, the percentage of households declines from low to high food

diversity categories among those where women reported having been involved in income-earning activities.

Figure 8.9: Food diversity among female-headed migrant households by women's involvement in income-earning activities outside of household agriculture



Source: Primary household survey data, 2011-12

Looking at these figures in conjunction with other data reveal that the households where women had to work were invariably among the poorest households. For instance, barring one household from a Forward Caste, all of them were from the lower-backward caste groups, with 58 percent (15 households) from Scheduled Castes/Tribes and Extremely Backward Castes. It is not that these households did not receive remittances from their migrant members; 24 of these 26 household reported receiving remittances. However, the remittances received by these households were inadequate which forced women to also supplement the household income. The survey data suggest that among the households where women took up work other than own agriculture, the average monthly remittances amount was Rs. 2474. In comparison, the households where women did not work outside of own agriculture received an average amount of Rs. 4326 per month, 75

percent more than the former; and the average monthly per capita remittances (which accounts for the household size) among the latter was 60 percent higher than the former – Rs. 830 and Rs. 518, respectively. This evidence corroborates the findings of other village-level studies in India on the impact of male-migration on left-behind women that suggests that when remittances are not adequate, women often have to take on the roles of income earners to fend for the families at the origin (Jetley, 1987; Paris et al., 2005).

## **Conclusion**

By opening the 'household box' to understand the impacts of migration, this Chapter has discussed the ways in which male-only migration restructures and realigns gender dynamics and power relations at the household level. In terms of the key themes, the discussion in this Chapter has shown that two major, and in many ways simultaneous, impacts of male-migration from rural Siwan include the increased participation of women in household affairs and decision-making and, an accompanying increase in the work burden of left-behind females. Another important, and much less explored, issue highlighted in this Chapter is the impact on migration in changing the traditional family form – from joint to nuclear households – as a result of increasing tensions over cash incomes from migration. Although this latter outcome is not explicitly the result of male migration, the cases of the households presented above reflect that stay-behind women appear to negotiate with other family members the control over their husband's earnings, and the ways they should or should not be spent.

Through the lens of gender, the discussion in this Chapter has also attempted to establish the linkages of these impacts on household food security. The field-research and survey findings presented however highlight that the connections between male migration, gender and household food security are highly complex. Thus, while greater female autonomy and their enhanced involvement in household affairs as a result of male migration are associated with the increased household food expenditure among female-headed household compared to male-headed households, the effects of gender of the household head on food expenditure are discernable only in the high income category; for the households at the lower end

of the income, no clear relationship emerges from the survey data. This finding notwithstanding, across the income categories the female-headed household fare worse than the male-headed households on food security and food diversity indicators, a finding I attribute to the added challenge of being a woman, particularly in the society, such as Siwan, where the hold of patriarchal norms remains significant.

Secondly, the structure of the family also appears to have a contradictory relationship with food security. Thus, while women living in nuclear households enjoyed greater financial autonomy than their counterparts in the joint/extended households, and the evidence also suggests that women who controlled household finances spent a greater share of money, both in proportion and absolute terms, on food, the food security outcomes of female-headed migrant households are better among joint than nuclear households, perhaps because the 'buffer' that joint family provides in times of income shocks. Extrapolating these findings to draw their implications on the changing family organisation in Siwan, it appears that nuclearisation of families in the district, although reflective of the 'agency' of women in many ways, is perhaps not always a healthy development.

Finally, and this is important, the discussion also highlights that female-headed households were heterogeneous, and the migration-gender-food-security nexus was influenced by a range of intervening variables such as caste, landholdings, type of family, and the amount of remittances received by the household. In regards to the latter, the women who did not receive adequate remittances had to work to supplement their household income. However, because in Siwan employment opportunities are rather scarce and wages low, this makes it even more difficult for the left-behind women. And their work participation does not appear to positively influence the household food security, and these households fare worse than those where women do not have to work. Importantly, this also highlights the crucial role of remittances in the lives of rural Siwani households. Whether or not the lack of decent jobs and income locally will dislodge the restrictions on women's mobility and propel women migration among poor households remains to be seen.



## **9 CONCLUSION**



## CHAPTER 9: CONCLUSION

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This thesis has argued that despite the obvious connections between migration and household food security, little attention, and scarce direct evidence, has been marshalled towards the linkages between them in development policy research and practice. In the preceding eight chapters, I have attempted to highlight these connections and, using primary data from the case-study district of Siwan in western Bihar, India, provided empirical evidence on how the relationship between the two plays out. The findings reveal that food insecurity is both a critical driver of rural households' migration decisions and the act of migration in turn influences their food security outcomes. In other words, there is a two-way relationship between migration and household food security. However, these connections are not straightforward – far from it. They manifest at various levels, as the primary research findings presented in the three empirical chapters establish. These include: i) interactions of wider institutional and policy environment with rural households' food security status and migration decisions; ii) the effects of migrants' remittances on household food security and inter-household differences among migrant and non-migrant households in income, assets and food security; and iii) within-household dynamics of migration and food security.

The primary research findings from the rural hinterlands of Bihar provide important insights of national and international significance that need attention. Therefore, in this final Chapter, I bring together the main insights of this research, identify the key findings that may have wider policy significance, and comment on the direction of future research. As a way of introduction, I first revisit the main research premise and rationale, and also summarise the narratives told in the previous chapters.

### **Returning to the beginning**

In the brief 'research synopsis' presented at the beginning of this thesis (Chapter 1), I asked what role does internal migration play as a livelihood strategy in influencing food security outcomes among rural households in India. The broad rationale for this research is provided by the disconnect that currently exists in the academic and



policy discussions on migration and food security. Migration has become a key component of livelihood strategies for an increasing number of rural households across the developing world. During the recent years, academics and prominent global policy-making bodies have increasingly argued about the need to integrate migration in the future development agenda (DFID, 2007; IOM, 2013c; UNDP, 2009; World Bank, 2009). And, despite food insecurity being a growing global concern, barring a few notable exceptions (Crush, 2013; Zezza et al., 2011), there appears to be virtually no discussion on the potential role migration plays in allowing rural households' to meet their food security needs. In part this neglect emanates from invariably more focus devoted in recent development policy and research practice to international migration and remittances, and consequently, the discussions have tended to center around their wider development impacts (Crush, 2013). At the level of food policy, the tendency to treat rural households as homogenous groups engaged in farming is also an important reason for this disregard. Using a case-study approach, involving interviews with a strategically selected and statistically representative sample of 392 rural households belonging to the high outmigration district of Siwan in western Bihar, India, in this thesis I have sought to contextualise this less-investigated relationship.

In alignment with the main objective of this research, the previous eight chapters have been developed with a view to generating a holistic understanding of the links between migration and food security. To briefly recap, Chapter 1 established the global significance of India as an appropriate research setting to study this relationship. Despite the abundant food availability at the national level and rapid increase in nation's overall wealth following the economic reforms, chronic food insecurity and hunger remains pervasive, the burden of which is disproportionately shared by country's rural masses. Looking through the headline national statistics on agricultural production and economic growth in India, it clearly emerges that the issue of food insecurity in India is intimately related to the wider set of livelihood circumstances of country's food insecure populations (Pritchard et al., 2014). In turn, this necessitates an understanding of those livelihood contexts. More recent evidence points to growing significance of migration, particularly to urban areas, in the rural livelihood systems in India (Deshingkar & Akhter, 2009; Deshingkar &

Anderson, 2004; Deshingkar & Farrington, 2009; Deshingkar & Grimm, 2005; Deshingkar & Start, 2003). However, pre-existing research on whether and how migration influences household food security in India is virtually non-existent.

Chapter 2 contextualised the links between migration and food security in a broader context. I argued that the relationship between migration and food security is best understood through the prisms of “entitlement” and “livelihoods”. These provide people-centered perspectives on how and why differently placed individuals and households choose the means and (livelihood) strategies they do (Chambers & Convoy, 1991; Scoones, 1998; Sen, 1981b) and how, in turn, they connect people with food in their plate (or lack thereof). With a focus on migration as a livelihood strategy, I highlighted the potential pathways of linkages between migration and food security that deserve empirical scrutiny.

Chapter 3 set the scene for the field-based evidence by addressing the broad dynamics of food insecurity, migration and urbanisation in India. In this Chapter, I assessed India’s progress on MDG goal on hunger and undernourishment, and discussed their various socio-spatial dimensions. The Chapter illustrated how the perilous performance of India on meeting its MDG goal targets is, in many ways, intimately related to failure of economic growth to strengthen the food entitlements of disadvantaged population groups. As discussed in the Chapter, the problem of food insecurity in India is predominantly rural in nature. Moreover, rising demographic pressures on land, expressed through progressive reductions in the average landholding sizes in rural areas, are weakening the capacity of land-based livelihoods to allow the rural households to meet their income and food needs. The evaluation of these trends in the India’s economic and employment landscape suggests non-farm, non-local, urban incomes are becoming increasingly crucial for rural households’ incomes and food security.

These broad national-level trends, however, need contextualising in their place-based settings. In order to understand how these macro-level changes are shaping rural households’ livelihood pathways (migration decisions in particular) and food security at the local level, this thesis has focused on 392 rural households residing in 10 villages in the Siwan district in western Bihar. In Chapter 4, I provided a detailed

description of the key strategic and statistical considerations that informed the selection of Siwan district, villages with the district and households within the villages. It is important to reiterate that rural livelihoods in Siwan (and Bihar more generally) have traditionally involved a frequent engagement of rural households in distant labour markets, and food (in)security has often acted as one of the critical drivers of migration, considerations that crucially informed the selection of Siwan.

Chapter 5 has dealt with these issues in greater detail. I have showed that for over 200 years, Bihar has remained a “geography of deprivation” on the Indian map of development. While much of the rural outmigration from Bihar has been, and continues to be, distress-induced, income-pull factors have also been, and are becoming increasingly more, significant. With a focus on Siwan, and the western region of Bihar more generally, I have showed that mobility has been more much pronounced than often assumed, and both push-pull factors have been equally significant. Indeed, migration has become an integral feature of local livelihoods. A close examination of the colonial records and district gazetteers points to a “culture of migration” from Siwan (Gupta, 1923; O'Malley, 1930; Yang, 1979, 1989) which contrasts with the “static peasant” image that has dominantly been used in academic and policy discourses to characterise the rural populations of the developing countries. Strikingly, however, core dimensions of mobility from Siwan have been highly static over the years. These include, i) circular migration, and ii) male-dominated pattern of mobility. These patterns notwithstanding, my fieldwork suggests that in recent years the importance of migration among Siwani dwellers has increased, and migration is also occurring for longer duration, which, in turn, has increased the importance of remittances for household food security.

Following on, the next three chapters provided empirical insights on the three key conceptual pathways of linkages between migration and food security, as set out in Chapter 2, namely, i) interactions of institutional arrangements with rural households’ food entitlements and migration decisions; ii) role of migrants’ remittances in influencing food security at the origin; and iii) given the male-dominated migration, the effects of gender on household food security.

Focusing on first of these pathways, in Chapter 6, I assessed the three important food-based safety nets of PDS, NREGS and ICDS in their grounded contexts in order to understand whether and how these institutional arrangements relate to rural households' food security status and their migration decisions. Following the election of new state government in 2005, and the governance reforms initiated by the new Chief Minister, important initiatives have been taken to improve the government-run food-based safety nets. That there is a political will to change the status quo cannot be denied, and indeed, deserves much appreciation. At the same time, assessment of these schemes points to widespread institutional failures. These programmes remain plagued with massive corruption and maladministration which, as things stand, have not meaningfully improved the food entitlements of rural populations of the state. Given the high incidence of poverty and general lack of gainful employment opportunities all-year round in the case-study villages, the widespread operational inefficiencies in these schemes mean that they do not provide an effective substitute to migration. It is in these contexts that (inter-state) labour migration remains an important strategy of rural Siwani households to meet their income and food needs.

Chapter 7 then examined the role of migration and remittances in household food security in Siwan. The discussion pointed out that sub-economical landholding and lack of adequate employment in the local non-farm sector means that remittances now form a significant component of rural migrants' household overall income portfolios. At the same time, precarious nature of urban informal jobs, migrants' attachment to origin villages, and socio-cultural norms have prohibited permanent mobility. Thus, the nature of migration involves circular moves. In turn, from the perspective of food security of origin members, circular migration has created complex rural-urban linkages. To most households, migrants' remittances provided the cash income to buy food. In other cases, sending of a member in the city prevented the households to slide down to a state of absolute landlessness. A few households were able to also increase their landholdings over the period from the savings accumulated from the urban incomes. Moreover, those households with relatively large landholdings, and with more members working in the cities, invested their remittances in own-account agriculture and were able to derive better income

gains from land and agriculture. While the usage of remittances varied depending on the background circumstances of the households, its positive impact on food security of members at the origin were highly discernable. Households that had one or more migrant members were invariably more food secure than those without migrants, though the incidence of poverty and food insecurity across the survey sample was high still. The primary evidence suggests that without access to remittances, the income and food security of most households would have been even worse, and for some households migration encouraged an upward spiral of land acquisition and livelihood enhancement.

Chapter 8 finally took the debate on these issues within the household itself. The Chapter showed that migration of men has created the space for women to participate more proactively in household decision-making when their husbands are not around, and improved their autonomy. In terms of food security, in households where women received adequate and regular remittances and controlled them, food expenditure was generally higher compared to households where women had less autonomy. However, despite this, women-headed households did not have better food security status as compared to households headed by men, a finding which points to the added disadvantage that comes from being a woman in a patriarchal setting such as Siwan. Indeed, while their men were away, women faced numerous challenges in accessing the government food-based safety nets. Male migration has also brought significant hardship for women, and those who did not receive adequate remittances fared even worse as, in addition to the domestic duties, they also had to find work and employment to make ends meet. Additionally, migration incomes are also leading to disputes over cash within the families, with the resultant effect being evidenced in the breaking up of joint households into nuclear units. Importantly, it is the left-behind wives of migrants who are increasingly seeking to stake claims on their migrant husband's earnings. This is reflective of women exercising their agency. At the same time, this also means erosion of traditional support for the left-behind women which, given the generally high incidence of poverty, is not necessarily a healthy development. In overall terms, the positive effects of gender on household food security are highly

contingent on the flow of migrants' remittances, and their interaction with household arrangements.

### **Key findings, policy relevance and future research**

The empirical findings of this research point to a number of issues of broad policy significance. Below I identify five of these.

First, attention needs to be given to the empirical insights of this research on how institutional arrangements on social protection relate to household food security and migration. The survey data from the villages in western Bihar shows that although households' decisions to migrate were not always guided by their inability to access social protection, it nonetheless aggravated their vulnerability further to food insecurity. It is important to emphasise that the issue of food-based safety nets is of contemporary significance in India. As noted in Chapter 1, in 2013 the Government of India passed the right to food legislation (NFSA 2013) to address the problem of chronic food insecurity among the poor and vulnerable populations. One of most important features of the NFSA is that it establishes a constitutional right of 67 percent of country's population to subsidised food through the existing PDS. However, the past history of leakages in PDS means that different Indian states are experimenting in various ways to improve its operational efficiency. Indeed, some influential commentators in India have argued that efficiency gains would be optimised if the PDS was replaced with coupons and cash transfers (Basu, 2011; Gangopadhyay, Lensink, & Yadav, 2013; Kotwal, Ramaswami, & Murugkar, 2011). In these contexts, this study has assessed the coupon reforms in the context of Bihar. As the discussion in Chapter 6 has highlighted, a rather confounding finding that emerges from the survey data is that incidence of pilferage in foodgrains is higher than the kerosene despite the fact that latter is more profitable item to pilfer. An important difference is that while the subsidised foodgrains are only available to BPL and Antyodaya households, the kerosene is available to all households. These difference suggests that a perhaps the universality of the latter helps induce a local politics of the PDS in which there is a less scope to suppress rights of the disadvantaged populations. In recent debates around the NFSA, Drèze and Sen (2011), drawing from the Tamil Nadu case, argued that universality in PDS

entitlements, despite its obvious higher initial costs, ultimately generated budgetary and public efficiencies because of its role in eliminating the potential for inclusion and exclusion errors. The evidence in this study reinforces these arguments by calling attention to the capacity for universality to help instigate a local politics in which improved PDS delivery is an issue of common concern across class and caste constituencies. The improved PDS, and indeed, all food-based safety nets, can act as effective supplements, if not substitutes to migration, in supporting the local livelihood systems over the long run and vulnerable households' efforts to improve their lot.

Second, it is clear that further decreasing returns from land-based livelihoods are leading to remittances becoming increasingly crucial to rural households' income portfolios. As noted in Chapter 3, the estimates derived from India's large-scale National Sample Survey by Tumbe (2011) show that between 1993 and 2007-08, rural households' dependency on remittances has grown considerably in the country. In terms of impact of remittances on food security, the evidence presented in Chapter 7 clearly shows that migrants' remittances had a generally positive impact on the food security of the household members in Siwan. Indeed, the food security of surveyed migrant households was highly dependent on remittances from the migrant members. Remittances equipped most households with the purchasing power to source food needs from the markets. Across the different categories of land size, assets, caste and class, the households with migrant members had invariably better food security and food diversity outcomes than the non-migrant households. This finding is further corroborated by a recent World Bank's study in rural Bangladesh that found remittances to be significant predictor of rural household food security (World Bank, 2015). Indeed, in the wake of recent evidence on rising levels of rural outmigration in many developing countries (Deshingkar & Grimm, 2005), these findings suggest that the aim of the development policy must be to recognise that remittances can, and indeed do, play a potentially important role in improving the food access among vulnerable rural households.

Third, beyond the immediate impact of remittances in providing cash to rural households to meet their food needs, the evidence in this study also suggests that they allowed several rural households to invest in land and agriculture at their

places of origin. Seen this way, the relationship between migration and landholding was mutually reinforcing. Remittances allowed the households to maintain, and in a few cases improve, their landholdings at the place of origin, and provided the money to pursue farming, with the overall effect being that it strengthened the own-production food entitlements of households. Importantly, the rising significance of non-local, migration incomes notwithstanding, rural households' attachments with land remain strong. And the precarious jobs in the urban informal sector only increased the importance of land in rural lives and most viewed it as a long-term safety net. Furthermore, and this is important, higher urban incomes were purposely recycled by some households into land and agriculture to derive better income gains from farming. The wider significance of these findings is that they suggest that the dynamics of rural livelihoods often involve these backward-forward linkages between farm and non-farm sectors, and in turn, they warrant the need for rural livelihood analysis to take into account these linkages rather than what the simple thesis of deagrarianisation permits.

Fourth, the primary research findings also point to the intensification of sharecropping arrangements in the study villages in Siwan, which have important caste dynamics. Some households, particularly the Forward Caste landlords, are increasingly withdrawing from direct farming and leasing out land to the landless and land-poor families, particularly belonging to the historically disadvantaged communities of the Scheduled Caste and Scheduled Tribes. These have important implications for the food security of the latter groups. The field evidence suggest that although their access to land remains precarious and sharecropping arrangements are exploitative, it nonetheless provides these vulnerable rural households important supplementary means to meet part of their food needs. Moreover, these arrangements have particular relevance in the wake of high food price inflation that has characterised the global food system in the recent past. There is ample evidence in the survey and related fieldwork that sharecropping farming reduced, in a relative sense, the landless and land-poor households' dependence on market purchases on food and, in turn, their vulnerability to food shocks. However, because the average size of land leased in was small for most households, they needed additional supplementary income streams. These findings



call for more research on these dynamics, particularly in rural settings with similar land and caste dynamics but where the landholdings are relatively bigger in size (eg. other rural regions in India and Nepal) in order to evaluate the bearing of these arrangements on disadvantaged rural populations' food security.

The fifth key finding pertains to mediating effects of gender on household food security. The stronghold of traditional gender norms that place restrictions on the mobility of women in many parts of India, and, indeed, in much of South Asia, means that migration is predominantly undertaken by men while women stay behind to look after the family and resources. This phenomenon of left-behind women has important implications for household food security. The evidence presented in this study demonstrates migration of men has significantly transformed gender relations, and contributed to increased presence of women both within and outside the household. In the absence of men, women are now proactively participating in household affairs, including controlling the household finances. While the evidence suggests that women prioritise expenses on food and improved female autonomy is associated with increased household food expenditure, the widespread gender discrimination means that the positive effects of increased women autonomy are not fully realised. Indeed, as has been noted in Chapter 8, many poor women face an uphill battle to avail the benefits of various government welfare programmes, such as the PDS. Importantly, the left-behind women are becoming increasingly more vocal about wanting to control their husband's earnings. In turn, this is leading to households becoming more nuclearised. The effect of this on household food security is not very clear. However, given the urban earnings of their husbands are precarious still (significant though) and gender discrimination widespread, the erosion of economic and social support provided by the joint families will probably have negative implications for the food security of left-behind women and their children. More in-depth research is needed on this phenomenon.

As a final set of observations, the relationship between household food security and migration will assume much greater significance in the context of climate change. Climate change will likely exert further negative effects on the local livelihoods because of heightened flood risks and forecasted higher incidence of temperature

spikes which will affect the already fragile farm-dependent livelihoods. In turn, this will exacerbate the vulnerability of poor populations to food insecurity.

Climate change has immediate relevance for the state of Bihar. Within India, Bihar is an epicenter of vulnerability to climate change due to its vulnerability to floods (Pritchard & Thielemans, 2014). A recent study by Ericksen et al. (2011) that maps the hotspots of food insecurity in global tropics finds that Bihar has “high exposure” to climate change and “low capacity” to cope with its effects. In these contexts, migration will likely emerge as a crucial adaptive strategy of the poor populations of Bihar.

Indeed, the significance of migration-food security relationship in the wake of climate change extends beyond Bihar. As Ericksen et al. (2011, p. 7) note: “Reliable crop growing days [will] decrease to critical levels, below which cropping might become too risky to pursue as a major livelihood strategy in a larger number of places across the global tropics, including West Africa, East Africa, and the Indo-Gangetic Plains.” The climatic stress on farm dependent livelihoods will increase the importance of migration within rural livelihood systems. The limited evidence available from micro-level studies on the migration-climate nexus also suggests the same. For instance, recent studies by Dun (2011, 2014) have investigated the relationship between environmental change (flooding or salinisation) and migration among rural households engaged in rice farming (Dun, 2011) and shrimp aquaculture (Dun, 2014) in the Mekong River delta, Vietnam. The study on flooding and migration showed that for those with agriculture dependent livelihoods (rice farmers), successive flooding events that lead to repeated destruction of crops was found to prompt household members to migrate to urban areas in search of work (Dun, 2011). Dun’s (2014) study found that although household migration decisions were guided by several factors, declining incomes from shrimp farming combined with an inability to grow other types of food due to environmental factors (especially soil salinity) resulted in households migrating elsewhere within Vietnam in search of alternative incomes. In India, Julich’s (2011) study about villages facing drought in eastern state of Orissa showed that household members able to migrate for labour would leave their village during times of stress if they were unable to receive loans or help from relatives. In the context of changing climate, migration

will likely emerge as a crucial food security strategy of the poor populations across the developing world. This warrants more research on the trilogy of climate change-migration-food security.

These findings warrant the pressing policy need to better integrate migration in future food policy research and practice.

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## Appendices

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### Appendix 1- Methods and materials (Chapter 4)

#### *Key definitions used*

##### **Household**

This study used the most common definition of household, adopted by Indian Census based on the common kitchen. According to Census definition:

A household is usually a group of persons who normally live together and take their meals from a common kitchen unless the exigencies of work prevent any of them from doing so. The persons in a household may be related or unrelated or a mix of both. However, if a group of unrelated persons live in a Census house but do not take their meals from the common kitchen, then they will not collectively constitute a household. Each such person should be treated as a separate household. The important link in finding out whether it is a household or not is a common kitchen”

(Registrar General of India, 2011a)

##### **Migrants and non-migrants households**

A key conceptual issue lies in defining the migrant households. Different criteria based on place of birth, place of last residence, reference time period etc. are applied in determining the status of individuals as migrants or non-migrants. In India, population Census and National Sample Survey are two important sources of migration data at the national level. However, there exist marked differences in the definition of migrants. The Indian Census provides data on migrants based on place of birth and place of last residence. By Census definition, “if the *place of birth* or *place of last residence* is different from the *place of enumeration*, a person is defined as a migrant. And if the place of birth and place enumeration is the same, the person is a non-migrant” (Bhagat, 2005, p. 3, italics in original). On the other hand, National Sample Survey adopts the concept of *last usual place of residence*,

which is defined as a place (village/town) where the person had stayed continuously for a period of six months or more. Accordingly, a migrant is defined as a person who had stayed continuously for at least six months or more in a place (village/town) other than the village/town where she/he was enumerated (National Sample Survey, 2010, p. 11). Short-term or seasonal migration in India constitutes a large chunk of migratory movements and critics point to the under-estimation of these flows in the national level migration data collected by both agencies (Breman, 2010; Deshingkar & Akhter, 2009; Deshingkar & Start, 2003). As a result, the recent rounds of National Sample Survey have included questions to capture short-term migration. In the 55<sup>th</sup> round (1999-2000) of the National Sample Survey, the migrant was defined as a person who had stayed away from home for 60 days or more during the last 365 days for employment reasons. In the 64<sup>th</sup> round conducted in 2007-08, this duration was shortened to a period between 30 days to 6 months (National Sample Survey, 2001, 2010). The definitional difference between Census and National Sample Survey shows that by stipulating the shorter time reference, the latter holds advantageous position over the former in capturing the seasonal or circular mobility.

Given the importance of short-term seasonal and circular migration for rural households, the 60-day duration criteria seemed pertinent and thus this study adopted this criteria to define migrant and non-migrant households. It must however be noted that the duration of migration was recorded for each individual which not only facilitated the classification of migrants as short-term and long term migrants but also helped assess the varying impacts by duration, if any.

Given this, a migrant household was defined as the one with at least one migrant member who has stayed away from his usual place of residence for the period of 60 days or more during the last 365 days for employment reasons. On the other hand, non-migrant household included the one without any member staying away from the place of usual residence.

### ***Defining and measuring household food security***

As noted in Chapter 2, food security is a multidimensional concept that encompasses issues of *food availability* (which refers to the overall food production

levels and/or supply side of food), *food access* (involves the distributional aspects of the food produced and is associated with assets or income of the individuals/households) and *food utilisation* (the extent to which food consumed converts into the body to allow normal bodily functions). A holistic analysis of food security, or insecurity, therefore, requires an appreciation of inter-play of these three factors.

However, the focus of this study is on the access aspect of food. This is because the problem of food insecurity in India is not a problem of food production per se but is more immediately related to the distributional aspect of food. As for the analysis of the food security outcomes in terms of food utilisation, the assessment of this component of food security involves assessment through the anthropometric measures of weight and height. The collection of these biomarkers renders the inquiry a medical nature and thus requires some medical expertise. I neither had the technical training nor the means to gather such information. And therefore the indicators reported here are mainly the access indicators related to food consumption. There are mainly two types of indicators through which household food security outcomes were assessed.

The first is a set of self-reported indicators of “food inadequacy” and “food unavailability” at the household level, with the latter expressed in terms of strategies employed by households to deal with the situations when the food was not available (eg. borrowing money, reducing food consumption). These indicators have a reference period of one year i.e. households were asked if at any time during the year preceding the survey they faced these situations of food shortages. In other words, these indicators presented in the analysis must be interpreted as households who reported facing the situation at least once in past one year.

The second indicator is a composite index of food diversity, with a shorter reference period of seven days. The surveyed households were administered a dietary diversity calendar that included 46 individual food items, and the responses of participant households were recorded on whether or not (“yes” or “no”) they consumed each of those items in the past week. The analysis of these items suggested that there were 16 food items that had frequencies of 10 households or



less. The remaining 30 food items that were analysed and, a composite measure of “food diversity index” was computed using the Principal Component Analysis of the food items. Depending on the number of food items consumed by the household, rank scores were generated and households were divided into three equal rank tertiles of low, medium and high (for a complete list of food items on which the data was collected, see Part 10 in the *Household Survey Questionnaire*, attached as Appendix 4; and for the list of the 30 items used for computing food diversity index, see Appendix 6).

Additionally, I have also presented data on household food expenditure to measure household food security.

### ***Reference period for the study***

Since the household surveys were conducted during April-May 2012, the reference period of 365 days in this study included April 2011 to March 2012. This reference period was used not just for defining migrant households but also for many variables, such as food production in the last year, total income earned in the last year etc.

### ***Focus of the study***

Internal migration can be analyzed at three broad levels of spatial aggregation that includes,

- I. Intra-district migration – movement away from place of birth/usual residence within the district
- II. Inter-district migration – migration from one district to another within the state
- III. Inter-state migration – movement from one state to another within the country

Since this study looked at rural out-migration, the spatial focus thus was on all the flows from rural areas to any other rural or urban regions within or across the state boundaries. However, barring a few cases, most of the migration from Siwan was from rural to urban areas.

### ***Fieldwork challenges***

Although the fieldwork for this study was conducted smoothly, some issues did arise during the course of field research at both rural origin and urban destination places which deserve mention.

#### **How to define a migrant household?**

As noted above, this study defined a migrant household as one where “one or more members stayed away for work for 60 days or more in the past 365 days”. However, given the complex nature of migration there were cases where the application of this definition was virtually impossible. For instance, during the field-work in the villages in Siwan I came across a household where one of the male members had left home five years earlier following an argument with his family. He secretly left for Punjab to work there and all this while, he never made any contact with his family. After trying hard to locate him, the family had thought that he had perhaps died and thus lost hope. Consequently, during the house-listing the household registered itself as non-migrant household. However, when I visited the same household a month after the listing for the household survey, the member returned home to attend his brother’s wedding which he had learned about from a friend in the village whom he had called after five years to inquire about his family. Moreover, when he returned he did give his family some money from his savings to meet marriage expenses. Given that not only the member was back to being the part of the household but also contributed economically, the status of the household had now changed to that of migrant household. To define such a household as either migrant or non-migrant seemed conceptually wrong. Thus, households such as this that did not fit into the definitional categories (there were a few more) were not surveyed.

#### **Problem of over response**

An issue that was frequently encountered during the rural surveys was that whereas a sample of 40 selected households was drawn for the survey, many other households in the study villages seemed to want to participate in the survey. This apparent inclination was due to the perception among the households that the

surveyors were government officials and the surveyed families will later be rewarded with welfare benefits. This was a dangerous perception with implications for the quality of survey data. However, it was clarified that this survey was an academic exercise with no links to government benefits whatsoever. In particular, sample households were informed wholly the nature and objectives of the survey in order to get accurate answers.

### **Tracing migrants for interviews**

In the cities (destination places), tracking the migrants for the interviews proved to be an onerous task. The mobile numbers of the migrants obtained from their families in the villages were the only vital information to track them. However, in many instances, the mobile phones of the migrants who had agreed to be interviewed in the first call could not be reached. Secondly, most migrants worked long hours all seven days a week and thus had difficulties scheduling interviews. Hence, only 10 migrants could be interviewed, though these interviews provided important insights.

### ***Ethics approval***

The research methods and procedures reported in this thesis received the approval of the University of Sydney's Human Research Ethics Committee (HREC) via the protocol number 14348. The HREC's approval letter is attached as Appendix 7. Note that this study was conceptualised in 2011, and the tentative title proposed that time was 'Does Migration Impact Household Food and Nutrition Security Outcomes: Empirical Insights from Rural India'. The HREC's approval letter (and other fieldwork documents such as survey questionnaire: Appendix 4) also bears the same project title.

## Appendix 2 – Segmentation form

### Particulars of segmentation

District Name: SIWAN

Block Name \_\_\_\_\_

Village Name \_\_\_\_\_

Date (DD/MM/YY) \_\_\_\_\_

NUMBER OF SEGMENTS CREATED \_\_\_\_\_

SEGMENT NUMBER	NAME OF SEGMENT	NUMBER OF HOUSEHOLDS IN SEGMENT	CUMULATIVE NUMBER OF HOUSEHOLDS	SELECTED

I (Interval) = (TOTAL NUMBER OF HOUSEHOLDS IN THE VILLAGE)/2 = \_\_\_\_\_

R (Random start) = \_\_\_\_\_ (Use random number table)

R + I = \_\_\_\_\_

Serial number (and name) of selected segments:

**A:** \_\_\_\_\_

**B:** \_\_\_\_\_

### Appendix 3 –Household listing form

District Name: SIWAN

Block Name \_\_\_\_\_

Village Name: \_\_\_\_\_

Date (DD/MM/YY)

Name of the Mapper \_\_\_\_\_

Name of the Lister \_\_\_\_\_

FOR OFFICE USE							ASK ONLY IF 6 = YES			
WHETHER HOUSEHOLD IS SELECTED FOR INTERVIEW (Yes/No)	HOUSEHOLD NUMBER	SERIAL NUMBER OF STRUCTURE	ADDRESS/ LOCATION/ DESCRIPTION OF STRUCTURE	RESIDENCE (YES/NO)	SERIAL NUMBER OF HOUSEHOLD IN STRUCTURE	NAME OF THE HEAD OF HOUSEHOLD	DOES THIS HOUSEHOLD HAVE ANY MEMBER WHO HAS STAYED AWAY FROM THE VILLAGE FOR MORE THAN 60 DAYS DURING PAST 365 DAYS FOR EMPLOYMENT (YES/NO)	HOW MANY MEMBERS HAVE STAYED AWAY FROM THE VILLAGE FOR MORE THAN 60 DAYS DURING PAST 365 DAYS FOR EMPLOYMENT (RECORD NUMBER)	WHETHER THE HOUSEHOLD MEMBER(S) MIGRATED WITHIN THE COUNTRY OR OUTSIDE THE COUNTRY (INTERNAL/INTERNATIONAL)	OBSERVATIONS
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Questionnaire No.	
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**CONFIDENTIAL**  
**For research purposes only**

**Appendix 4 – Survey questionnaires**

**DOES MIGRATION IMPACT HOUSEHOLD FOOD SECURITY OUTCOMES: EMPIRICAL  
INSIGHTS FROM RURAL INDIA**

[PRIMARY SURVEY QUESTIONNAIRE FOR PhD RESEARCH]

## Interview Schedule I- Household Questionnaire

*To be administered to the head of the household or any other household member aged 18 years and above who is knowledgeable of the household, in the presence of other household members with inputs from all. One schedule to be administered per household.*

INTERVIEW DATE:	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> (YY/MM/DD)							INTERVIEW STATUS (Record relevant code, only after the interview)	01 = Completed 02 = No One at home 94 = Refused 96 =Other (Specify _____)
TIME OF START OF INTERVIEW	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> (Hours:Mins)					INTERVIEWER	Name _____  Signature _____		

## PART 1: IDENTIFICATION PARTICULARS

1.1. District name SIWAN

1.2. Block Name & ID  
 Name \_\_\_\_\_  
 ID \_\_\_\_\_

1.3. Village Name and ID  
 Name \_\_\_\_\_  
 \_\_\_\_\_ ID  
 \_\_\_\_\_  
 \_\_\_\_\_

1.4. Gram Panchayat  
 \_\_\_\_\_  
 \_\_\_\_\_

1.5. Listing number of household  
 \_\_\_\_\_  
 \_\_\_\_\_

1.6. Address of household  
 \_\_\_\_\_  
 \_\_\_\_\_

1.7. Name of head of household

1.10. Religion of household

01 = Hindu  
 02 = Muslim  
 96 =Other (specify\_\_\_\_\_)

1.11. Caste/tribe of household  
 (record verbatim)

01 = Caste \_\_\_\_\_  
 02 = Tribe \_\_\_\_\_  
 03 = No Caste/Tribe  
 98 = Don't know

1.12. Category of caste/tribe

01 = General  
 02 = SC  
 03 = ST  
 04 = OBC  
 05 = Maha Dalit  
 94 = Refused to answer  
 96=Other (specify\_\_\_\_\_)  
 98 = Don't know

1.13. Mother toung of  
 household (record verbatim)

01 = Hindi  
 02 = Bhojpuri  
 03 = Urdu  
 96 =Other (specify\_\_\_\_\_)

1.14. Type of household

01 = Nuclear  
 02 = Joint  
 03 = Extended  
 96 =Other (specify\_\_\_\_\_)



## PART 2: Individuals in the Household

(Record household members who usually live in the household)

	2.1	2.2	2.3	2.4	2.5	2.6
ID CODE	NAME	RELATION TO HEAD	AGE	INFANTS	SEX	MARITAL STATUS
01		01				
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						

**Codes**

2.2 – 01 =Head                      02 =Wife/Husband              03 =Son/Daughter                      04 =Son-in-law/Daughter-in-law              05 =Grandchild  
           06 =Parent                      07 =Parent-in-law              08 =Brother/Sister                      09 =Brother-in-law/Sister-in-law              10 =Niece/Nephew  
           11=Adopted/Foster/Stepchild              12=Domestic servant              96=Other (Specify \_\_\_\_\_)

2.3 – Age in completed years. 2 digit code, so 1 is “01 =”, if less than 1, write “00”.

2.4 – If 2.3 = ‘00’, then age of infant in complemented months.

2.5 –01 = Male, 02 =Female

2.6 –01 =Never married              02 =Currently married              03 =Widowed              04 =Divorced/Separated

Table 2 continued...

ID CODE	2.7	2.8	Ask to only those who are 4 to 25 years		Ask to those above 4 years	
	LITERACY	YEARS OF SCHOOLING	2.9	2.10	2.11	2.12
			IS S/HE CURRENTLY STUDYING? (If 01 =, Go to 2.11)	REASONS FOR NOT STUDYING	PRIMARY OCCUPATION	SECONDARY OCCUPATION
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						

- Codes – 2.7** – 00 =Illiterate
- 2.8** – 00=No education  
04 =Higher Secondary (11<sup>th</sup>and 12<sup>th</sup> Class)  
98 ==Don't know
- 2.9** – 00=No
- 2.10** – 01 =School too far away  
04 =Required for household work  
07 =Cost too much  
10 =Required for care of siblings  
13=Got married
- 2.11** – 01 =Government employee  
04 =Unpaid family work  
07 =Labour in non-agricultural Sector  
10 =Pensioner
- 2.12** – Record codes from **2.11**
- 01=Literate without schooling (Can sign only)  
01 =Primary (up to 5<sup>th</sup> class)  
05 =Graduate
- 01 = Yes  
02 =Transport not available  
05 =Required for work on farm/family business  
08 =No proper school facilities for girls  
11=Not interested in studies  
14=Employment over education
- 02 =Salaried employment in private firm  
05 =Agricultural labour in own land  
08 =Student  
96=Others(Specify)
- 02 =Literate  
02 =Middle (from6<sup>th</sup> to 8<sup>th</sup> class)  
06 =Postgraduate & above
- 03 =Child below 4 years of age  
03 = High (9<sup>th</sup> and 10<sup>th</sup> class)  
96=Other (Specify)
- 03 =Further education not considered necessary  
06 =Required for outside work for payment in cash or materials  
09 =Not safe to send girls  
12=Repeated failures  
96= Other (Specify.....)
- 03 =Own business  
06 = Agricultural labourin others land  
09 =Job seeker

**PART 3: HOUSEHOLD MEMBERS WHO HAVE STAYED AWAY FOR 'NON ECONOMIC REASONS' DURING THE PAST 365 DAYS**

**(Record members belonging to the family who have lived elsewhere for reasons other than employment such as studies, health care etc.)**

	<b>3.1.</b>	<b>3.2.</b>	<b>3.3</b>	<b>3.4</b>	<b>3.5</b>
<b>ID CODE</b>	NAME	RELATION TO HEAD	AGE	SEX	MARITAL STATUS
<b>01</b>					
<b>02</b>					
<b>03</b>					
<b>04</b>					
<b>05</b>					
	<b>3.6</b>	<b>3.7</b>	<b>3.8</b>	<b>3.9</b>	<b>3.10</b>
<b>ID CODE</b>	LITERACY	YEARS OF SCHOOLING	CURRENT PLACE OF RESIDENCE	DURATION OF STAY AT CURRENT PLACE OF RESIDENCE IN PAST 365 DAYS	MIGRATION REASON
			<b>Village/City</b>	<b>State</b>	
<b>01</b>				_____ Years _____ Months	
<b>02</b>				_____ Years _____ Months	
<b>03</b>				_____ Years _____ Months	
<b>04</b>				_____ Years _____ Months	
<b>05</b>				_____ Years _____ Months	

**Codes - 3.2. -**

(Only include direct descendents of head of household (sons, daughters, grandsons, granddaughters; daughter-in-law, etc.)

01=Wife/Husband      02=Son/Daughter      03=Grandson/Granddaughter      04=Daughter-in-law      05=Parent      96=Other (Specify)

**3.3** – Age in completed years. 2 digit code, so 1 year is “01”, if less than 1, write “00”.

**3.4** – 01= Male      02 = Female

**3.5** – 01=Never married      02=Currently married      03=Widowed      04=Divorced/separated

**3.6** – 00 =Illiterate      01=Literate without schooling (Can sign only)      02 =Literate      03 =Child below 4 years of age

**3.7** – 00=No education      01=Primary (up to 5<sup>th</sup> class)      02=Middle (from 6<sup>th</sup> to 8<sup>th</sup> class)      03 = High (9<sup>th</sup> and 10<sup>th</sup> class)

04=Higher Sec (11<sup>th</sup>and 12<sup>th</sup>Class)      05=Graduate      06=Postgraduate & above

96=Other (Specify)      98=Don't know

**3.8** – Record verbatim and write both, village/city and state      **3.9** – Record verbatim.

**3.10** – 01= Education      02 = Health care      96=Other (Specify)

## PART 4: SOCIAL-ECONOMIC CONDITIONS OF THE HOUSEHOLD

- |  |   |
|--|---|
| <p><b>4.1</b> Type of house which the household is now occupying? <b><u>Interviewer should fill this by observing the house himself.</u></b></p> <p>Kutchra (Mud walls, mud floor &amp; thatched roof)    01 = Kutchra    <input style="width: 40px; height: 20px;" type="text"/></p> <p>Semi-Pucca (Brick walls, cement floor, tin or asbestos roof)    02 = Semi-Pucca    <input style="width: 40px; height: 20px;" type="text"/></p> <p>Pucca (Brick walls, cement floor &amp; roof)    03 = Pucca    <input style="width: 40px; height: 20px;" type="text"/></p> <p>01 = Own</p> <p><b>4.2</b> The house in which you are presently living, is this your own house, someone else or rented?    02 = Someone else</p> <p>If rented, how much rent per month do you pay?    03 = Rent (Rs. _____)    <input style="width: 40px; height: 20px;" type="text"/></p> <p><b>4.3</b> Does any member of this household own any other house here or anywhere else?    00 = No</p> <p>01 = Yes    <input style="width: 40px; height: 20px;" type="text"/></p> <p><b>4.4</b> Can you please tell me, in total how many rooms including kitchen are there in this house?    Number _____</p> <p><b>4.5</b> Do you have separate room for cooking in your house?    00 = No</p> <p>01 = Yes    <input style="width: 40px; height: 20px;" type="text"/></p> <p><b>4.6</b> What is the main source of lighting in your house?    01 = Electricity    <input style="width: 40px; height: 20px;" type="text"/></p> <p>02 = LPG</p> <p>03 = Kerosene Laltain</p> <p>04 = Gas Laltain</p> <p>05 = Solar Energy</p> <p>06 = Others ( _____ )</p> <p style="text-align: right;">Specify</p> | <p><b>4.7</b> What type of fuel is used for cooking?    01 = LPG</p> <p>02 = Coal/Charcoal</p> <p>03 = Kerosene</p> <p>04 = Wood    <input style="width: 40px; height: 20px;" type="text"/></p> <p>05 = Dung Cakes</p> <p>06 = Crop Residue</p> <p>96 = Others ( _____ )</p> <p style="text-align: right;">Specify</p> <p><b>4.8</b> What is the main source of drinking water in your house?    01 = Handpump (Own) → Go to 4.10</p> <p>02 = Handpump (Shared)</p> <p>03 = Handpump (Public)    <input style="width: 40px; height: 20px;" type="text"/></p> <p>04 = Well</p> <p>96 = Others ( _____ )</p> <p style="text-align: right;">Specify</p> <p><b>4.9</b> What is the distance between your house and source of drinking water?    Km _____</p> <p><b>4.10</b> How deep is the owned handpump dug up in the ground?    Feet _____</p> <p><b>4.11</b> What is the type of toilet facility do you use?    01 = Own flush toilet</p> <p>02 = Own pit toilet</p> <p>03 = Shared toilet</p> <p>04 = Open air defecation    <input style="width: 40px; height: 20px;" type="text"/></p> <p>96 = Others ( _____ )</p> <p style="text-align: right;">Specify</p> |
|--|---|

## PART 5: AGRICULTURAL ACTIVITIES

**5.1.** Did any members of the household **own or cultivate crops** on any land in the past one year (Not including a ‘kitchen garden’)?

00 = No      01 = Yes  
(if ‘00’, go directly to **5.10**)

Q. No.	All information below relates to the past 365 days				Cultivated (In Kattha)	Fallow (In Kattha)
<b>5.2</b>	What is the <b>total agricultural land</b> that members of the household own (including the land leased out)?					
<b>5.3</b>	Out of this total agricultural land, how much was <b>leased out</b> ? (If ‘none’, write NA)					
<b>5.4</b>	What is the total agricultural land <b>leased in</b> ? (If ‘none’, write NA)					
<b>5.5</b>	What is the area of your cultivated land (owned and leased in) that is <b>irrigated</b> ?					
<b>5.6</b>	List the crops grown, costs incurred, amount of crop used for household consumption, amount of crop sold and total amount received from sale of crops					
					Ask only if <b>Column 4</b> is less than <b>Column 3</b> , otherwise leave blank	
	<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>	<b>Column 5</b>	<b>Column 6</b>
	<b>5 Major Crops</b>	<b>Input cost</b> (Seeds, fertilizer, wages etc.) (In Rs.)	<b>Total production</b> (In Quintal)	<b>Amount of crop used for HH consumption</b> (In Quintal)	<b>Amount of crop sold</b> (In Quintal)	<b>Total Amount received from sale of crop</b> (In Rs.)
5.6a						
5.6b						
5.6c						
5.6d						
5.6e						

**5.7.** Had there been a shift in the crops grown in the last 5 years?

00 = No      01 = Yes  
(if 00, go directly to **5.9**)

**5.8.** Has any decision to change the crops grown been motivated by any of the following Government Policies?

		00 = No 01 = Yes	Elaboration
5.8a	Change in Minimum Support Price		
5.8b	Subsidies for seeds, tractors, electricity		
5.8c.	Extension services (credit, insurance, market)		
5.8d.	Loan waivers		
5.8e.	Other (specify) _____		

**5.9** Does this household own any of the following **farm assets**?

		00 = No 01 = Yes	Number (If 01 =, record number)
5.9a	Tractor		
5.9b	Ploughing implements		
5.9c	Cart		
5.9d	Thresher		
5.9e	Fodder cutting machine		
5.9f	Generator/Pump for irrigation		
5.9g	Other (specify) _____		

**5.10** Does this household own any livestock such as cows, buffaloes, goats, chicken etc.?

00 = No      01 = Yes

(If '00', go directly to **Part 6**)

If 'yes', list the **Livestock** owned by the household

	Livestock	00 = No 01 = Yes	If yes, number of animals
5.10a	Cows		
5.10b	Buffaloes		
5.10c	Goats		
5.10d	Sheep		
5.10e	Chicken/Ducks		
5.10f	Any other _____ (Specify)		

**5.11** Did you sell any livestock products in the past 365 days?

00 = No      01 = Yes

(If '00', go directly to **5.13**)

**5.12** How much money did you make selling livestock products such as milk, eggs, chicken and livestock in the past 365 days?

5.12a Milk and eggs (Rs. \_\_\_\_\_)

5.12b. Chicken and other livestock (Rs. \_\_\_\_\_)

5.12c. Any other \_\_\_\_\_ (Rs. \_\_\_\_\_)

(Specify)

**5.13** What was the money value of feeding and maintaining the animals (includes, value of both, home grown and purchased grains, crop residue etc.) (Rs. \_\_\_\_\_)

## PART 6: HOUSEHOLD CASH INCOME

(Income from farm, non-farm, government schemes and migration to be recorded)

	Column 1	Column 2	Column 3	Column 4
Q. No.	Source of Income	During the <b>last 365 days</b> , did the household receive income from this source?	How much? (In Rs.)	How Important was this source for household livelihood?
<b>6.1</b>	<b>Family-owned enterprises</b>			
6.1a	Farm – sale of crops (including horticulture)			
6.1b	Farm – Sale of milk, eggs, livestock			
6.1c	Fishing			
6.1d	Non-agri enterprise shop, tailoretc			
<b>6.2</b>	<b>Wage income</b>			
6.2a	From agri employment			
6.2b	From non-agri employment: salaried			
6.2c	From non-agri employment: casual labour			
<b>6.3</b>	<b>Other sources</b>			
6.3a	Remittances from family elsewhere			
6.3b	Rent			
6.3c	Monetary benefits from social protection schemes (example, Indira Awaas, Old-age/widow pension/educational scholarships for girl-child/SC/ST children)			
6.3d	Pensions (retirement benefits)			
6.3e	NTFB (non-timber forest produce)			
6.3f	Other (specify)			
<b>Total Household Income (6.1+6.2+6.3) = Rs _____</b> (Interviewer to sum and record)				
<b>Column 2:</b> 00 = No                    01 = Yes                    94 == Refused to answer                    98 ==Don't know				
<b>Column 4:</b> 01 = Most important    02 =Supplementary                    03 = Minor                    04 =Not received				

## PART 7: HOUSEHOLD CONSUMPTION EXPENDITURE

What is the money value of the amount purchased or received in-kind by your household for the following **food** and **non-food items**?

S. No.	Items	Money spent (In Rs.)	
		Last 30 days	Last 365 days
7.1	Food items (includes cereals, vegetables, pulses, fruits, milk, eggs, chicken, mutton, fish, cooking oil, dry fruits, tea, coffee, sugar, spices etc.)		
7.2	Fuel and Light (includes electricity, wood, cow dung cakes, kerosene oil, coal/charcoal, cylinder gas, matches, candles, lighters, lanterns etc.)		
7.3	Personal care and toilet articles & other sundry articles (include spectacles, torch, umbrella, lighter, toothpaste, brush, powder, washing soap, hair oil, shampoo, perfume, shaving blade, electric bulb, tube light, glassware, bucket, agarbatti (incense) and insecticide etc)		
7.4	Consumer services (includes grinding, tailoring, pet animal porter charges, wages paid to servants, mali, chowkidar and other similar expenses)		
7.5	Transportation (includes diesel and petrol in own vehicle(s), school bus/van fare, train/bus fare, taxi charges and other similar expenses)		
7.6	Entertainment and recreation (includes cinema, picnic, sports, club fees, video cassettes, cable charges etc.)		
7.7	Newspapers and books		
7.8	Rent (includes house rent and rent for agricultural land as well as water charges)		
7.9	Medical Expenses (non-institutional) (include cost of medicines, doctors fee, diagnostic fee etc.)		
7.10	Any Other (Specify _____)		
7.11	<b>Sub-total (item 7.1 to 7.10)</b>		
7.12	Medical (institutional)		
7.13	Clothing, bedding and foot wear		
7.14	Durable goods (include expenses for purchase of utensils, fan, cooker, furniture item & similar HH durables)		
7.15	Remittances sent to other households / individuals		
7.16	Litigation and legal expenses		
7.17	Religious expenses (money spent on any religious ceremony)		
7.18	Social expenses (weddings, deaths, rites)		
7.19	Education of family members		
7.20	Taxes (house tax, tax on agricultural land etc.)		
7.21	<b>Sub-total (item 7.12 to 7.20)</b>		
7.22	<b>Average monthly expenditure for items 7.12 to 7.20 = [7.21 X (30/365)]</b>		
7.23	<b>Monthly household consumer expenditure (7.11 +7.22)</b>		



## PART 8: HOUSEHOLD DEBT AND ASSETS

**8.1** Does household have a bank account or post office account?

00 = No      01 = Yes            (If no, **Go to 8.3**)

**8.2** By whose name does the household have bank/post office account?

(Write the relation of the person to the household head)

**RECORD ALL MENTIONED**

Name \_\_\_\_\_ Relation to Head \_\_\_\_\_

Name \_\_\_\_\_ Relation to Head \_\_\_\_\_

**Codes for Relation in 8.2**

01 =Wife/Husband      02 =Son/Daughter      03 =Grandson/Granddaughter  
 04 =Daughter-in-law      05 =Parent      96=Other (Specify)

**8.3** Does household have taken loan from any source? (**Probe: whether loan taken from SHG**)

00 = No      01 = Yes            (If no, **Go to 8.4**)

	(8.3.a)	(8.3.b)	(8.3.c)	(8.3.d)	(8.3.e)
S. No.	Nature of loan	Source	Purpose	Loan paid 00=No 01=Yes	<b>If 8.3.d = "00" then ask:</b> Amount outstanding including interest on date of survey
1					
2					
3					
4					
5					

**8.3.a Nature of loan** – 01 =Hereditary loan      02 =Loan contracted in cash      03 =Loan contracted in kind      04=Loan contracted partly in cash and partly in kind  
 96 = Others (Specify)

**8.3.b Source** –      01 =Co-operative society      02 =Bank      03 =-Employer/landlord      04=Agriculture/professional money lender      05 =Shop-keeper/trader  
 06 =Relatives/friends      07 =Private money lender      96 = Others (Specify)

**8.3.c Purpose** –      01 = For food      02 = Medical expenses      03 = Educational expenses      04 = Legal expenses      05 = Other consumption expenses  
 06 = Marriage and other ceremonial expenses      07 = Purchase of land/construction of building      08 = Productive purpose      09 = Repayment of debt  
 10 = Agricultural purpose      96 = Others (Specify)

**8.4** Does the household own the following household asset?

<b>S. No.</b>	<b>Household assets</b>	<b>No = 00 Yes = 01</b>	<b>If yes, record number</b>
8.4.a	Motor Car		
8.4.b	Taxi/Truck/Lorry		
8.4.c	Motor cycle/Scooter		
8.4.d	Cycle		
8.4.e	Telephone/Mobile		
8.4.f	Sewing Machine		
8.4.g	Television		
8.4.h	MP3/DVD/CD		
8.4.i	Refrigerator		
8.4.j	Computer/Laptop		
8.4.k	Sofa Set		
8.4.l	Mattress		
8.4.m	Table		
8.4.n	Chair		
8.4.o	Cot/Bed/Khatia		
8.4.p	Clock/Watch		
8.4.q	Electric Fan		
8.4.r	Dish Antenna		
8.4.s	Radio/Transistor/Tape		
8.4.t	Camera		
8.4.u	Heater		
8.4.v	Other _____ (Specify)		

## PART 9: HOUSEHOLD SAVING AND INVESTMENT

### 9.1: Household Savings

S.No	Particulars	Household savings		If yes, amount saved (In Rs.)	
		00 = No	01 = Yes	Last month	Last year
9.1a	Saving account in bank				
9.1b	Fixed deposits (FD)				
9.1c	SHGs				
9.1d	PF installment, LIC premium etc				
9.1e	Post office account				
9.1f	Kisanpatra				
9.1g	Others (Specify _____)				
<b>9.1h</b>	<b>All savings (Total 9.1a to 9.1g)</b>				

### 9.2: Investments during last 2 years

S.No	Particulars	Investment during last two years		If yes, amount invested (In Rs.)
		00 = No	01 = Yes	
9.2a.	Land (For agricultural purpose)			
9.2b	House (land purchase, construction, renovation etc.)			
9.2c	Other construction (gaushala etc.)			
9.2d	Small enterprise			
9.2e	Shares, debentures etc			
9.2f	Car/Scooter/Taxi etc			
9.2g	Others (Specify _____)			
<b>9.2h</b>	<b>All Investments (Total 9.1a to 9.1h)</b>			

**PART 10: FOOD SECURITY**

How have food prices changed in the **past 12 months** for the items described below:

**10.1** Items in the PDS store

	<b>Items</b>	<b>Code</b>
10.1a	Rice	
10.1b	Wheat	
10.1c	Kerosene	
10.1d	Other _____ (Specify)	

**10.2.** Rice, wheat, atta and pulses in local shops or the local market

**10.3.** Eggs, milk, ghee and meat in local shops or the local market

**10.4.** Fruits and vegetables in local shops or the local market

**Codes for 10.1.to 10.4.**

01 = Increased a lot

03 = Stayed about the same

98 = Don't know/ no opinion

02 = Increased a little

04 = Decreased

**10.5.** Interviewer to ask for specific details (example, onions, channa etc.)

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**10.6** During the past **one month**, describe the regularity of eating, for each household member

ID CODE HH MEMBER (This must be according to the individual information collected in HH roster in Part 2)	Column 1	Column 2	Column 3	Column 4
	ATE THREE MEALS/DAY <u>EVERDAY</u>	ON <u>SOME DAYS</u> , ONLY ATE TWO MEALS/DAY	ON MOST DAYS, ONLY ATE TWO MEALS/DAY	ON SOME DAYS, ATE LESS THAN TWO MEALS/DAY
01				
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				

From **column 1 to column 4**, record either of the following codes:

00 = No      01 = Yes

**At any time during the last 12 months did any of the following situations apply to your household:**

**10.7. Food was not enough**, defined as any of the following situations:  
(Fill relevant code in the box for each of the questions below)

10.7a. Household ate meals without vegetables

10.7b. They could only afford to consume food from the Public Distribution outlet (PDS)

10.7c. If they consumed only a single meal in a day

10.7d. If all three main food categories (cereal, pulses and vegetables) were not available

10.7e. If everybody got less than the amount to satiate their hunger

**10.8. Food was not available** (“there was a need to borrow money to buy food or to mortgage land or jewelry or to ask friends or neighbours or for some members of the household to migrate out of the village or household reduced food consumption”)

Fill relevant code in the box

**10.9** If answering ‘yes’ to either questions **10.7** and **10.8**, which of the following actions were taken (Record more than one, if appropriate):

10.9a. Borrowed money from friends or family

10.9b. Borrowed money from local traders, money lenders or a shop

10.9c. Borrowed money from a Self Help Group

10.9d. Mortgaged land

10.9e. Sold jewelry or other personal assets

10.9f. Someone in the household migrated out of the village

10.9g. Accessed grain banks

10.9h. HH members consumed less food than usual

10.9i. Any other (specify \_\_\_\_\_)

**10.10** If answered ‘yes’ for any of the questions above (from **10.9a.** to **10.9i**, list up to 3 most important actions taken by the household in order of their importance)

**(Record the codes from 10.9a. to 10.9i)**

**Codes for 10.7, 10.8 and 10.9** – 00=No 01=Yes 98=Don’t know

**10.11. Yearly calendar of food security**

For households answering ‘yes’ to either **10.7** or **10.8**, please nominate the periods this occurred (tick the relevant months).

		Apr 2012	Mar 2012	Feb 2012	Jan 2012	Dec 2011	Nov 2011	Oct 2011	Sep 2011	Aug 2011	Jul 2011	Jun 2011	May 2011
10.11a	Food was not enough												
10.11b	Food was not available												
10.11c	Which months did your household consume food grown from your farm or kitchen garden?												
10.11d	Which months did any member of your household consume food procured from the PDS?												
10.11e	Which months did any member of your household consume food procured from the ICDS?												
10.11f	Which months did any person in this household obtain work through NREGA?												

### 10.12: Household Food Diversity Calendar

10.12a		10.12b	10.12c		10.12d		10.12e		10.12f	
Have you consumed this food during the past <u>week</u> ? (If 'yes', answer <b>Q 10.12b to 10.12f</b> )		In the past <u>week</u> , how often was this food eaten?	<b>HOME PRODUCTION</b> In the past <u>week</u> , how much of this food did your household consume?		<b>FOOD PURCHASES FROM SHOPS OR MARKETS</b> In the past <u>week</u> , how much of this food did your household consume?		<b>FOOD FROM PUBLIC DISTRIBUTION SERVICE</b> In the past <u>week</u> , how much of this food did your household consume?		<b>FOOD FROM OTHER SOURCES</b> In the past <u>week</u> , how much of this food did your household consume?	
	<b>00 = NO</b> <b>01 = YES</b>		<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>
<b>Cereals</b>										
Rice										
Wheat										
Corn										
Any other cereal										
<b>Pulses/legumes</b>										
Channa										
Lentils										
Pigeon peas										
Black gram										
Green gram										
Bengal gram										
Cowpeas										
Toordal										
Arhardal										
Urad dal										
Masoor Dal										
Other (specify)										

**Codes for 10.12b:** 01 = Daily    02 = Thrice a week    03 = Twice a week    04 = Once in four/five days    05 = Weekly



**Table, continued**

10.12a		10.12b	10.12c		10.12d		10.12e		10.12f	
Have you consumed this food during the past <b>week</b> ? (If 'yes', answer Q 10.12b to 10.12f)		In the past <b>week</b> , how often was this food eaten?	<b>HOME PRODUCTION</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD PURCHASES FROM SHOPS OR MARKETS</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD FROM PUBLIC DISTRIBUTION SERVICE</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD FROM OTHER SOURCES</b> In the past <b>week</b> , how much of this food did your household consume?	
	<b>00 = NO</b> <b>01 = YES</b>		<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>
<b>Vegetables</b>										
Onion										
Garlic										
Chilli										
Tomatoes										
Gourds (Bitter, Ash, Melon)										
Drumstick										
Lady finger										
Carrot										
Spinach										
Green beans										
Potato										
Any other										

**Codes for 10.12b:** 01 = Daily 02 =Thrice a week 03 = Twice a week 04 = Once in four/five days 05 = Weekly

**Table, continued**

10.12a		10.12b	10.12c		10.12d		10.12e		10.12f	
Have you consumed this food during the past <b>week</b> ? (If 'yes', answer <b>Q 10.12b to 10.12f</b> )		In the past <b>week</b> , how often was this food eaten?	<b>HOME PRODUCTION</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD PURCHASES FROM SHOPS OR MARKETS</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD FROM PUBLIC DISTRIBUTION SERVICE</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD FROM OTHER SOURCES</b> In the past <b>week</b> , how much of this food did your household consume?	
	<b>00 = NO 01 = YES</b>		<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>
<b>Fruits</b>										
Banana										
Mango										
Jackfruit										
Pineapple										
Coconut										
Any other										
<b>Livestock products</b>										
Milk**										
Eggs**										
Mutton										
Chicken										
Fish										
Any other										

**Codes for 10.12b:** 01 = Daily 02 =Thrice a week 03 = Twice a week 04 = Once in four/five days 05 = Weekly

**Table, continued**

10.12a		10.12b	10.12c		10.12d		10.12e		10.12f	
Have you consumed this food during the past <b>week</b> ? (If 'yes', answer <b>Q 10.12b to 10.12f</b> )		In the past <b>week</b> , how often was this food eaten?	<b>HOME PRODUCTION</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD PURCHASES FROM SHOPS OR MARKETS</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD FROM PUBLIC DISTRIBUTION SERVICE</b> In the past <b>week</b> , how much of this food did your household consume?		<b>FOOD FROM OTHER SOURCES</b> In the past <b>week</b> , how much of this food did your household consume?	
	<b>00 = NO</b> <b>01 = YES</b>		<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>	<b>QUANTITY</b>	<b>RUPEES</b>
<b>Miscellaneous</b>										
Biscuits**										
Tea										
Sugar										
Jaggery										
Salt										
Coffee										
Pickles										
Ghee										
Cooking oil										
Cashewnuts										
Spices										
Dry fruits										
Any other										

**Codes for 10.12b:** 01 = Daily 02 = Thrice a week 03 = Twice a week 04 = Once in four/five days 05 = Weekly

\*\* Biscuits to be recorded in terms of **number of packets** consumed.

## PART 11: OPERATION OF PDS

(Interviewer to keep card samples)

**11.1a.** Does your household have a Ration card/Ration coupons?

(Interviewer to see the card/coupons)

00 = No      01 = Yes

[If '01' go to 11.2. If '00', ask only 11.1b and then go directly to Part 12]

**11.1b.** If household does not show card/ coupons, specify why?

**11.2.** If 'yes', what type of card/coupons (Interviewer to be shown card/coupons):

01 = Antyodaya      [go directly to **11.5**]

02 = BPL

03 = APL

**11.3.** Do you think this card/these coupons reflect your true eligibility?

00 = No      01 = Yes

**11.4.** If '00' in the question **11.3** above, why? (Interviewer to ask without prompting one of the responses below, and then fill the appropriate code in the box)

01 = We have been told by a Government official we are BPL/Antyodaya eligible, but didn't receive the card/coupons

02 = Our household situation has changed for the worse since cards/coupons were issued (because of not getting the right card/coupons – that is, eligible for Antyodaya, but given BPL/APL card/coupons).

03 = Other households in this village in a similar situation to us have a

Antyodaya/BPL card/coupons, but we don't

**11.5.** Could you please tell your monthly quantity entitlements according to your card/coupon(s)?

	Item	Quantity (In Kg/Liter)	What price you pay per Kg/Liter (In Rs.)
11.5a	Rice		
11.5b	Wheat		
11.5c	Kerosene		
11.5d	Other (_____) Specify		

**11.6.** During the past three months, did your household obtain food through the PDS?

00 = No

01 = Yes

If '00', go to 11.9)

**11.7.** Could you tell me what quantity of ration did you obtain during the last three months from the PDS store? (If any of the items below not obtained during any of the last three months, leave that column 'blank'.

		Quantity (In Kg/Liter)		
		1 month preceding the survey	2 months preceding the survey	3 months preceding the survey
11.7a	Rice			
11.7b	Wheat			
11.7c	Kerosene			
11.7d	Other (_____) Specify			

**11.8.** Which person in your household most recently visited the PDS store to buy food? (Record the appropriate code).

- 01 = Male head of household
- 02 = Female head of household
- 03 = Other male in household
- 04 = Other female in household

**11.9.** Reason for not obtaining food through the PDS during the past three months

		Record relevant code for each of the options
11.9a	The ration not distributed in the last three months	
11.9b	Did not need PDS provisions	
11.9c	Difficult to access location of PDS shop	
11.9d	PDS shop opening hours prevent use	
11.9e	PDS shop not sufficiently stocked	
11.9f	Quality of grains at PDS store is not good	
11.9g	PDS dealer never gives the full quota	
11.9h	Misplaced card/coupons	
11.9i	Did not have enough money to buy ration	
11.9j	Card or coupons mortgaged/sold	
11.9k	PDS shop only allows to buy monthly entitlements in one go and we usually don't have that much money at a point of time	
11.9l	Other reason ( _____ ) (Specify)	

00 = No      01 = Yes

**11.10.** Users' attitudes towards PDS store

		Strongly agree	Agree	No opinion	Disagree	Strongly disagree
11.10a.	Commodities in the PDS store are reasonable in quality					
11.10b.	Commodities in the PDS store are reasonable in quantity					
11.10c.	The PDS store's opening hours make it easy to use on a regular basis					
11.10d.	The PDS store's location makes it easy to use on a regular basis					
11.10e	The PDS store distributes the quantity as per the monthly entitlement					

**11.11.** Overall, how would you rate the importance of ration from the PDS for your household?

- 01 = Very important
- 02 = Important
- 03 = Not important

## PDS Coupons

**11.12** Do you use your 'ration card' or the monthly 'ration coupons' for obtaining the PDS ration/grains?

01 = Ration Card

02 = Coupons

[If 01, go directly to 11.26]

**11.13** From where do you obtain your monthly coupons?

01 = Gram Panchayat Office (GP)

02 = Block Development Office (BDO)

03 = Camps organized jointly by GP & BDO

96 = Any other (specify) \_\_\_\_\_

**11.14** Is there a particular month of the year, in which you get your monthly coupons for the whole year?

00 = No

01 = Yes

[If no, go to 11.16]

**11.15** Which month of the year do you **usually** get your monthly 'ration coupons' for the whole year?

Month \_\_\_\_\_

**11.16** Which month of the year did you get your monthly coupons for the **last year** i.e. 2011-2012?

Month \_\_\_\_\_

**11.17** Do you get information beforehand about when or which month and where the coupons will be distributed?

00 = No

01 = Yes

[If no, go to 11.19]

**11.18** From where do you get information about when and where the coupons will be distributed?

01 = Gram Panchayat Office

02 = Block Development Office

03 = Relatives/Neighbours in the village

04 = Other (specify) \_\_\_\_\_

**11.19** During the last year i.e. 2011-2012, did or could you utilize all your monthly PDS coupons to obtain ration?

00 = No

01 = Yes

[If yes, go to 11.22]

**11.20** Could you please tell me how many coupons you did not or could not utilize in the last year (interviewer to check the 'coupon booklet' for unutilized coupons)?

11.20a Number of unutilized coupons for Wheat \_\_\_\_\_

11.20b Number of unutilized coupons for Rice \_\_\_\_\_

11.20c Number of unutilized coupons for Kerosene \_\_\_\_\_

**11.21** Could you please tell me why you did not or could not utilize the coupons (record the most appropriate code)?

01 = Did not need PDS ration/provision(s) during those months

02 = Coupons were distributed after their validity ended

03 = The PDS shop was not sufficiently stocked to distribute ration

04 = The household members were not in the village

96 = Any other (specify \_\_\_\_\_)

**11.22** Has the village PDS dealer ever asked you for coupons for more than a month in exchange for ration for a month?

00 = No

01 = Yes

[If no, go to 11.25]

**11.23** Last time when you obtained the ration (whether or not obtained ration in last 3 months), how many coupons did you have to give to the PDS dealer for obtaining a month's ration for each of the following items?

11.23a Number of coupons for Wheat \_\_\_\_\_

11.23b Number of coupons for Rice \_\_\_\_\_

11.23c Number of coupons for Kerosene \_\_\_\_\_

**11.24** How often do you have to give more coupons, to obtain your monthly entitlements from the PDS store?

01 = Always    02 = Often    03 = Sometimes   

**11.25** In your opinion, is there any improvement in the following aspects of PDS system after the coupon system was introduced?

**[Record relevant code for each of the options]**

00 = No    01 = Yes

11.25a Ration distribution has become more regular

11.25b More quantity of ration/grain is distributed

11.25c Quality of ration/grains has improved

11.25d Increase in PDS shop's opening hours

11.25e More transparency in PDS functioning

11.25f Any other (specify \_\_\_\_\_)

**Perceptions about Cash Transfers**

(Interviewer to read out the statement below and make sure that the respondent has understood it clearly)

The Government is now considering providing cash to the beneficiary households to buy entitled quantities of monthly ration (wheat, rice, kerosene etc.) from the open market (such as local grocery shops/kirana stores), instead of providing the ration from the PDS outlets. Under the proposed system, money will be transferred to your bank or post-office account every month and you can withdraw the money to buy food items. In case your household does not have an account in the bank or post-office, the government will open an account for you and you do not have to pay any money for the same. I must inform you that the amount of cash money will be indexed to inflation, that is to say, this money will always correspond to the market value of the food commodities. In other words, if the food prices rise, your cash entitlements will also be increased by the same proportion, which means increase in food prices will, in no way, affect your monthly ration entitlements.

**11.26.** Have you heard of this proposed change?

00 = No 01 = Yes     **go to 11.28]**

**11.27.** If yes, from where/whom did you first come to hear/learn about it?

01= Gram Panchayat Office    02 = Aaganwadi center  
 03=Village school staff    04 = Neighbors/friends  
 05= PDS dealer    06= Newspaper/Television  
 96 = Other (specify \_\_\_\_\_)

**11.28.** Can you tell me whether or not there is a bank in this village?  
 00 = No      01 = Yes

**11.29.** What is the distance of the nearest bank (whether or not in the village) from your house?  
 01 = Less than 1Km      02 = 1 to 2Km      03 = 2 to 3Km  
 04 = 3 to 4 Km      05 = More than 4 km

**11.30.** Can you tell me whether or not there is a post-office in this village?  
 00 = No      01 = Yes

**11.31.** What is the distance of the nearest post-office (whether or not in the village) from your house?  
 01 = Less than 1Km      02 = 1 to 2Km      03 = 2 to 3Km  
 04 = 3 to 4 Km      05 = More than 4 km

**11.32.** Can you tell me whether or not there is a fair-price shop (ration shop) in this village?  
 00 = No      01 = Yes

**11.33.** What is the distance of the nearest fair-price shop (whether or not in the village) from your house?

01 = Less than 1Km      02 = 1 to 2Km      03 = 2 to 3Km      04 = 3 to 4 Km  
 05 = More than 4 km

**Now, I would like to know your perceptions on this proposed change.**

**11.34.** Would you prefer to continue to buy ration from the **PDS shop** or prefer **cash** instead and buy food from local grocery stores/kirana shops?

01 = Ration from the PDS store → [go to **11.35**]  
 02 = Cash to buy ration → [go to **11.36**]

For questions **11.35 and 11.36**, interviewer to ask without prompting one of the responses below, and then record the relevant code for each of the following options.

**11.35** If **11.34** = 01, would you please tell me the reasons for choosing ration from the PDS store?

Q. No.	Question	Code
11.35a	Cash will be spent on non-food items	
11.35b	Food prices at ration shops are always lower than the prices in the open market	
11.35c	Ration shops are more flexible in the sense that any member of the household can easily avail ration from the shop, whereas only account holder can withdraw money from the bank/post-office	
11.35d	Accessibility – PDS shop is nearer than the bank and/or post-office (interviewer to cross-check with the questions above)	
11.35e	More difficult to deal with bank/post-office	
11.35f	Unsure of timely transfer of money in the bank account	
11.35g	Other (specify _____)	

**11.36** If **11.34**= 02, would you please tell me the reason for choosing cash over food

Q. No.	Question	Code
11.36a	Quantity of ration provided by the PDS dealer is less than our entitled quota	
11.36b	Quality of grains/other PDS commodities is not good	
11.36c	Irregularity in the functioning of ration shop (opening and closing days/hours not fixed)	
11.36d	Cash provides more choice on what to eat	
11.36e	Cash could be utilized on other households needs, if the need be	
11.36f	Other (specify _____)	

**Codes for 11.35 and 11.36** ——— 00 = No 01 = Yes



## PART 12: : OPERATION OF MGNREGS

**12.1.** Do you or any member of the household have a job card? 00 = No 01 = Yes

[If '00', ask only **12.2** and then go directly to **Part 13**. If '01', go to **12.3**]

**12.2** If no, could you tell me the reasons for not having a job card?

(Interviewer to read out all options and record the most appropriate code)

- 01 = We are better-off and don't need the job-card      02 = People from our caste don't do the kind of work offered by MGNREGS  
 03 = Applied for the job card but haven't yet been given one      96 = Other (Specify \_\_\_\_\_)

**12.3** Did anyone in this household work under MGNREGS during the **past 12 months**? 00 =  Yes

[If no, ask only **12.4** and **12.5** and then go directly to **Part 13**. If yes, ask all questions from **12.5** to **12.13**]

**12.4** Could you tell me the reasons for not working under MGNREGS?

(Interviewer to read out all options and record the most appropriate code)

- 01 = We were given a job card, even though we didn't need it      02 = MGNREGS wages are lower than market wages hence didn't apply for work  
 03 = Didn't need the work during past 12 months      04 = Timing of MGNREGS employment coincided with peak agriculture season  
 05 = Sought work but didn't get it      96 = Other (specify \_\_\_\_\_)

**12.5** Did it ever happen anytime in the past that any member of this household who was working outside this village, returned to work in NREGA?

00 = No 01 = Yes

**12.6** Complete the following table listing all details for **every** household member who worked under MGNREGS

	<b>12.6a</b>	<b>12.6b</b>	<b>12.6c</b>	<b>12.6d</b>	<b>12.6e</b>
ID Code of any household member (same as <b>Part 2</b> )	Description of work	How many days employed? (write number)	Mode of payment	Schedule of payment	Daily Wage (In Rs.)

**Codes**

Column 12.6a:      01 = Plantation work  
 Column 12.6c:      01 = Cash  
 Column 12.6d:      01 = Weekly

02 = Construction  
 02 = Through bank account  
 02 = Fortnightly

96 = Any other (Specify)  
 03 = Through post office account  
 96 = Any other (Specify)

**12.7 Attitudes towards MGNREGS**

		Strongly agree	Agree	No opinion	Disagree	Strongly disagree
12.7a.	Got work when wanted; worked for number of days they wanted; work they got to do was according to what they wanted					
12.7b	The way of selecting people for MGNREGS jobs was fair					
12. 7c	Able to access MGNREGS money from the bank/post-office without any problems					
12.7d	The MGNREGS projects were needed, recommended and selected by the Gramsabha					
12. 7e	In MGNREGS projects, women, destitute and physically challenged people were treated fairly					
12.7f	MGNREGS has reduced the rate of outmigration from the village					

**12.8** Which of the following three statements best describes the role of MGNREGS for this household:

01 = Without the cash income from MGNREGS, we **wouldn't** have had enough food to eat

02 = Without the cash income from MGNREGS we **would** have had enough food to eat, but it has made life easier for us

03 = Neither of these two statements really describes the situation

**12.9** Do you agree that the food component in the MGNREGS wage structure should have been retained?

00 = No 01 = Yes

**12.10** How did the daily wage rate for MGNREGS compare to any other manual labour being undertaken by members of this household?

01 =Higher 02 =About the same 03 =Lower

**12.11** What is the daily rate for manual labour earned by members of this household (other than MGNREGS)?

Men (Rs.\_\_\_\_\_) Women (Rs.\_\_\_\_\_)

**12.12** If you have grievances against MGNREGS, are they being addressed?

00 = No 01 = Yes

**12. 13.**Please discuss any additional issues/suggestions about MGNREGS

		<b>Respondent's comments</b>
12.13a	Grievances/redressal	
12.13b	Food component	
12.13c	Unemployment allowance	
12.13d	Facilities availability	
12.13e	Any other (specify)	

## PART 13: OPERATION OF ICDS/AAGANWADI

**13.1.** Did any member in your household get benefit from any Integrated Child Development Scheme during the **past 12 months**?

00 = No 01 = Yes 02 = Not applicable

[If '00' go to **13.3**. If '02', go directly to **Part 14**]

**13.2** If yes, who were the beneficiaries of ICDS in your household (tick more than one box if relevant):

13.2a. Child under six years of age

13.2b. Nursing mother

13.2c. Pregnant family member  
(wife, daughter, daughter-in-law)

13.2d. Adolescent girl-child


**13.3** If no, what was the reason?

01 = There was no anganwadi in the neighborhood

02 = The anganwadi is not operating regularly, and the household is not benefiting

96 = Any other reasons (please specify)

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**13.4.** If 13.1 = '01 =', complete the following, giving details of benefits received by members of the household from ICDS:

	<b>13.4a.</b>	<b>13.4b.</b>	<b>13.4c.</b>	<b>13.4d.</b>
ID Code of household member (same as Part B)	Benefit obtained from ICDS	Description of benefit received (write details)	Duration of the benefit received (mention duration in terms of number of months/years)	Period when the benefit was received (mention the name of the months/period during which benefited)

**Codes 13.4a:**

01 = Supplementary nutrition

05 = Referral and pre-school education

02 = Growth monitoring

06 = Any other (Specify \_\_\_)

03 = Nutrition and health education

94 = No response

04 = Immunization

98 = Don't know

**13.5.** If the household has children aged between 3 and 6 years, then ask the following:

		Ask If 13.5a = '01'		Ask if 13.5c = '01'		Ask if 13.5a='00'	
	<b>13.5a</b>	<b>13.5b.</b>	<b>13.5c.</b>	<b>13.5d.</b>		<b>13.5e.</b>	
ID Code of children aged between 3 & 6 years (see <b>Part 2</b> )	Does this child go to 'aaganwadi center'? 00 = No 01 = Yes <b>If '00', go to 13.5e.</b>	How often does the child go to 'aaganwadi center' in a week? (write the no. of days)	Does the child get any food at the 'aaganwadi center'? 00 = No 01 = Yes	Whether or not the child got food last week?		The reasons for not sending child to the Aaganwadi center (write the appropriate code for each child, even if same)? 01 = No 'aaganwadi' in the neighbourhood 02 = 'Aaganwadi' is not operating regularly 03 = We don't need 'aaganwadi' benefits 96 = Other (specify_____)	
				<b>Day</b>	<b>Breakfast</b> (Biscuits/Seasonal Fruit/Bhuja)		<b>Lunch</b> (Khidi/Rasiyav/Halwa/Pulav)
					00 = No 01= Yes		00 = No 01= Yes
		Days_____		Yesterday			
				2 days before			
				3 days before			
				4 days before			
				5 days before			
				6 days before			
				7 days before			
		Days_____		Yesterday			
				2 days before			
				3 days before			
				4 days before			
				5 days before			
				6 days before			
				7 days before			
		Days_____		Yesterday			
				2 days before			
				3 days before			
				4 days before			
				5 days before			
				6 days before			
				7 days before			

**PART 14: : OPERATION OF OTHER BENEFIT SCHEMES**

**14.1.** Did any person in this household receive a pension or other benefit during the **past 12 months**?

00 = No      01 = Yes            **[If no, go to 14.3]**

**14.2.** Did the household receive any of the following payments during the **past 12 months** (record the appropriate code for each)?

00 = No                      01 = Yes

- 14.2a = Old age pension
- 14.2b = Disability pension
- 14.2c = Widow pension
- 14.2d = Accidental death benefits
- 14.2e = Freedom fighter pension
- 14.2f = Army pension/related compensation
- 14.2g = Employment-related pensions,
- 14.2h = Drought /Flood relief
- 14.2i = Other Natural calamities relief
- 14.2j = Other (specify)


**14.3.** Did the household receive any of the following subsidy payments during the **past 12 months** (record the appropriate code for each)?

00 = No                      01 = Yes

- 14.3a =Drinking water connection subsidy
- 14.3b =Gas connection subsidy
- 14.3c =Farming subsidy for seeds, tractor purchase etc
- 14.3d =Access to a farming credit card (Kissan etc.)
- 14.3e =Total sanitation campaign subsidy
- 14.3f =Any other (Specify\_\_\_\_\_)


**14.4.** **14.4** Did this household receive any other benefit payment relating for medical or death reasons (including health or life insurance)?  
 00 = No                      01 = Yes            **[If no, go to Part 15]**

**14.5** Please provide details.

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## PART 15: SOCIAL ORGANISATIONS

**15.1.** Is any person in this household an elected member of the Gram Panchayat?

00 = No      01 = Yes

**15.2.** Is any person in this household an official in the Gram Panchayat (example: secretary, bill collector, water man, office assistant)?

00 = No      01 = Yes

**15.3.** Is any person in this household a member of one of the following types of organization (record the appropriate code for each)?

00 = No      01 = Yes

**15.3a.** Farming/producer marketing group

**15.3b** Water users' group

**15.3c** Forest conservation group

**15.3d** Any other (specify \_\_\_\_\_)


**15.4.** Is any person in this household a member of a Self Help Group?

00 = No      01 = Yes

**[If no, go directly to Part 16]**

**15.5.** What is the monthly contribution made to the Group (Write 00, if no contribution?)

Amount (Rs \_\_\_\_\_)

**15.6.** During the **past 12 months**, has any person in this household accessed credit through the Self-Help Group?

00 = No      01 = Yes

**[If no, go directly to Part 16]**

**15.7.** What was the amount of credit received?

Amount (Rs \_\_\_\_\_)

**15.8.** What has this credit been used for (list more than one if appropriate)?

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**Codes 15.8:**

15.8a = Food

15.8b = Medical purposes

15.8c = Household asset purchases

15.8d = Weddings or ceremonies

15.8e = Farming purposes

15.8f = Petty or household business

15.8g = Other (specify \_\_\_\_\_)

## PART 16: SUBJECTIVE WELL-BEING

These questions are to be asked to the head of household, or a senior adult present, and are designed to represent the view of the household.)

Please imagine a six-step ladder where on the bottom (the first step), stand the POOR people in your village, and on the highest step (the sixth step), stand the richest people.

<b>Poorest</b>		<b>Middle</b>		<b>Richest</b>	
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

**16.1.** On which step is the household on today?

**16.2.** On what step was the household two years ago?

**16.3.** On what step was the household five years ago?

(If “Don’t know”, record 98 )

**16.4.** In this **Village**, do you think that during the past five years, peoples’ abilities to adequately feed themselves, and clothe themselves have improved?

00 = No

01 = Yes

98 = Don’t know

**16.5.** Do you think the next generation of people in this **Village** will have more opportunities and a better lifestyle than the situation at present?

00 = No

01 = Yes

98 = Don’t know





## ***Interview Schedule 2- Migrant Household Questionnaire***

*All questions in this part must be addressed to the households having one of more members who have stayed away from the village for 60 days or more in the last 365 days (April 2011 to March 2012) for employment purpose.*

**PART 18: HOUSEHOLD MEMBERS WHO HAVE STAYED AWAY FOR EMPLOYMENT REASONS DURING THE PAST 365 DAYS**

(Record members belonging to the family who have lived elsewhere for 60 days or more in past 365 days for employment reasons. In addition to those household members presently staying away for work, also record the members who have lived outside the village for work for 60 days or more in last 365 days and who have now returned and are residing with the household)

	18.1	18.2	18.3	18.4	18.5		18.6
ID CODE	NAME	RELATION TO HEAD	AGE	SEX	MARITAL STATUS		LITERACY
01							
02							
03							
04							
05							
					Ask only if 18.10 = 01		Ask only if 18.10 = 00
	18.7	18.8	18.9	18.10	18.11		18.12
ID CODE	YEARS OF SCHOOLING	AGE AT FIRST MIGRATION	TOTAL DURATION OF STAY OUTSIDE VILLAGE SINCE S/HE OUTMIGRATED FOR THE FIRST TIME (YEARS)	IS S/HE CURRENTLY STAYING WITH THE HOUSEHOLD	PLACE AND DURATION OF STAY DURING THE MOST RECENT LAST MOVE IN PAST 365 DAYS		CURRENT PLACE OF RESIDENCE (City/State)
					PLACE (City/State)	DURATION	
01			_____ Years				
02			_____ Years				
03			_____ Years				
04			_____ Years				
05			_____ Years				

**Codes – 18.2** – (Only include direct descendents of head of household (sons, daughters, grandsons, granddaughters; daughter-in-law, etc.)

01=Wife/Husband      02=Son/Daughter      03=Grandson/Granddaughter      04=Daughter-in-law      05=Parent      96=Other (Specify)

**18.3** – Age in completed years. 2 digit code, so 1 is “01”.

**18.4** – 01= Male, 02 = Female;

**18.5** – 01=Never married      02=Currently married      03=Widowed      04=Divorced/separated

**18.6** – 00=Illiterate      01=Literate (Without schooling)      02 = Literate

**18.7** – 00=No education      01=Primary (up to 5<sup>th</sup> class)      02=Middle (from 6<sup>th</sup> to 8<sup>th</sup> class)      03 = High (9<sup>th</sup> and 10<sup>th</sup> class)      04=Higher Secondary (11<sup>th</sup> and 12<sup>th</sup>)

05=Graduate      06=Postgraduate & above      96=Other (Specify \_\_\_\_\_)      98=Don’t know

**18.8** – Age in completed years. 2 digit code, so 1 is “01”.

**18.9** – Record verbatim. For example, 1 year 7 months. If less than a year, write ‘00’ and then write number of months.

**18.10** – 00 = No      01=Yes;

**18.11 (Place)** – Record verbatim. **(Duration)** – Record in months (for example 01 for 1 month, 02 for 2 months and so on. If less than one month, write ‘00’ and then write number of days)

**18.12** – Record verbatim

Table continued

	Ask only if 18.10 = 00		Ask only if 18.14 = '01'		Ask only if 18.16 = '01'		
	18.13	18.14	18.15	18.16	18.17	18.18	18.19
ID CODE	DURATION OF STAY AT THE CURRENT PLACE OF RESIDENCE	DID S/HE OUTMIGRATED ELSEWHERE IN ADDITION TO LOCATION AT LAST MOVE/CURRENT LOCATION IN PAST 365 DAYS	NUMBER OF MOVES IN PAST 365 DAYS	DID S/HE VISIT HOME IN PAST 365 DAYS	HOW MANY TIMES VISITED HOME IN PAST 365 DAYS	TOTAL DURATION STAYED HOME IN PAST 365 DAYS	WAS THE PURPOSE OF ANY VISIT HOME IN PAST 365 DAYS TO HELP/WORK ON HOUSEHOLD FARMS
01	___ Years ___ Months						
02	___ Years ___ Months						
03	___ Years ___ Months						
04	___ Years ___ Months						
05	___ Years ___ Months						
	18.20	18.21	18.22	18.23	18.24	18.25	18.26
ID CODE	REASON FOR MIGRATION	OCCUPATION DURING LAST MOVE/AT CURRENT PLACE OF RESIDENCE	INCOME PER MONTH OF THE OUTMIGRANT DURING LAST MOVE/AT THE PLACE OF RESIDENCE (In Rs.)	WHETHER REMITTANCE SENT DURING LAST 365 DAYS	NUMBER OF TIMES REMITTANCE SENT DURING LAST 365 DAYS	TOTAL AMOUNT OF REMITTANCE SENT DURING LAST 365 DAYS (In Rs.)	MODE OF REMITTANCE
01							
02							
03							
04							
05							

Codes - 18.13 - For example, 1 year 7 months. If less than a year, write only number of months.

18.15 - 01 = 1 move 02 = 2 moves 03 = 3 moves 04 = 4 moves and more

18.17 - 01 = 1 time 02 = 2 times 03 = 3 times 04 = 4 times and more

18.18 - Record verbatim in months (for example 01 for 1 month, 02 for 2 months and so on. If less than one month, write '00' and then write number of days)

18.19 - 00 = No 01 = Yes

18.20 - 01 = Landless household 02 = Income from agriculture not enough 03 = Crop failure 04 = Money needed to boost agricultural production 05 = Repayment of loan

06 = Unemployment/irregular employment in the village 07 = Better employment 08 = Low wage rate in the village 09 = Dowry for daughter/other girls in the household 96 = Other (specify)

18.21 - 01 = Government Employee 02 = Salaried employment in private firm 03 = Own business 04 = Agricultural labourer 05 = Construction worker 06 = Domestic help

07 = Driver 08 = Security services (watchman) 09 = Rickshaw puller 10 = Street vendor/Push cart vendor 11 = Shoe shiner/Cobbler 96 = Other (specify)

18.22 - Record verbatim. 18.23 - 00 = No 01 = Yes

18.24 - 01 = 1 time 02 = 2 times 03 = 3 times 04 = 4 times and more;

18.25 - Record verbatim.

18.26 - 01 = Bank account transfer

02 = Money order

03 = Friend/Relatives

04 = Self

## PART 19: REMITTANCES

**19.1.** Did out-migrant send remittances during the last 365 days (interviewer to record this from question 18.23 above?)  
 00= No      01= Yes  [If no, go directly to **Part 20**]

**19.2** Would you please tell me whether or not household used the remittance money for any of the following in the past 365 days (Record the appropriate code for each of the following options)?

**Codes for 19.2**

00= No 01= Yes

- 19.2a = Food
- 19.2b = Education of household members
- 19.2c = Health care
- 19.2d = Buying household durables
- 19.2e = Building pukka house/renovating house
- 19.2f = Building toilet
- 19.2g = Buying agricultural land
- 19.2h = Debt repayment
- 19.2i = Marriage and other ceremonies
- 19.2j = Initiating new entrepreneurial activity
- 19.2k = Saving
- 19.2l = Any other (specify \_\_\_\_\_)

**19.3** Would you please tell me the 3 most important uses of remittance as well as the money spent on each 3 of them in order of amount of money spent (Record the upto 3 codes from 19.2a to 19.2l and money spent on each, in descending order of the money value, from highest to lowest)?

**Codes**

**Amount**

Rs \_\_\_\_\_ Rs \_\_\_\_\_ Rs \_\_\_\_\_

**19.4.** Apart from these uses, did household utilize remittances to boost agricultural production in the past 365 days (Ask only, if household owned or cultivated crops in the past one year i.e. 5.1 = '01')?

00= No      01= Yes  [If no, go to **19.8**]

**19.5** Could you please tell me whether the household used money for any of the following and how much?

Q. No	Particulars	Investment during last 365 days	Amount invested (In Rs.)
		00=No 01 = Yes	
9.5a	Fertilizer/pesticides		
19.5b	Improved seed varieties		
19.5c	Purchase of farm machinery		
19.5d	Renting farm machinery for agriculture		
19.5e	Any other (Specify _____)		

**19.6** As a result of investment of remittances, do you feel that there is an increase in household agricultural production in the past 365 days?

01 = Increased

02 = Same

[If same, go to 19.8]

**19.7** Is the increased production used for household own consumption or sold?

01 = Household consumption

02 = Sold

**19.8** Overall, how important are the remittance for this household?

01 = Very important

02 = Important

03 = Not important

98 = Don't know/can't say

**19.9** How do you compare the following aspects of household status at present with family member(s) earning outside, with the past when none of the family members had migrated out of this village for work?

**Codes from 19.9a to 19.9f.**

01 = Better

02 = Same

03 = Worse

19.9a Income/Financial status of household

19.9b Social status of the household

19.9c Educational Status of household members

19.9d Health status of household members

19.9e Food security of household members

19.9f Child health and educational outcomes

## PART 20: HOUSEHOLD LABOUR

**20.1** Has out-migration by family member(s) reduced the pressure on the household resources?

00= No 01= Yes

**20.2** Has out-migration by family member(s) resulted into availability of more food per person?

00= No 01= Yes

**20.3** Has out-migration by family member(s) resulted into increase in the workload for left-behind family members?

00= No 01= Yes

**(Ask the following questions only if household owned or cultivated crops in the past one year i.e. 5.1 = '01')**

**20.4.** Has out-migration by family member(s) resulted into availability of less labour for household own agriculture or has it helped to use household labour more efficiently for better economic returns?

01 = Shortage of Labour

02 = Efficient utilization of labour

**[If '02', go directly to 20.9]**

**20.5** What measures did the household take to compensate for the labour of out-migrant(s)?

00 = Did not do anything → [go directly to Part 21]

01 = Hired outside labour → [go to 20.6]

02 = HH members worked → [go to 20.7]

for more number of hours

03 = Both – '01' and '02' above → [ask both, 20.6 and 20.7]

**20.6** Could you please tell me number of outside labour hired and amount of money paid for each of the following agricultural activities (if 'no labour hired' for a particular activity, leave blank)

	Activity	Number of Labour Hired	Amount Paid (In Rs.)
20.6a	Plowing (Hal Chalana)		
20.6b	Manuring (Khad Dalna)		
20.6c	Sowing (Buwai)		
20.6d	Harvesting (Nirayi/Gudai)		
20.6e	Threshing (Katai)		
20.6f	Other (Specify _____)		
	<b>Total</b>		

**20.7** Would you please tell me whether the increase in the number of hours is more for male or female members of the households?

01 = Male members

02 = Female members

03 = Both

98 = Don't know

**[If '02', go to 20.8, otherwise go directly to part 21]**

**20.8** With female members of the household spending more time on household agriculture, has it resulted into less time for child care by female members of the household?

00= No

01= Yes

02 = Not Applicable (No children)

**20.9** In what ways do you think outmigration has resulted into efficient utilization of the household labour?

01 = Bigger family size so enough members for own agriculture

02 = Small landholding/agricultural income inadequate to meet household needs

03 = Migration during agriculturally lean season provides extra income

96 = Any other (specify \_\_\_\_\_)

### ***Interview Schedule 3: Questionnaire for Left-Behind Wife of the Out-migrant***

*All questions must be addressed to the 'Left-behind Wife of an Out-migrant' only. In case of more than one left-behind wives, please interview the youngest female, provided she is 18 years or older. Questions must be asked without adult males present.*



**PART 21: BASIC INFORMATION ABOUT THE LEFT-BEHIND WIFE AND THE OUTMIGRANT HUSBAND**

**21.1** Is the wife of any out-migrant from the family present?

00 = No

01 = Yes

02 = Not applicable (the out-migrant(s) is/are unmarried)

(If 21.1 = no, go directly to Part 29. If 21.9 = yes, ask all questions from Part 21 to Part 28)

**21.2** Respondent Name and ID (See, Part 2)

Name \_\_\_\_\_

ID \_\_\_\_\_

**21.3** Respondent's Husband Name and ID (See, Part 18)

Name \_\_\_\_\_

ID \_\_\_\_\_

**21.4** Age of respondent

(Age in completed years) \_\_\_\_\_ Years

**21.5** Can you read and write?

00 = No

01 = Yes

**[If no, go to 21.7]**

**21.6** Year of schooling \_\_\_\_\_ Completed grade

**[If no formal education, write 00]**

**21.7** What was your age at the time of your marriage?

(Age in completed years)

\_\_\_\_\_ Years

**21.8** Do you have any children?

00 = No 01 = Yes

**[If no, go to 21.10]**

**21.9** How many children you have?

No. of daughters \_\_\_\_\_

No. of sons \_\_\_\_\_

**21.10** How long has it been since your husband migrated out for the first time or what was his age at first migration (record from **18.9** above)?

Duration of stay since 1<sup>st</sup> move \_\_\_\_\_ Years

Or

Age at first move \_\_\_\_\_ Years

(Age in completed years)

**21.11** What was your husband's marital status at the time of first move?

01 = Never married

02 = Married

96 = Other (specify \_\_\_\_\_)

98 = Don't know

**21.12** Where is he staying currently (record from **18.12** above. If staying in the village at the time of survey, leave blank)?

Village/city \_\_\_\_\_

State \_\_\_\_\_

**21.13** In total, for how long has he been staying at the current place of residence or where he last moved?

\_\_\_\_\_ Years \_\_\_\_\_ Months

**[If less than a year, write only number of months]**

**21.14** Did he visit home in last 365 days (record from **18.16** above)?

00 = No 01 = Yes

 **go to 21.16]**

**21.15** How long has it been since he last visited home?

\_\_\_\_\_ Years

\_\_\_\_\_ Months

**21.16** For how long (total duration of stay) did he stay in the village when he visited home last time?

\_\_\_\_\_ Months \_\_\_\_\_ Days

**[If less than a month, write only number of days]**

**21.17** Does your husband send remittances (record from 18.23 above)?

00 = No

01 = Yes

 **[If no, go to 21.22]**

**21.18** Who does your husband send remittances to?

01 = You **→ [go to 21.20]**

02 = Father/Mother-in-law

03 = Brother-in-law

96 = Other (specify \_\_\_\_\_)

**21.19** Does he also send money to you?

00 = No

01 = Yes

**21.20** Do you have any conflict with any member(s) of the household with regards to sharing of remittances?

00 = No

01 = Yes

**[If no, go to 21.22]**

**21.21** Who do you usually have conflict with?

01 = Father/Mother-in-law

02 = Brother-in-law

96 = Other (specify \_\_\_\_\_)

**21.22** Normally, when your husband is in the home/village, who does he spend most of his time with?

01 = You

02 = Children

03 = Parents

04 = Friends/Neighbours

96 = Other (specify \_\_\_\_\_)

**21.23** Have you ever visited your husband's place of work (current or any other place where he worked in the past)?

00 = No

01 = Yes

[If no, ask questions **21.24** and **21.25**. If yes, ask questions **21.26** and **21.27**]

**21.24** Could you tell me the reasons for not ever visiting your husband's place of work (interviewer to probe and record the most appropriate code)?

01 = Own choice

02 = Financial problems

03 = Health problems

04 = Housing problems at husband's place of work

05 = Nature of job of husband (always mobile, such as driver)

06 = Husband says 'I must stay home'

07 = Need to look after agriculture in his absence

08 = Other domestic and child care responsibilities

96 = Other (specify \_\_\_\_\_)

**21.25** If given a chance would you like to live with your husband at the place he is working?

00 = No 01 = Yes

**21.26** In total, how many times have you visited your husband's place of work?

No. of times \_\_\_\_\_

**21.27** How long has it been since the last time you visited your husband's place of work?

\_\_\_\_\_ Years

\_\_\_\_\_ Months

**[If less than a year, write only number of months]**



## PART 23: Gender Roles

**23.1** Are you involved in any income-generating activities, other than household agriculture?

00 = No

01 = Yes

[If '00', go to 23.13]

**23.2** What type of work you mainly do?

01 = Agricultural labourer

02 = Share-cropper

03 = Non-agricultural labourer

04 = Own business (for e.g. basket-making)

05 = Domestic worker (e.g. cleaning, moping, washing clothes)

96 = Other (Specify \_\_\_\_\_)

**23.3** For how many months do you usually do this work in a year?

No. of months \_\_\_\_\_

**23.4** For how many days, do you usually do this work in a month?

No. of days \_\_\_\_\_

**23.5** How many hours do you do this work in a usual day?

No. of hours \_\_\_\_\_

**23.6** Do you receive income in cash or kind, for this work?

01 = Income in-kind

02 = Cash income [If '02', go to 23.9]

**23.7** What do you receive as part of in-kind income?

01 = Cooked food/meals

02 = Certain quantity of crop

96 = Other (Specify \_\_\_\_\_)

[Ask 23.8 only if 23.7 = '02'. Otherwise go to 23.10]

**23.8** Could you tell me what would be approximate value of this in-kind income (portion of crop) that you get as daily wage?

Rs \_\_\_\_\_

**23.9** How much do you earn a day/what is your wage per day?

Rs \_\_\_\_\_

**23.10** When you are working outside, who usually takes care of household affairs?

01 = Daughter

02 = Mother-in-law

03 = Sister-in-law

96 = Other (Specify \_\_\_\_\_)

**23.11** After your husband's migration, would you say your workload as:

01 = Increased a lot

02 = Increased a little

03 = Stayed about the same

04 = Decreased

98 = Don't know/ no opinion

**23.12** Do you think it has resulted into you spending less time for child care?

00 = No

01 = Yes

**23.13** Would you please tell me amount of time spent on each of the following domestic activities before and after your husband outmigration?

	Activities	Time spent daily on each activity							
		Before husband's outmigration				After husband's outmigration			
		NA	Hours	Minutes	Do you take rest after each activity? 00 = No 01 = Yes	NA	Hours	Minutes	Do you take rest after each activity? 00 = No 01 = Yes
23.13a	Collecting drinking water								
23.13b	Cleaning and mopping house								
23.13c	Cooking								
23.13d	Washing clothes								
23.13e	Collecting fuel/wood								
23.13f	Milking animals								
23.13g	Taking care of animals								
23.13h	Agriculture related work like weeding, harvesting and threshing on own farm								
23.13i	Child care								
23.13j	Leisure								

NA = Not Applicable

**23.14** Is any of the activities listed above was earlier done by your husband?

00 = No      01 = Yes

**no, go to Part 24]**

**23.15** Could you please tell me 3 most important activities done by your husband earlier in order of amount of time spent (interviewer to record in descending order of time spent (from high to low)?

**Activity code (e.g. 23.13a)**

**Time spent (Hours:Mins)**

## PART 24: DECISION MAKING

In times when husband is around and others when he is away, could you please tell me who has the final say on each of the following?

		Code	
		Husband around	Husband away
24.1	Your own and your children health care		
24.2	Children's education		
24.3	Large household purchases		
24.4	Daily household purchases		
24.5	Visits to family or relatives		
24.6	What food is to be cooked		
24.7	What to do with money in the household		

### Codes for questions from 24.1 to 24.7

- 01 = Respondent alone
- 02 = Husband/partner alone
- 03 = Respondent and husband
- 04 = Father/mother-in-law
- 05 = Joint household decision
- 96 = Other (specify)
- 98 = Refused to answer/cannot answer

## PART 25: LIVING ARRANGEMENTS

**25.1** At present whom do you live with: do you live alone, with in-laws, with parents or do you have any other living arrangement (interviewer to observe and record on her own)?

- 01 = Nuclear  
03 = With parents  
02 = With in-laws  
96 = Others (Specify \_\_\_\_\_)

**25.2** Have you changed the type of living arrangement after your husband migration?

- 00 = No      01 = Yes      **[if no, go to 25.4]**

**25.3** Please mention with whom did you live before?

- 01 = Nuclear  
03 = With parents  
02 = With in-laws  
96 = Others (Specify \_\_\_\_\_)

**25.4** Since how many years you have been staying in the present living arrangement? \_\_\_\_\_ **Years**

**25.5** Can you please mention whose decision it was to stay in the present living arrangement?

- 01 = Self  
04 = Father-/Mother-in-law  
02 = Son/Daughter  
05 = Father/Mother  
03 = Husband  
96 = Others (Specify)

**25.6** Are you comfortable with the present living arrangement?

- 00 = No      01 = Yes      **[if yes, go to 25.8]**

**25.7** Could you please tell me the reason, why (interviewer to probe and record verbatim)? \_\_\_\_\_

**25.8** After Your husband's migration, do you think your relations with your parents/in-laws family have changed?

- 00 = No      01 = Yes **[if no, go directly to Part 26]**

**25.9** Have they changed for better or worse?

- 01 = Better      02 = Worse

## PART 26: FAMILIAL SUPPORT

### 26.1 Support from In-laws

#### Financial Support

- 26.1a Education expenses of children
- 26.1b Health care expenses of children
- 26.1c Health care expenses of yourself
- 26.1d Providing you money when you need it

#### Physical Support

- 26.1e Taking children to school
- 26.1f Taking children to doctor
- 26.1g Taking you to doctor
- 26.1h Accompanying for household purchase
- 26.1i Going with you to bank or post office
- 26.1j Helping you with household chores
- 26.1k Doing household chores when you are away

#### Emotional Support

- 26.1l Sharing your talks
- 26.1m Giving suggestion when you are down

#### Others (Specify below)

- 26.1n \_\_\_\_\_
- 26.1o \_\_\_\_\_

### 26.2 Support from Parents

#### Financial Support

- 26.2a Education expenses of children
- 26.2b Health care expenses of children
- 26.2c Health care expenses of yourself
- 26.2d Providing you money when you need it

#### Physical Support

- 26.2e Taking children to school
- 26.2f Taking children to doctor
- 26.2g Taking you to doctor
- 26.2h Accompanying for household purchase
- 26.2i Going with you to bank or post office
- 26.2j Helping you with household chores
- 26.2k Doing household chores when you are away

#### Emotional Support

- 26.2l Sharing your talks
- 26.2m Giving suggestion when you are down

#### Others (Specify below)

- 26.2n \_\_\_\_\_
- 26.2o \_\_\_\_\_

**Codes for questions 26.1 and 26.2** – 00 = Don't need help/NA 01 = Always  
 02 = Often 03 = Sometimes 04 = Never



## PART 27: OTHER ISSUES

**27.1** After your husband's outmigration, have you faced any of the problems described below (interviewer to read out each option and record the appropriate code for each of the following)?

**Codes for 27.1** – 01 = Always                      02 = Often                      03 = Sometimes                      04 = Never

**Workload**

- 27.1a More responsibility
- 27.1b Insufficient time for recreational activities
- 27.1c Insufficient time to rest
- 27.1d Neglect responsibilities

**Mental/Emotional Health**

- 27.1e Feel worried due to communication gap with husband
- 27.1f Inability to visit parents house or relatives due to lack of time
- 27.1g Feel lonely or isolated
- 27.1h Lack of peace of mind
- 27.1i Feel depressed or unhappy
- 27.1j Think that husband should not have out-migrated for a job
- 27.1k Not able to maintain social relations

- 27.1l Feel insecure
- 27.1m Cannot sleep properly
- 27.1n Not able to concentrate in work
- 27.1o Feeling of incompetence
- 27.1p Attempt of suicide
- 27.1q Irritable on petty issues
- 27.1r Think negative
- 27.1s Feel worried
- 27.1t Feel tired
- 27.1u Feel like crying

**Children (If no children, go to 27.2)**

- 27.1v Not able to teach children
- 27.1w Difficulty in upbringing of children
- 27.1x Less time for child care

27.2 Do you take decisions related to the money in your household?

00 = No      01 = Yes

[If no, go to 27.4]

27.3 After your husband's migration, have you faced any of the problems described below (interviewer to read out each option and record the appropriate code for each of the following)?

**Codes for 27.3**

01 = Always      02 = Often      03 = Sometimes      04 = Never

27.3a Difficulty in dealing with financial responsibilities

27.3b Difficulty in managing resource demands at the time of emergency

27.3c Difficulty in taking right decisions at the time of emergency

27.3d Available money is insufficient to run household affairs

27.3e Difficulty in receiving or obtaining money from husband

27.4 After your husband's outmigration, do you think that there has been improvement in the following (interviewer to read out each option and record the appropriate code for each of the following)?

**Codes for 27.4**

00 = No      01 = Yes

27.4a Your children and yours health

27.4b Children's education

27.4c Your self-respect

27.4d Your decision-making power

27.4e Family relations

27.4f Other (Specify \_\_\_\_\_)

## PART 28: PERCEPTION ABOUT OUTMIGRATION

**28.1** Do you prefer to be a wife of an out-migrant or stay put?

01 = Wife of an out-migrant

02 = Wife of a stay-put

[If '01', go to 28.3]

**28.2** Could you please tell me the reasons why do you prefer that your husband should stay put in the village (interviewer to probe and record the response)?

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**28.3** Do you think that the out-migrants have better job opportunities than non-migrants?

00 = No

01 = Yes

**Ask question 28.4 to 28.6, irrespective of whether the respondent has son or not**

**28.4** Will you allow your son if he decides to migrate elsewhere for work?

00 = No

01 = Yes

[If no, go to 28.6]

**28.5** Will you allow your son to migrate elsewhere for work if he decides to leave his wife behind in the village?

00 = No

01 = Yes

[If 01, go to 28.7]

**28.6** Will you allow your son to migrate elsewhere for work if he decides to take his wife to the place of work?

00 = No

01 = Yes

**Ask question 28.7 and 28.8, irrespective of whether the respondent has daughter or not**

**28.7** Will you marry your daughter to an out-migrant, knowing that after marriage she has to stay in the village while her husband is away?

00 = No

01 = Yes

[If no, go to 28.9. Otherwise, go directly to Part 29]

**28.8** Will you marry your daughter to an out-migrant knowing that after marriage she will stay with her husband at the place of his work?

00 = No

01 = Yes

**PART 29: INFORMATION ABOUT THE 'MIGRANT MEMBER(S)' OF THE HOUSEHOLD FOR FOLLOW-UP SURVEY**

We thank you for participating in this survey. The information you have provided will be used in Chetan Choithnai's PhD thesis at the University of Sydney, academic journal publications and conference presentations. As a follow-up to this household survey, this study involves interviews with a set of migrant members of the select households at their current place of residence. We would like to remind you that by migrant member, we mean **any male or female member of this household who has lived outside this village for 60 days or more during last 365 days for employment reasons**. Could you please provide us with some information about such migrant members that will help us contact them.

**Record the information about upto 2 migrants**

<b>Migrant 1</b>	
Name of the migrant	
Village/Town/City of current residence	Village _____ Town _____ City _____
State/Union Territory	State/UT _____
Full Postal Address	
PIN	
Telephone number (with area code)	
Mobile Number	
Name of a <b>friend/relative</b> at the current residence	
Telephone or mobile number of that friend/relative	

<b>Migrant 2</b>	
Name of the migrant	
Village/Town/City of current residence	Village _____ Town _____ City _____
State/Union Territory	State/UT _____
Full Postal Address	
PIN	
Telephone number (with area code)	
Mobile Number	
Name of a <b>friend/relative</b> at the current residence	
Telephone or mobile number of that friend/relative	

## **Appendix 5 - Interview guide/aid memoir for unstructured/in-depth interviews with migrants with the list of indicative topics**

Below given is the list of indicative themes for the unstructured in-depth interviews with the migrant members of the select households. It is important to note that in-depth interviews have no predetermined patterns, structures or contents. The aim of the in-depth interview is to obtain informants' perspectives on the research problem and thus the list of topics below consists of potential themes and it is not an exhaustive list. While an attempt will be made to obtain information on each of the following aspects, informants' narratives on other aspects relevant from the perspective of this research will also be recorded to add value to the research context.

### **Background information**

Although this information was also collected through the 'Household Interview Schedule', the repetition of this basic set of questions is considered useful for starting a conversation with the migrant respondents. Moreover, this information will also provide a means to double-check the information with the one provided by household.

- Name
- Sex
- Current age
- Age at first migration
- Duration of stay outside the village since first migration
- Duration of stay at the current place of residence
- Marital Status
- If married, number of children
- Highest educational attainment

### **Migration history**

- Number of migratory movements made by the respondents from the first migration onwards.
- Nature/pattern of migration, 1) seasonal, 2) circular, 3) permanent, and the factors that guide these patterns.

- A set of social, economic, demographic, cultural, political factors that caused migration.
- Any particular event or episode that influenced the migratory behaviour of the respondent

### **Social networks of migrants**

This section will seek to understand the importance of social network in guiding the migration behaviour of the respondent. The information that will be sought includes:

- Whether migrant had any pre-existing social networks at the migration destination and the role of these social networks in guiding the migration behaviour of the respondent.
- Whether and how these network are structured around the hierarchies of social class, caste/tribe and gender.
- Whether these social networks guide the patterns of social relations at the workplace destinations i.e. how does one social group (people from one caste, tribe) interact with other.

### **Living and Working conditions**

This section is intended to understand the living and working conditions of the migrants at the destination place. The questions include:

- Number of working hours
- Whether work related safety protocols are in place or not
- Whether the nature of work involve any health hazards
- Health status of migrants
- Availability or safe drinking water, toilet facility, recreational facilities etc.

### **Standard of living**

This section will attempt to assess the standard of living and well-being of the migrants and how they compare with their life in the origin village(s). This will include questions pertaining to:

- Type of housing
- Source of drinking water
- Type of toilet facility
- Monthly income and consumption patters

## **Income and Remittances**

This part will cover questions such as,

- Daily/Weekly/Monthly income of the migrants
- Whether the income earned is adequate enough to live decently
- Saving patterns of migrants
- Whether migrants send remittances at the place of origin
- If yes, how frequently they send remittances at the place of origin
- Nature of remittances – cash or kind
- The amount of money remitted home

## **Food consumption patterns of migrants**

An attempt will also be made to understand the food consumptions of the migrants at the destination places. The aim is to learn whether and how migration play out on the food security of migrant members and whether there were any qualitative differences between the food security outcomes of resident and non-resident groups of the same household.

## Appendix 6: Food items used in Principal Component Analysis for computing food diversity tertiles

Following is the list of 30 food items that were used in the Principal Component Analysis for computing household food diversity tertiles. The household dietary diversity calendar in the survey questionnaire included 46 individual food items, and households were asked to report the food items they consumed in the month preceding the survey. However, there were 16 food items with frequencies of 10 households or less which rendered them unsuitable for Principal Component Analysis analysis. Hence these 30 items were finally used for the dietary diversity tertiles

S. No.	Food item
	<b>Cereals and pulses</b>
1	Corn
2	Chole
3	Moong
4	Chana
5	Arhardal
6	Masoor Dal
7	Other (specify_____)
	<b>Vegetables</b>
8	Onion
9	Garlic
10	Tomatoes
11	Gourds (Bitter, Ash, Melon)
12	Drumstick
13	Lady finger
14	Spinach
15	Any other
16	Banana
17	Mango
18	Jackfruit
19	Other (specify_____)
20	Milk
21	Eggs
	<b>Meat protein</b>
22	Mutton
23	Chicken
24	Fish
	<b>Others</b>
25	Biscuits
26	Tea
27	Sugar
28	Jaggery
29	Pickles
30	Ghee





**RESEARCH INTEGRITY  
Human Research Ethics**

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**Appendix 7 – Ethics approval**

Ref: MF/HW

6 December 2011

Assoc Professor Bill Pritchard  
School of Geosciences  
University of Sydney  
[bill.pritchard@sydney.edu.au](mailto:bill.pritchard@sydney.edu.au)

Dear Assoc. Professor Pritchard

Thank you for your correspondence dated **2 December 2011** addressing comments made to you by the Human Research Ethics Committee (HREC).

I am pleased to inform you that with the matters now addressed your protocol entitled **“Does migration impact household food and nutritional security outcomes? Empirical insights from rural India”** has been approved.

Details of the approval are as follows:

**Protocol No.:** 12 – 2011 / 14348

**Approval Date:** 6 December 2011

**First Annual Report Due:** 6 December 2012

**Authorised Personnel:** Assoc. Professor Bill Pritchard  
Chetan Choithani

**Documents Approved:**

Document	Version Number	Date
Endorsement and certified Hindi translation from Chairperson of Gram Panchayat	2	02/12/2011
Participant Consent Form and certified Hindi translation	2	02/12/2011
Participant Information Statement and certified Hindi translation	2	02/12/2011
Participant Information Statement for Interview with migrants and certified Hindi translation	2	02/12/2011
Use of Name Consent Form and certified Hindi translation	2	02/12/2011
Household questionnaire	Nil	Undated
Topics for unstructured in depth	Nil	Undated
Safety protocol	1	06/11/2011

HREC approval is valid for four (4) years from the approval date stated in this letter and is granted pending the following conditions being met:

**Manager Human Ethics**

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CRICOS 00026A



### **Condition/s of Approval**

Continuing compliance with the National Statement on Ethical Conduct in Research Involving Humans.

Provision of an annual report on this research to the Human Research Ethics Committee from the approval date and at the completion of the study. Failure to submit reports will result in withdrawal of ethics approval for the project.

All serious and unexpected adverse events should be reported to the HREC within 72 hours.

All unforeseen events that might affect continued ethical acceptability of the project should be reported to the HREC as soon as possible.

Any changes to the protocol including changes to research personnel must be approved by the HREC by submitting a Modification Form before the research project can proceed.

### **Chief Investigator / Supervisor's responsibilities:**

1. You must retain copies of all signed Consent Forms and provide these to the HREC on request.
2. It is your responsibility to provide a copy of this letter to any internal/external granting agencies if requested.

Please do not hesitate to contact Research Integrity (Human Ethics) should you require further information or clarification.

Yours sincerely

A handwritten signature in black ink, appearing to read "Margaret Faedo".

**Dr Margaret Faedo**  
**Manager, Human**  
**Ethics** *On behalf of the*  
*HREC*

Cc Chetan Choithani chetan.choithani@sydney.edu.au

**This HREC is constituted and operates in accordance with the National Health and Medical Research Council's (NHMRC) National Statement on Ethical Conduct in Human Research (2007), NHMRC and Universities Australia Australian Code for the Responsible Conduct of Research (2007) and the CPMP/ICH Note for Guidance on Good Clinical Practice.**