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## **Internal and international migration as a response to double deprivation** Some evidence from India

Mathias Czaika

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### Abstract

This study disentangles the effects of feelings of relative deprivation and the capability of households in realizing their migration aspirations. For this purpose I deconstruct the concept of relative deprivation into intra-group and inter-group relative deprivation and test their relative importance together with levels of absolute deprivation in shaping migration decisions on a household level. The migration decision itself is modelled as a two-stage process which separates the decision on *whether* to migrate at all, and the decision *where* to migrate in terms of an internal or international destination. Our empirical analysis is based on a unique dataset referring to the recent 64th round of the National Sample Survey (NSS) in India. This large dataset covers around 125,000 households and about 100,000 former household members counted as out-migrants. I hypothesize that intra-group as well as inter-group relative deprivation influences migration decisions and the choice of destinations. I identify two factors as relevant in this migration decision-making process. First, intra-group as well as inter-group relative deprivations are strong predictors for migration decisions in general, and in terms of possible destinations, for short-distance intra-state movements in particular. The likelihood of out-migration towards international destinations is significantly higher for households with lower levels of intra-group and inter-group relative deprivation. Second, besides the effects of relative deprivation, absolute deprivation plays an ambivalent role: while economically better endowed households have a higher migration propensity to send (primarily male) migrants to distant inter-state and international destinations, the inverse is true for moves of shorter distance that are mainly dominated by (female) migrants stemming from poorer households.

**Keywords:** relative deprivation, internal and international migration, India

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## Introduction

'The links between internal and international migration have recently begun to attract attention at the international policy level, especially in response to concerns by developed countries over migrant flows. Important questions are whether today's internal migrants are tomorrow's international migrants; whether international migration and internal migration are substitutes for each other; and *whether internal and international migrants share the same profile*. Needless to say, the answers depend very much on the local context and thus can only be arrived at through location-specific case studies.' (IOM 2008, p. 181)

The study of internal and international migration is dichotomous in a sense that most research is either focused on one or the other. This distinction might be justified if the two subjects did not have much in common. This, however, is not the case, since the underlying forces initiating and perpetuating both types of movements are very similar and differ predominantly in their relative weight. A core difference, however, is to be seen in the role of the state and regulations to control international flows of people. Besides this, internal and international migration share a very similar set of economic, social, political and cultural drivers that influence the migration decision-making process of individuals and groups such as households or kinships (King and Skeldon 2010). The purpose of this paper is to analyse the drivers and pattern of internal and international migration in contemporary India. I try to answer the following questions: why do some individuals (or whole households) decide to leave their place of residence, and which factors determine the decision about the internal or international destination? What is the common set of drivers of internal and international migration, and where are the differences? In particular, I analyze the role of absolute and relative deprivation in the migration decision-making process of Indian households.

Socio-economic factors play a decisive role in explaining the migration decisions of individuals and households as well as in driving aggregate migration flows. Availability of economic, social and 'human capital' resources enable individuals and households to materialize their desire to migrate. This desire for migration is due to factors that create individual or collective aspirations to migrate in order to change one's life significantly. However, what are these factors that generate these migration aspirations? This paper focuses on one important origin of these aspirations by arguing that social comparisons among individuals or households belonging to the same group of people are generating individual and/or collective feelings of relative deprivation. Individuals identify themselves with one or more social groups they belong to and in which social comparisons regarding status and well-being are made. These social comparisons may cause feelings of relative deprivation even if absolute deprivation is not a primary issue. However, to what extent individuals (or, households) identify themselves with various social groups is *a priori* unclear.

Liebig and Sousa-Poza (2004) found some empirical evidence for the hypothesis that countries with a more unequal income distribution tend to have higher migration rates. Stark (2006) has provided the micro-foundation for this structural relationship, arguing that relative deprivation of individuals or households is the behavioural link between economic inequality and migration propensity. Hereby, income inequality within a country generates feelings of relative deprivation which induce a higher emigration propensity among those most deprived. Accordingly, household members decide to migrate not necessarily only to increase their expected income but also to improve their relative position with respect to a

specific reference group (Stark and Taylor 1989). However, and to the best of my knowledge, the migration literature only considers relative deprivation with a country's overall population as the relevant reference group, which assumes that people compare their personal well-being with that of the rest of the country's population. The decisive question is, however, whether this is appropriate, and if not, *which* societal reference categories are relevant in a societal reality of multiple belongings.

In this paper, I apply the concept of relative deprivation within and across various societal groups. For the following three reference categories, I *simultaneously* test the roles that intra-group and inter-group inequality play in explaining migration propensities: political entity, social class, and religious group. Hence, I investigate whether migration propensities are based on social comparisons made either within a societal group ('individual relative deprivation'), across societal groups but within the same societal reference category on the basis of group identification ('group-based relative deprivation'), or both. Finally, multiple relative deprivations, defined as feelings of 'double deprivation' within *and* across a multitude of societal groups, are then tested regarding their relevance in explaining migration decision-making of households in India. Thanks to the availability of recent household data in the National Sample Survey (NSS), I can test the implications of multiple relative deprivation on two types of migration decisions: first, whether relatively deprived households have a higher propensity to send any household member as a migrant, and second, whether multiple relative deprivation has an influence on the choice of destination in terms of an internal or international migration site.

The remainder of this paper is structured as follows. Section 1 outlines a conceptual framework of our definitions of the multiple types of relative deprivation and their influence on migration decision-making. Section 2 describes the Indian pattern of migration by exploring our sample, and I develop the methodology used for the empirical analysis on the relevance of relative deprivation in driving household decisions on out-migration of family members. Section 3 provides and interprets the empirical results, and is followed by concluding remarks.

## **1 Multiple relative deprivation and migration**

Migration theory provides a whole host of possible determinants of internal and international migration. Massey et al. (1993; 1998), Ghatak et al. (1996), and King and Skeldon (2010) provide some excellent reviews on theoretical drivers of internal and international migration. This paper draws on some insights of traditional and recent migration theory with regards to (i) the role of households in the decision-making process; (ii) the role of capabilities and resource endowments of individuals and households; (iii) the spread of risks by diversifying income sources and smoothing intertemporal income and consumption among individuals and household members; and most importantly, (iv) the role of perceptions of relative deprivation. Feelings of relative deprivation are the outcome of comparisons made between personal well-being and the well-being of other individuals within a (pre-defined) reference group (Runciman 1966). Yitzhaki (1979, 1982) integrates this concept into the economic inequality literature by asserting that individuals feel deprived when they compare their economic situation with the living standards of wealthier people, and Stark (1984) has identified individual relative deprivation as a possible driver for human migration, which goes far beyond the focus on 'spatial income gaps' in neoclassical migration theory.

Relative deprivation is a source for individual and collective discontent, but it is not necessarily based on inter-personal comparisons. Most of the time, it is relative to an (explicit or implicit) norm or standard of what is considered as adequate. This idea of a discrepancy between aspirations and achievements, or between the current standard of living individuals 'enjoy' and the standard of living they believe they deserve, is at the heart of relative deprivation theory and explains to a large extent discontentment and some form of individual and collective action (Brown 2000). For instance, Gurr (1970) emphasizes the importance of relative deprivation as a root source for collective violence; the larger the discrepancy between the individuals' situation and that of others, the greater the likelihood of unrest. Beyond an individual's feeling of relative deprivation based on inter-personal comparisons, there is also a feeling of deprivation based on perceptions of the relative well-being of the entire social group they belong to. Runciman (1966) labels this phenomenon 'fraternalistic' deprivation, in the sense that the group which an individual (or household) belongs to is relatively deprived either compared to a desired standard or to the situation of other groups in a reference category. In the following I distinguish the two types of deprivation: *individual relative deprivation* (IRD) and *group-based relative deprivation* (GRD). Thus, and according to Pettigrew et al. (2008), I can distinguish four types of individuals: those with a high IRD and high GRD, those with a low IRD and low GRD, those with a high IRD but low GRD, and finally, individuals with low IRD but high GRD. Consequently, some people are either 'double deprived', 'double gratified', or have 'mixed feelings' about their levels of personal and group deprivation, depending on their individual status within their societal group and the status of their societal group in the whole society. Typically, it is members of deprived groups who also feel personally most deprived.<sup>1</sup>

Similar to Runciman's (1966) findings on the causes of social unrest (he observes that participants in insurgencies are seldom the most deprived individuals), I can also state that it is seldom the poorest who decide to migrate, due to various resource constraints (e.g, Martin and Taylor 1996). Stark and Yitzhaki (1988) and Stark and Taylor (1989) were among the first to link the concept of individual relative deprivation with the migration decision-making process of individuals and households and find that the more an individual is deprived relative to the rest of the society (or, a particular reference group), the higher the propensity for emigration. However, this is only true as long as absolute deprivation does not constrain migration capabilities. In their study on the implications of relative deprivation for the emigration of Mexicans to the USA, Stark and Taylor (1991) control for absolute income constraints and find that individual relative deprivation drives Mexican-US cross-border movements but not internal migration in Mexico.

So far, however, research on the linkage between relative deprivation and migration ignores the fact that individuals may feel 'double deprived'. A differentiation between individual relative deprivation (IRD), based on inter-personal comparisons, and group-based relative deprivation (GRD), based on inter-group comparisons, as distinct factors in the migration decision-making process seems therefore indispensable (Czaika 2011). But of course, emigration is only one possible behavioural step deprived individuals or groups can

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<sup>1</sup> In India, for instance, Tripathi and Srivastava (1981) find that Muslims as a socially disadvantaged minority show a much more biased attitude towards Hindus if they are individually and collectively more deprived.

take to improve their lot.<sup>2</sup> Individuals can reduce feelings of relative deprivation with or without migration, as they can change their norms, standards and reference groups with or without migration. In the following empirical analysis, however, I assume that individuals do not (at least not in the short term) substitute their reference group, suggesting that out-migration of household members is more likely the more individuals are relatively deprived.

A perennial problem in relative deprivation theory is the inability to specify *a priori* who compares with whom (Walker and Smith 2000). Social comparisons provide the means by which people assess their own position within their social group as well as the ‘standing’ of their group. Thus, whether these social comparisons lead to a perception of relative deprivation or not depends also on the situation of the reference group as a whole; that is, the group of people individuals compare with. In social psychology, it is assumed that individuals tend to compare with ‘similar others’ (Brown 2000, p. 244). I apply this definition in the following way: perceptions of individual relative deprivation (IRD) are based on inter-household comparisons of households within the same social reference group, whereas feelings of group-based relative deprivation (GRD) are based on inter-group comparisons across social groups but within the same societal category (political entity, social class, or religion). Beyond this distinction of individual and group-based relative deprivation, I assume that people generally belong to and identify themselves with a multitude of groups across different social categories. This means, for instance, that people may not only feel relatively deprived because of their inferior status within their religious group and an inferior status of their religious group among all other religious groups (‘double deprivation’), but at the same time also because they live in a relatively deprived state (political entity) or belong to a relatively deprived societal class (social class). To capture the effect of these multiple belongings, I explicitly analyze the relevance of ‘multiple relative deprivation’ as a major factor in driving the migration decision-making of individuals.

In the following, I formulize the two separate types of relative deprivation and distinguish (i) inter-household comparisons *within* a social reference group; and (ii) inter-group comparisons *across* other social groups with the same societal reference category. Hereby, household *i*’s level of individual relative deprivation *IRD* with respect to other households within the same social reference group *r* is defined as

$$IRD_{i,r}(c_i) = \int_{c_{i,r}}^{c_{i,r}^{max}} [1 - F(z)] dz \quad (1)$$

with  $c_i$  denoting annual consumption expenditures of household *i*, and  $F(z)$  representing the cumulative distribution of household consumption levels within a social reference group *r*. The implication is that the propensity for out-migration increases with higher levels of relative deprivation, that is, within each social group more deprived households are more likely to have higher propensities for out-migration. However, it is not necessarily the poorest households in a country’s population that have the highest levels of relative deprivation and thus have a higher likelihood of out-migration. Households that belong to a group with – on average – high but unequal distributed consumption levels may have higher rates of out-migration than poorer but more balanced groups. That is, it is not only the relative deprivation within groups that counts, but also the relative position of the group

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<sup>2</sup> Rebellion and violence, fatalism and resignation, social and political activism or simply working harder are other behavioural options to improve (individual and collective) economic and social outcomes.

compared to the other reference groups in the society. Consequently, I define the level of group-based relative deprivation  $GRD$  of household  $i$  according to:

$$GRD_{i,r}(\bar{c}_r) = \int_{\bar{c}_r}^{\bar{c}_r^{max}} [1 - F(z)] dz \quad \text{with} \quad \bar{c}_r = \frac{1}{n_r} \sum_{i \in r} c_{i,r}. \quad (2)$$

I assume that each household  $i$  that belongs to a social group  $r$  identifies with the average consumption level  $\bar{c}_r$  of that group and compares with the average consumption levels of all other (richer) groups within the same societal reference category. The migration propensity of household  $i$  is therefore expressed by the likelihood of out-migration of a household member, which is driven by feelings of deprivation either due to a relatively low position within a social group (i.e. high IRD), or by belonging to and identifying with a relatively deprived group within the broader societal reference category (i.e. high GRD), or both, and a set  $X$  of other co-varying factors considered as relevant in the migration decision-making process:

$$Prob(M_i = 1) = f(IRD_i, GRD_i, X) \quad (3)$$

I suggest that migration propensity is positively related to both types of relative deprivations (individual and group-based) due to the intentions and aspirations of individuals, households, or larger groups to improve their relative position within and across their societal reference group. However, to what extent these different types of relative deprivation drive the decision about the ‘migration distance’, that is, the choice of an internal or international destination, is rather unclear and has to be explored empirically. I can only speculate like this: households that are absolutely deprived are also very likely to be relatively deprived (depending on the well-being of the reference group), and thus, these households lack the necessary economic, social, and human capital resources to realize long-distance internal or international migration endeavours. On the other hand, wealthier households can still be significantly relatively deprived if they belong to richer societal groups. In this case, resource constraints play a rather minor role and long-distance (internal and international) moves are more likely. The following case study on the drivers of internal and international migration in India shall test the validity of these implications.

## 2 Internal and international migration in India: an empirical analysis

This case study on internal and international migration in India provides a location-specific analysis of the Indian migration pattern. The primary focus is the question whether internal and international migration share a similar set of determinants. Our presumption is that this divide between the two types of migration is established for reasons of academic practice and sometimes for political reasons. This distinction is not justifiable according to the nature of internal and international migration since both categories are highly interlinked and often part of larger migration systems and processes (King and Skeldon 2010). For the case of India, Skeldon (2006) provides insights on some of these interlinkages between the internal rural–urban migration and the international migration pattern. For instance, the federal state of Kerala has for decades played a significant role as a migration hub for migrants from neighbouring (and other) Indian states who are refilling the gaps in the labour force left by skilled and semi-skilled workers leaving for the Gulf (Zachariah and Rajan 2005). In the following, I investigate the relevance of a set of determinants in driving these internal and international migration flows.

## 2.1 Data source and descriptive statistics

This study draws on data from the 64th round of the Indian National Sample Survey (NSS) conducted among 125,000 households across India between July 2007 and June 2008. This survey collects information on out-migration of former household members to another destination within or outside India. This nationally representative household sample is the result of a stratified multi-stage sampling design with households surveyed in around 12,600 villages and urban neighbourhoods all over India.<sup>3</sup> The collected information includes a wide range of socio-economic household characteristics as well as particulars on the out-migrant. The empirical analysis is based on two different sub-samples: the analytical unit in the first one is the household (with or without migrants), while in the second sample, the individual migrants and their destination choice are considered. Thus, in the first stage regression, the dependent variable *out-migration* is set to one if the household has reported out-migration of a former household member to another place of residence, and zero otherwise.<sup>4</sup> In the second stage, three different types of regression models are distinguished: a respective variable on out-migration is set to one, or zero otherwise, if the household head has reported (i) intra-state migration, i.e. within the same state of the former household; (ii) inter-state migration to another state within India; or (iii) international migration to another country.

**Table 1: The pattern of internal and international migration in India in 2007/2008**

Area	Households with any out-migrant	Present place of residence of out-migrant		
		Intra-state	Inter-state	International
Rural (71.6 %)	30.4 %	73.4 %	23.3 %	3.1 %
Male		46.6 %	45.8 %	7.2 %
Female		89.0 %	10.2 %	0.7 %
Urban (28.4 %)	19.3 %	69.9 %	22.8 %	7.1 %
Male		49.9 %	33.3 %	15.9 %
Female		79.7 %	17.6 %	2.7 %
Total (100 %)	27.2 %	72.8 %	23.2 %	3.8 %
Male		47.1 %	43.8 %	8.6 %
Female		87.3 %	11.6 %	1.1 %

Note: NSSO (2010, p.101) and own calculations based on the weighted NSS sample observations.

Table 1 shows that the share of migrant-sending households is significantly higher for rural than for urban households. Despite some large agglomerations, India can still be characterized as a predominantly rural country with more than 70 per cent of its population still living in non-urban areas. At the national level, about 27 per cent of all households have at least one migrant in their family with more rural households (30.4 per cent) being involved in migration of a household member than urban households (19.3 per cent). Concerning the destination of out-migration, almost three-quarters (72.8 per cent) of the migrants stay in relative geographical proximity to their family by deciding on a destination within the state (see also Figure 1b). About 23 per cent of migrants settle in another state within India (Figure 1c), and only about 3.8 per cent decide to leave the country for a

<sup>3</sup> The households were allocated to each Indian federal state and Union Territory in proportion to the population registered in the 2001 census (NSSO 2010).

<sup>4</sup> A household is defined as a 'group of persons who normally lived together and took food from a common kitchen' (NSSO 2010, p. 6).

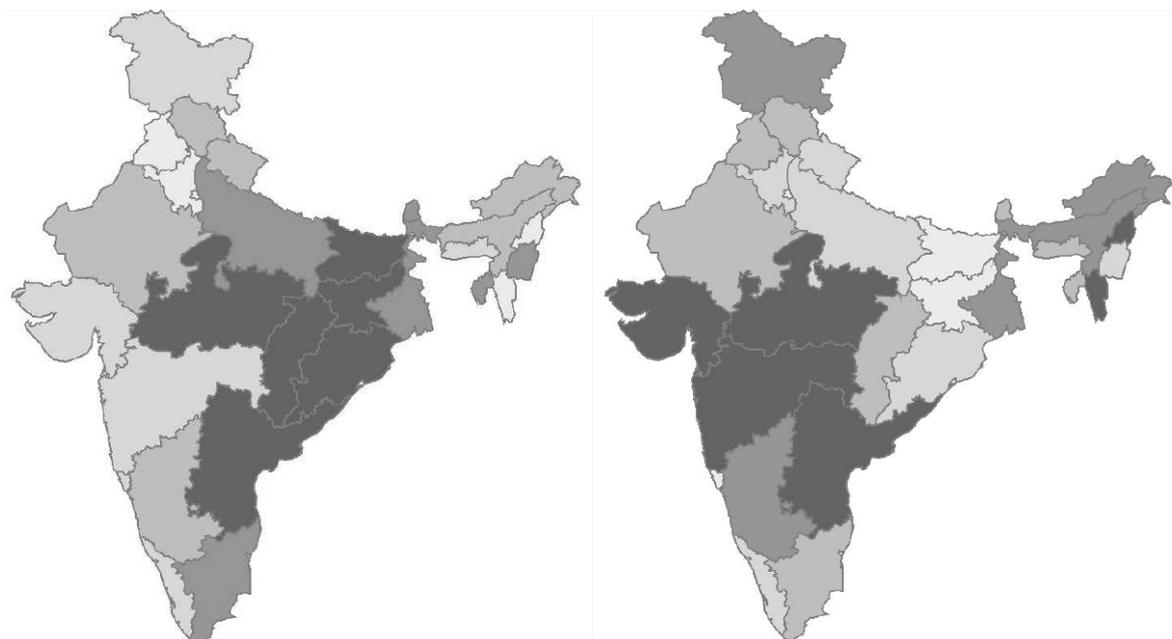
destination abroad, with a significantly higher migration rate in urban areas (7.1 per cent) compared to rural regions (3.1 per cent) (Figure 1d).

These statistics imply some interlinked migration processes from rural to local urban; from rural and urban areas within one state to other urban centres in other Indian states; and finally, from there to some international destinations. Furthermore, the migration rate for men was 9.2 per cent in rural areas and 5.1 per cent in urban areas.<sup>5</sup> Accordingly, the migration rates for women were much higher compared to men in both the rural and urban areas, with 16.6 per cent for rural and 11 per cent for urban females (NSSO 2010). With respect to distance, a high share of female migrants, from both rural and urban areas, took up residence within the same state: 89 per cent for rural female out-migrants and 79.7 per cent for urban female migrants have their present place of residence within the same state. This high rate of short-distance migration for women can be explained by the fact that marriage is the dominant reason for female migration. Compared to female migration, migration distances are more diverse for men from both rural and urban areas. Male migrants from rural areas are almost equally dispersed (about 46 per cent) within and outside the state where they had their last place of residence. For urban male migrants, about 49.9 per cent are still residing within the same state, whereas 33.3 per cent of them had left the state of last residence. As a first explanation of these statistics I can say that the mainly work-related migration motivations of men lead to a higher geographical dispersion according to economic opportunities at various short- or long-distance destination sites. Thus, I can to some extent describe the Indian migration pattern as follows: short-distance intra-state migration has a strong female character due to the importance of marriage migration; longer-distance migration to other Indian states or abroad is largely employment-driven; and international migration is mainly concentrated in a few migratory hub states such as Kerala, Goa, or Punjab. Relatively deprived states like Bihar, Jharkhand, and Orissa rather fulfill the role of labour reserves for those regions with a high international migration outflow (Figure 1).

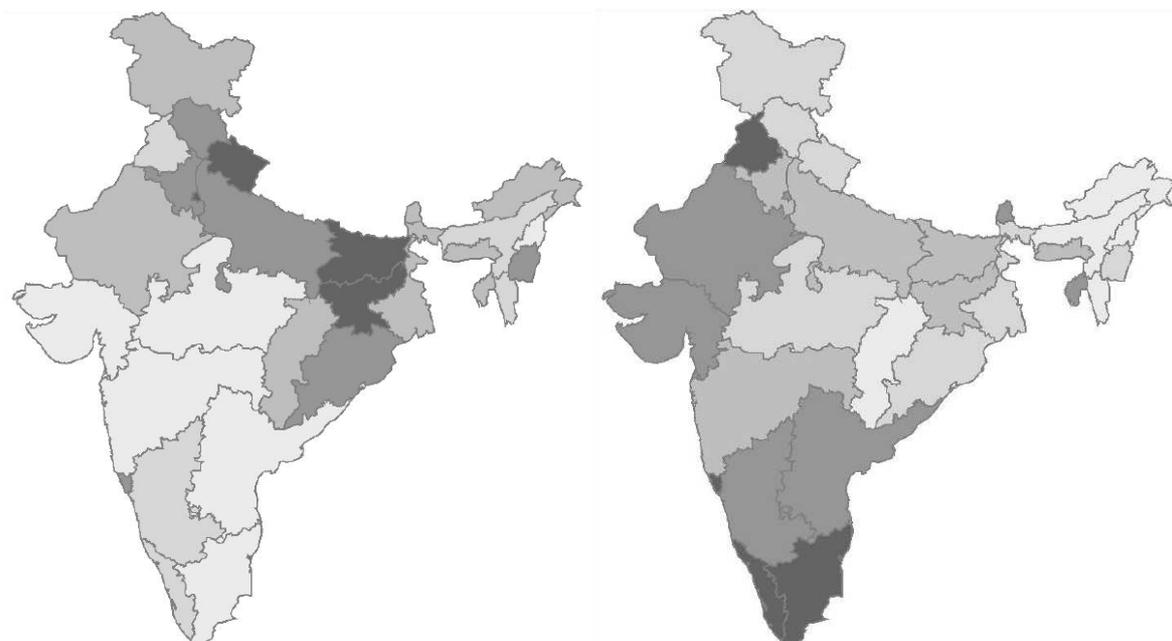
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<sup>5</sup> Migration rates for men (women) are defined as a number of male (female) out-migrants per 100 persons.

**Figure 1a: Inter-state relative deprivation (in Rs.)**      **Figure 1b: Intra-state migration (per 1000 migrants)**



**Figure 1c: Inter-state migration (per 1000 migrants)**      **Figure 1d: International migration (per 1000 migrants)**



	<b>Figure 1a</b>	<b>Figure 1b</b>	<b>Figure 1c</b>	<b>Figure 1d</b>
■	N=6, M=9225, SD=2491	N=6, M=871, SD=26	N=6, M=537, SD=86	N=6, M=230, SD=84
■	N=6, M=5075, SD= 911	N=6, M=819, SD=17	N=6, M=326, SD=38	N=8, M= 32, SD=10
■	N=8, M=2712, SD= 485	N=8, M=740, SD=37	N=8, M=208, SD=24	N=6, M= 16, SD=1.4
■	N=6, M= 928, SD= 417	N=6, M=622, SD=41	N=6, M=150, SD=8.7	N=7, M= 7.1, SD=1.7
■	N=6, M= 116, SD= 124	N=6, M=331, SD=49	N=6, M=106, SD=28	N=5, M= 2.6, SD=1.0

Note: 32 Indian states (3 island states missing); N=number of states in interval; M=mean within interval, SD=standard deviation within interval. Own graphs and calculations based on data from NSSO (2010).

To understand this pattern of out-migration more thoroughly, I theorized on the role of relative deprivation with respect to different reference groups and types of belonging. Based on household-specific information and the two concepts of relative deprivation expressed by equations (1) and (2), I generated measures of individual household relative deprivation (IRD) for four different reference groups: all India (*IRD\_India*), states (*IRD\_state*), societal class (*IRD\_social class*), and religious group (*IRD\_religious group*). These calculations of household relative deprivation levels are based on the weighted annual amount of household consumption expenditures and the mean excess consumption of wealthier households in the respective reference group.<sup>6</sup> Beyond these measures of intra-group comparison, I determine for the three alternative reference groups weighted averages of group-specific consumption levels to enable inter-group comparisons of group-based relative deprivation (GRD).<sup>7</sup> Since each household identifies itself generally with a multiplicity of societal groups, relative deprivation levels of both types might be correlated across societal categories. Therefore, I calculate a composite level of ‘multiple relative deprivations’ across the three group categories (state, social class, religious group) for both relative deprivation measures, i.e. comparisons within and across groups. I apply factor analysis for calculating factor scores for two separate types of multiple relative deprivations, *IRD\_multiple* and *GRD\_multiple*.

## 2.2 Empirical strategy

The empirical analysis will address the following two questions: first, what is the probability of a household to have a migrant; and second, what is the probability of a migrant choosing an internal (short- or long-distance) or international destination? I run two types of regression models in order to quantify the effects of various types of relative deprivation and other socio-economic covariates at the two separate analytical stages. For the second stage analysis on destination choice, I basically apply the same set of covariates on household characteristics as in the first stage plus some additional controls on individual characteristics of the out-migrant.

## 2.3 Estimation model

The first stage regression predicts as a latent variable the unobserved probability of out-migration of a member  $M_i^*$  of household  $i$ , dependent on the level of household-specific ( $IRD_i$ ) and group-specific ( $GRD_i$ ) relative deprivation with respect to reference group  $r$ , and a vector of other explanatory variables  $X_i$ , the unknown vector of parameters  $\alpha$ , and the normally distributed error term  $\varepsilon_i$ . Out-migration of a former household member is the observed binary variable which is set to one if the household has sent a family member any time in the past, and zero otherwise,

$$M_i = 1 \text{ if } (\alpha_1 IRD_{ir} + \alpha_2 GRD_{ir} + X_i' \alpha_0 + \varepsilon_i > 0), \text{ and } 0 \text{ otherwise,} \quad (3)$$

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<sup>6</sup> For the out-migration households, the annual household consumption expenditure is predicted with a Tobit model on the annual amount of remittances and some other explanatory variables. This procedure corrects for the problem of endogeneity of the household consumption expenditure variable in the migration decision models.

<sup>7</sup> See Figure 1a for the spatial pattern of state-related relative deprivation.

which is estimated by a probit model. Based on model estimates, marginal effects (measured at sample means) on the probability of out-migration of a household member are then calculated for each explanatory variable. Similarly, the second stage models predict the probability that an out-migrant  $j$  as a former member of household  $i$  has chosen an internal or international destination  $D_{ji}^z$  with  $z=(intra-state, inter-state, international)$ . The respective binary variable on destination-specific out-migration is then set to one if the out-migrant has chosen destination  $z$ , and zero otherwise,

$$D_{ji}^z = 1 \text{ if } (\beta_1^z IRD_{ir} + \beta_2^z GRD_{ir} + Y_{ji}'\beta_0^z + \delta^z), \text{ and } 0 \text{ otherwise.} \quad (4)$$

I estimate the vector of coefficients  $\beta$  of these destination-specific out-migration models by a probit regression procedure. This approach allows a comparison of marginal effects for the set of explanatory variables across different migration destination models.

For both stages of the decision-making process on out-migration, our core explanatory variables of interest are the two relative deprivation measures. Household relative deprivation  $IRD$  with respect to a reference group  $r=(state, social class, religious group)$  expresses the level of intra-group comparisons on household consumption levels indicating the degree to which households (and their members) feel relatively deprived within their reference group.  $GRD_{ir}$  captures the effect of feelings of relative deprivation on behalf of the group  $r$  that household  $i$  belongs to. Since households belong to groups of different social categories at the same time, and both measures of  $IRD$  and  $GRD$  across these social categories might be collinear, I use two alternative procedures to control for the influence of multiple relative deprivations on the probability for out-migration. First, I estimate separate models for relative deprivation measures  $IRD_r$  and  $GRD_r$  for the three social reference categories state, social class, and religious group. Second, I calculate the eigenvectors  $IRD\_multiple$  and  $GRD\_multiple$  that reflect the respective principal component across the three reference categories. Finally, as an overall measure without group separation,  $RD\_India$  tests for the effect of individual household deprivation across all sample households.

## 2.4 Main control variables

The decision of a household on out-migration of one or more of its household members is assumed to be driven by a whole set of factors. Based on the characteristics of the available dataset I am able to control and proxy for some of the various socio-economic, geographical, and demographic factors at the household level. As a major variable for explaining the likelihood of out-migration, I use the number of household members including the out-migrants ( $HH$  size) as a proxy for the importance of an economic intra-household risk diversification strategy (e.g. Stark and Levhari 1982). Then, capabilities to migrate are non-linearly related to the level of absolute deprivation (Martin and Taylor 1996). I capture this effect by the amount of annual household consumption expenditures  $HH$  consumption and an additional squared term of this variable. To reduce problems of reverse causality I use a tobit estimation procedure to predict  $HH$  consumption levels for households reporting remittances received from an out-migrant. This shall correct for the influence of non-negative remittances on household consumption levels.

Furthermore, a dummy variable for households with relatively small (below 1 hectare) and large (above 6 hectare) *land possession* controls for resource availability as a migration-enabling factor. However, at the same time, possession can have a migration-

reducing effect if the land possessed is the main source of income and household workforce is scarce. Therefore, I control additionally for the type of household in terms of its main economic activity. For rural households I distinguish between agricultural and non-agricultural households, whereas for urban areas I control for self-employed and casual labour households.

Besides these socio-economic factors, I also take into account the influence of social and religious factors and control for likely differences in migration propensities of various social and religious groups. I control for households that belong to either one of the three largest religious groups, *Hindu*, *Muslim* and *Christian*. Similarly, I control for social minorities, expressed by dummy variables for *scheduled tribes* and *scheduled castes*. These are social groupings that are explicitly recognized by the Indian constitution, and its members can generally be considered as severely under-privileged and mostly deprived in absolute terms. Besides these two categories for minorities, I also control for households that belong to an *upper social class* as a residual category of all the households that do not belong to a scheduled caste/tribe (SC/ST) or 'other backward class' (OBC).

### 3 Estimation results

#### 3.1 Household out-migration

Table 2 reports the regression results on the probability of out-migration of any household members. Across all five model specifications I find positive and significant effects of both types of relative deprivation measures for all three societal categories, i.e. the federal state (*model 2*), social class (*model 3*), and religious group (*model 4*). Also when measured across all India, which means without considering societal groups (*model 1*), relative deprivation seems to be a very relevant factor in the household decision-making process on out-migration. These results indicate that there is a positive relationship between 'double deprivation' and migration. Households have a higher probability for migration if they are deprived *within* their societal group or if they belong to a relatively deprived societal group. The latter also holds for households which are less deprived or not deprived within their societal reference group. While the effect for individual relative deprivation (IRD) of households is relatively stable for all three societal categories, for group-based relative deprivation (GRD) I can explore significant differences across societal categories. While relative deprivation of the religious group increases the likelihood of out-migration quite significantly, the effect for group-based relative deprivation if the reference group is the social class is rather small. This suggests that the identification with the social class is significantly weaker than the identification with the religious group, and thus, inequality across social classes induces less emigration than inequality across religious groups. Application of principal component analysis for determining the composite effect of each type of relative deprivation across all three societal categories shows that 'multiple' individual relative deprivation (IRD) is a much stronger predictor of out-migration than 'multiple' group-based relative deprivation (GRD).

**Table 2: Probit estimation: relative deprivation and household out-migration**

Dependent variable	Out-migration of former HH member				
	(1)	(2)	(3)	(4)	(5)
RD_All India	0.158**				
	(28.47)				
IRD_state		0.132**			
		(25.48)			
GRD_states		0.167**			
		(6.77)			
IRD_social class			0.116**		
			(25.78)		
GRD_social class			0.008**		
			(9.67)		
IRD_religious group				0.136**	
				(28.43)	
GRD_religious group				0.212**	
				(5.23)	
IRD_multiple					0.086**
					(25.37)
GRD_multiple					0.010*
					(2.01)
HH size	0.094**	0.090**	0.089**	0.090**	0.092**
	(62.50)	(63.40)	(66.08)	(64.96)	(62.19)
HH consumption	0.007**	0.005**	0.003	0.005**	0.013**
	(4.71)	(3.49)	(1.77)	(3.33)	(6.90)
HH consumption (sq.)	-0.000*	-0.000	0.000	-0.000	-0.000**
	(1.99)	(0.69)	(1.21)	(0.50)	(3.73)
Land possession (<1 hectare)	-0.003	-0.000	0.004	-0.005	-0.002
	(0.50)	(0.00)	(0.54)	(0.73)	(0.30)
Land possession (>6 hectare)	0.055*	0.062*	0.067*	0.061*	0.058*
	(2.02)	(2.29)	(2.48)	(2.28)	(2.13)
Scheduled tribe	-0.105**	-0.100**		-0.098**	-0.085**
	(14.95)	(14.10)		(13.89)	(10.20)
Scheduled caste	-0.041**	-0.039**		-0.032**	-0.024**
	(7.43)	(7.01)		(5.76)	(3.81)
Upper social class	0.056**	0.056**		0.043**	0.010
	(10.43)	(10.40)		(8.22)	(1.46)
Hindu	-0.035*	-0.039**	-0.034*		0.013
	(2.46)	(2.79)	(2.41)		(0.93)
Muslim	-0.104**	-0.106**	-0.110**		-0.066**
	(7.74)	(7.89)	(8.27)		(4.44)
Christian	0.009	0.008	-0.008		0.020
	(0.50)	(0.44)	(0.45)		(1.03)
Self-employed in non-agriculture	-0.031**	-0.036**	-0.036**	-0.038**	-0.034**
	(4.64)	(5.42)	(5.41)	(5.59)	(5.08)
Self-employed in agriculture	0.042**	0.037**	0.031**	0.044**	0.040**
	(7.14)	(6.31)	(5.33)	(7.46)	(6.79)
Urban self-employed	-0.075**	-0.068**	-0.065**	-0.077**	-0.074**
	(9.86)	(8.88)	(8.53)	(10.23)	(9.82)
Urban casual labour	-0.118**	-0.112**	-0.111**	-0.119**	-0.121**
	(9.63)	(9.06)	(9.25)	(9.69)	(10.11)
Obs. P	0.272	0.272	0.272	0.272	0.272
Pred. P	0.238	0.239	0.239	0.238	0.238
No. of obs.	125516	125516	125516	125516	125516
Pseudo R2	0.196	0.190	0.187	0.190	0.193

Notes: \* (\*\*) significant at the 5% (1%) level. t-statistics are in parentheses. All models include state dummy variables and a rural dummy.

For the other independent variables I find a mixed pattern of explanation. Absolute deprivation, measured by annual household consumption expenditures, is a constraint of out-migration. Even when controlling for the number of household members, which proxies for the potential of an income-diversification strategy, migration in general is *ceteris paribus* rather an option of the less deprived households. Thus, availability of some minimum economic resources pre-conditions the realization of the migration option. This positive income effect is partly supported by the availability of assets in terms of land possession. Households with relatively abundant land property have a higher propensity for out-migration of any family member than households with only small land possession. Beyond this positive effect of land assets, rural households with their main economic activity (self-employed) in agriculture are also more 'affected' by out-migration. Why? Deteriorating agricultural prices and incomes might be an underlying reason for this tendency. It seems that two separate migration processes are induced by this: first, rural-to-rural migration of agricultural households *within* the agricultural sector, and second, rural-to-urban migration as part of an ongoing process of economic structural change with a declining agricultural sector at the limit of its labour absorption capacity.<sup>8</sup> This interpretation of an ongoing economic restructuring is supported by the finding that rural households, which are employed in the non-agricultural sector, have a significantly lower propensity for out-migration. Beyond these more economic factors, other socio-cultural factors can also be considered as relevant: belonging to an under-privileged scheduled tribe or class reduces the likelihood for out-migration quite significantly. Hindu and Muslim households, i.e. the two largest religious groups in India, have significantly lower migration propensities with primarily Muslim households being less inclined to migrate.

### **3.2 The choice of migration destination**

Tables 3 to 5 report the regression results on the determinants of the migration destination choice by distinguishing between intra-state (Table 3), inter-state (Table 4), and international migration (Table 5).

Estimation of likelihoods for all three migration options is based on the same set of explanatory variables, which makes the various effects, also in their intensity, comparable. Relative deprivation is controlled for on a national level (i.e. without considering social groups) as well as by the composite indices across the three societal categories (state, social class, religious group) indicating for 'multiple' individual household relative deprivation (IRD) and 'multiple' group-based relative deprivation (GRD), respectively. For all three types of 'migration distances' (i.e. intra-state, inter-state, and international destinations) I estimate both total and gender-specific out-migration propensities. The likelihood of short-distance movements within an Indian state is positively associated with the level of both individual and group-based relative deprivation. However, the effects are rather weak and only significant for female migration. Since the vast majority of all female out-migration is short-distance (87.3 per cent) and motivated by marriage (84.3 per cent), relative deprivation seems to be an additional factor for women to leave (or forced to leave) their household. Beyond marriage reasons, another factor for intra-state migration is educational (study)

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<sup>8</sup> About 70 per cent of migrant households with a present place in rural areas had their place of last residence in a rural area (while 28.6 per cent come from urban areas), and 56.8 per cent of migrant households in urban areas had migrated from a rural area (and 42.8 per cent for urban-to-urban migration) (NSSO 2010).

**Table 3: Probit estimation: short-distance (intra-state) out-migration**

Dependent variable	Out-migration of former HH member					
	(1)	(2)	(3)	(4)	(5)	(6)
	Male	Female	Total	Male	Female	Total
IRD_All India	0.001 (0.15)	0.010* (2.04)	0.014** (3.11)			
IRD_multiple				0.008 (1.49)	0.005 (1.64)	0.011** (3.49)
GRD_multiple				0.014 (1.36)	0.008 (1.19)	0.014* (7.99)
Employment	-0.244** (14.48)	-0.004 (0.39)	-0.150** (15.72)	-0.243** (14.42)	-0.004 (0.41)	-0.149** (15.69)
Studies	0.122** (4.57)	0.087** (11.95)	0.128** (12.13)	0.124** (4.66)	0.086** (11.90)	0.129** (12.17)
Marriage	0.380** (6.51)	0.288** (35.14)	0.298** (34.73)	0.381** (6.55)	0.288** (35.01)	0.299** (34.77)
Forced displacement	0.016 (0.12)	0.076* (2.18)	0.098 (1.76)	0.016 (0.12)	0.076* (2.18)	0.099 (1.77)
HH size	0.012** (8.03)	0.004** (6.03)	0.008** (9.71)	0.012** (8.30)	0.004** (5.93)	0.008** (9.83)
HH consumption	-0.018** (6.61)	-0.008** (4.16)	-0.011** (8.72)	-0.016** (5.52)	-0.008** (3.98)	-0.010** (7.98)
HH consumption (sq.)	0.000** (4.81)	0.000* (2.25)	0.000** (4.58)	0.000** (3.77)	0.000* (2.23)	0.000** (4.66)
Land possession (<1 hectare)	-0.042** (3.09)	-0.006 (0.91)	-0.023** (3.15)	-0.043** (3.13)	-0.006 (0.89)	-0.023** (3.18)
Land possession (>6 hectare)	0.051 (1.35)	0.016 (1.15)	0.030 (1.60)	0.050 (1.34)	0.017 (1.20)	0.030 (1.62)
Scheduled tribe	0.087** (4.42)	0.016 (1.55)	0.045** (4.00)	0.073** (3.18)	0.010 (0.78)	0.034* (2.46)
Scheduled caste	0.025 (1.87)	0.011 (1.78)	0.016* (2.31)	0.014 (0.91)	0.007 (0.80)	0.007 (2.85)
Upper social class	0.033** (2.88)	-0.023** (4.24)	-0.009 (1.49)	0.040** (2.78)	-0.020** (2.62)	0.004 (0.45)
Hindu	0.059* (2.02)	0.014 (0.87)	0.028 (1.42)	0.077* (2.43)	0.020 (1.13)	0.042* (1.99)
Muslim	-0.107** (3.35)	0.031* (2.00)	-0.018 (0.84)	-0.087* (2.49)	0.036* (2.26)	-0.002 (0.11)
Christian	0.002 (0.06)	-0.028 (1.25)	-0.012 (0.50)	0.027 (0.62)	-0.019 (0.82)	0.006 (0.23)
Self-employed in non-agriculture	0.033* (2.03)	0.018* (2.45)	0.029** (3.38)	0.035* (2.15)	0.018* (2.43)	0.030** (3.44)
Self-employed in agriculture	-0.029** (2.57)	0.022** (3.86)	0.010 (1.62)	-0.028* (2.46)	0.022** (3.86)	0.010 (1.68)
Urban self-employed	-0.006 (0.32)	-0.031** (3.84)	-0.035** (3.56)	-0.046 (0.24)	-0.008** (3.84)	-0.035** (3.49)
Urban casual labour	-0.004 (0.06)	0.022 (1.53)	0.028 (1.35)	-0.001 (0.01)	0.021 (1.51)	0.029 (1.37)
Male dummy			-0.035** (4.07)			-0.035** (4.06)
Obs. P	0.472	0.873	0.728	0.472	0.873	0.728
Pred. P	0.471	0.901	0.792	0.471	0.901	0.792
No. of obs.	54091	46441	100530	54091	46441	100530
Pseudo R2	0.218	0.145	0.290	0.219	0.145	0.290

Note: \* (\*\*) significant at the 5% (1%) level. t-statistics are in parentheses. All models include state dummy variables.

purposes. In contrast, prospects of (better) employment are not significantly motivating for intra-state migration. Short-distance migration within an Indian state is the most likely chosen migration option of the poorer and under-privileged (scheduled tribes) households. A robust negative effect of household consumption levels on the probability of intra-state migration indicates a 'negative self-selection' for short migration distances.

Internal migration for longer distances is an option chosen by about 23 per cent of the out-migrants, with a higher probability (about four times) to be chosen by males (43.8 per cent) compared to females (11.6 per cent). This discrepancy is mainly explained by the search for (better) employment, which, however, is only a significant factor for the migration of men. Surprisingly, relative deprivation does not play a significant role in the decision on this inter-state migration option. Instead, and contrary to the short-distance alternative, the choice of a more distant internal destination is positively related to household consumption levels. This implies that absolute deprivation becomes a constraint for migrating to more distant destinations, which is *ceteris paribus* more resource-intensive. For instance, a hypothetical increase of the average annual household consumption level by 100,000 Rs (approximately US\$2250 in 2007) would increase the likelihood of inter-state migration by about 6 per cent and of international migration by about 1 per cent, whereas short-distance migration would be reduced by about 10 per cent.

Consequently, a balanced increase in household income levels which reduces absolute deprivation by definition without changing relative deprivation levels has *ceteris paribus* the following effects: first, it significantly increases the overall out-migration propensity, and second, it increases average migration distances in a way that more migrants choose inter-state or international destinations rather than staying within the state. Interestingly, all measures of relative deprivation have a negative effect on the probability of international migration. I can provide two alternative explanations for this result. First, lower levels of individual or group-based relative deprivation correlate with lower inequalities within and across societal groups. However, lower inequality implies that richer households lose in relative terms and perceive themselves to be less 'rewarded' for any socio-economic efforts and achievements. Since these well-endowed households tend to have higher propensities to migrate (in general, and particularly abroad) compared to poorer households, a decreasing level of overall relative deprivation can well increase the overall migration inclination towards international destinations. Second, this negative effect of relative deprivation on international migration can be caused by a false specification of the relevant reference group. Potential international migrants might feel relatively deprived by comparing their level of (socio-economic) well-being at home either with general economic standards and prospects abroad or with respect to the well-being of the Indian diaspora as an 'external' reference group.

**Table 4: Probit estimation: long-distance (inter-state) out-migration**

Dependent variable	Out-migration of former HH member					
	(1)	(2)	(3)	(4)	(5)	(6)
	Male	Female	Total	Male	Female	Total
RD_All India	0.016 (1.75)	-0.006 (1.38)	0.003 (0.55)			
IRD_multiple				0.004 (0.81)	-0.005 (1.70)	-0.002 (0.59)
GRD_multiple				0.008 (0.75)	-0.004 (0.66)	-0.002 (0.34)
Employment	0.183** (11.86)	-0.008 (0.93)	0.104** (12.64)	0.182** (11.79)	-0.010 (1.11)	0.101** (12.31)
Studies	-0.052 (1.95)	-0.747** (10.29)	-0.087** (8.62)	-0.053* (2.02)	-0.075** (10.33)	-0.088** (8.74)
Marriage	-0.284** (4.84)	-0.244** (31.67)	-0.242** (30.86)	-0.285** (4.87)	-0.250** (32.30)	-0.245** (31.29)
Forced displacement	-0.133 (1.15)	-0.063 (1.75)	-0.096* (1.97)	-0.134 (1.16)	-0.065 (1.84)	-0.097* (2.00)
HH size	-0.004** (2.80)	-0.001 (1.60)	-0.002** (2.60)	-0.004** (3.04)	-0.002** (2.97)	-0.003** (3.73)
HH consumption	0.007* (2.17)	0.003 (1.65)	0.006** (3.03)	0.004 (1.46)	0.005* (1.31)	0.006** (2.97)
HH consumption (sq.)	-0.093 (1.81)	-0.043 (1.02)	-0.082 (1.79)	-0.000 (1.33)	-0.000 (1.29)	-0.000 (1.75)
Land possession (<1 hectare)	0.026 (1.87)	-0.002 (0.26)	0.012 (1.79)	0.026 (1.88)	0.003 (0.54)	0.015* (2.31)
Land possession (>6 hectare)	-0.039 (1.04)	-0.015 (1.07)	-0.023 (1.35)	-0.038 (1.02)	-0.017 (1.25)	-0.024 (1.44)
Scheduled tribe	-0.078** (4.05)	-0.012 (1.26)	-0.037** (3.71)	-0.084** (3.73)	-0.012 (1.06)	-0.036** (3.03)
Scheduled caste	-0.012 (0.94)	-0.009 (1.44)	-0.009 (1.43)	-0.017 (1.08)	-0.010 (1.32)	-0.010 (1.24)
Upper social class	-0.021 (1.84)	0.013* (2.53)	0.005 (0.96)	-0.018 (1.25)	0.017* (2.35)	0.007 (0.92)
Hindu	0.015 (0.50)	0.000 (0.00)	0.012 (0.63)	0.024 (0.80)	-0.005 (0.30)	0.010 (0.47)
Muslim	-0.013 (0.40)	-0.019 (1.18)	-0.010 (0.47)	-0.003 (0.08)	-0.025 (1.47)	-0.013 (0.59)
Christian	0.025 (0.60)	0.023 (1.04)	0.035 (1.38)	0.037 (0.85)	0.018 (0.75)	0.033 (1.19)
Self-employed in non-agriculture	-0.011 (0.69)	-0.004 (0.47)	-0.010 (1.22)	-0.013 (0.78)	-0.019** (2.63)	-0.021** (2.63)
Self-employed in agriculture	0.021 (1.78)	-0.008 (1.41)	-0.001 (0.24)	0.020 (1.78)	-0.029** (4.20)	-0.011* (2.06)
Urban self-employed	0.038 (1.79)	-0.012 (1.43)	0.009 (0.88)	0.037* (2.03)	0.029** (3.72)	0.041** (4.48)
Urban casual labour	-0.070 (1.72)	-0.050** (4.20)	-0.061** (3.61)	-0.072 (1.86)	-0.007 (1.23)	-0.032 (1.92)
Male dummy			0.021** (2.75)			0.021** (2.72)
Obs. P	0.438	0.116	0.232	0.438	0.116	0.232
Pred. P	0.418	0.090	0.171	0.418	0.091	0.172
No. of obs.	54091	46441	100530	54091	46441	100530
Pseudo R2	0.227	0.139	0.257	0.227	0.134	0.256

Note: \*, \*\* significant at 5%, 1% level. t-statistics are in parentheses. All models include state dummy variables.

**Table 5: Probit estimation: international out-migration (from India)**

Dependent variable	Out-migration of former HH member					
	(1)	(2)	(3)	(4)	(5)	(6)
	Male	Female	Total	Male	Female	Total
RD_All India	-0.007**	0.0001	-0.002**			
	(3.08)	(0.20)	(4.00)			
IRD_multiple				-0.006**	-0.0004	-0.002**
				(4.47)	(0.85)	(6.01)
GRD_multiple				-0.007**	-0.001**	-0.002**
				(2.68)	(3.51)	(3.90)
Employment	0.048**	0.003**	0.021**	0.048**	0.003**	0.021**
	(12.79)	(2.77)	(14.36)	(12.65)	(2.69)	(13.99)
Studies	0.006	-0.003**	-0.005**	0.005	-0.003**	-0.005**
	(0.58)	(4.70)	(4.10)	(0.53)	(4.83)	(4.28)
Marriage	-0.017	-0.015**	-0.013**	-0.017	-0.017**	-0.013**
	(1.30)	(11.42)	(9.18)	(1.29)	(11.94)	(9.52)
Forced Displacement	0.070	-0.003	-0.002	0.078	-0.003	-0.002
	(1.09)	(1.16)	(0.26)	(1.17)	(1.33)	(0.28)
HH size	-0.002**	-0.001**	-0.001**	-0.003**	-0.001**	-0.001**
	(5.77)	(6.37)	(9.21)	(6.55)	(7.18)	(10.31)
HH consumption	0.003**	0.001**	0.001**	0.003**	0.001**	0.001**
	(5.90)	(3.81)	(8.01)	(5.43)	(3.31)	(7.17)
HH consumption (sq.)	-0.015**	-0.013*	-0.005**	-0.000**	-0.000*	-0.000**
	(3.86)	(2.21)	(3.91)	(3.69)	(2.05)	(3.79)
Land possession (<1 hectare)	0.004	0.000*	0.001	0.005	0.001	0.001
	(1.00)	(0.26)	(0.94)	(1.37)	(0.67)	(1.51)
Land possession (>6 hectare)	-0.008	0.002	0.000	-0.008	0.002	-0.000
	(0.91)	(0.86)	(0.02)	(1.01)	(0.81)	(0.11)
Scheduled tribe	-0.015**	-0.002	-0.004**	-0.012	-0.001	-0.003*
	(2.92)	(1.54)	(3.16)	(1.92)	(0.82)	(1.98)
Scheduled caste	-0.007	-0.000	-0.002	-0.004	-0.000	-0.001
	(1.75)	(0.43)	(1.92)	(0.87)	(0.01)	(0.99)
Upper social class	-0.000	0.001*	0.001	-0.001	0.001	0.001
	(0.09)	(2.21)	(1.31)	(0.41)	(1.32)	(0.66)
Hindu	-0.027**	-0.005**	-0.008**	-0.031**	-0.005**	-0.009**
	(3.97)	(4.08)	(5.34)	(4.05)	(3.68)	(5.41)
Muslim	0.062**	-0.002*	0.010**	0.055**	-0.002*	0.009**
	(6.36)	(2.55)	(5.39)	(5.44)	(2.39)	(4.55)
Christian	-0.002	-0.001	-0.001	-0.005	-0.001	-0.002
	(0.22)	(0.45)	(0.94)	(0.66)	(0.68)	(1.54)
Self-employed in non-agriculture	-0.005	0.002	-0.000	-0.010*	-0.000	-0.002*
	(1.05)	(1.55)	(0.24)	(2.47)	(0.04)	(2.31)
Self-employed in agriculture	0.009*	0.002	0.002*	0.003	-0.000	0.000
	(2.45)	(1.61)	(2.49)	(0.92)	(0.08)	(0.23)
Urban self-employed	-0.012**	-0.001	-0.003**	-0.003	0.001	0.000
	(3.03)	(1.23)	(3.33)	(0.97)	(1.55)	(0.25)
Urban casual labour	-0.016**	-0.003*	-0.005**	-0.006	-0.002	-0.003
	(2.85)	(2.25)	(4.30)	(0.97)	(1.15)	(1.91)
Male dummy			0.002			0.002
			(1.77)			(1.70)
Obs. P	0.085	0.011	0.038	0.085	0.011	0.038
Pred. P	0.029	0.003	0.006	0.030	0.003	0.006
No. of obs.	54091	46289	100530	54091	46289	100530
Pseudo R2	0.344	0.253	0.367	0.342	0.245	0.363

Note: \*, \*\* significant at 5%, 1% level. t-statistics are in parentheses. All models include state dummy variables.

Besides the above-mentioned socio-economic factors, it stands out that smaller households rather tend to opt for inter-state and international destinations. This result implies that a diversification strategy of household income, which becomes more of an option for larger households, is less relevant for long-distance internal and international migration. Potentially, it is reasonable to assume that income diversification becomes less relevant for a migration option further away because of a negative effect of distance on the amount and frequency of remittances flows. However, this is left for future research.

Social factors such as belonging to a specific social class or religious group, including the social capital and networks related to these ethnic and religious identities, also have some relevance in explaining migration distances. For instance, while the migration of family members of Hindu households is more likely but rather short distance, Muslim households have a lower migration propensity but instead have a stronger linkage to international destinations.

Christian households, on the other hand, have the highest out-migration rate, but do not have these strong linkages to an international destination such as Muslims with their established international networks primarily to the Gulf region, where Indian (male) expatriates are a dominant group of foreign workers. Hindus similarly lack these strong ties to an international destination, which makes Hindu households not generally less mobile but rather moving in relative proximity to their origins.

## Concluding remarks

This paper has looked at the determinants of out-migration in general and the respective decisions about migration distances or destinations. I find strong evidence that both individual and group-based relative deprivation across political, social, and religious categories play a significant role in the decision on migrating *at all*. In the choice of a destination, however, the role of relative deprivation is more ambiguous. While I can find rather strong positive effects on (short-distance) migration within a federal state, internal movements to other states within India are rather unaffected by relative deprivation, and it even has a negative effect on international migration, disproving to some extent a debated positive link between sending-country inequalities and international migration.

I find a common set of drivers for both internal and international migration, but also some differences beyond the obvious role of some (migration-related) policies. These differences are mostly related to the capability of households to afford the higher costs for migrating to distant destinations. Inter-state and international migration are the preferred migration options of households experiencing less absolute deprivation. Relative deprivation, on the other hand, is not a relevant driver of longer-distance moves. However, individual relative deprivation of households as well as group-based relative deprivation influence both the decision about whether a family member shall migrate at all, and if they choose to do so, the likelihood of choosing a proximate destination.

Beyond this, the relative importance of absolute deprivation compared to relative deprivation either within or beyond a social reference group increases in decisions about more distant destinations. Economic and social resource constraints are more important factors for explaining long-distance migration than outcomes of economic or social comparisons within or across social groups. However, it is very likely that the appropriate reference group for potential international migrants is not, or at least not only, in India but

abroad. If international standards of well-being become more of a reference for would-be migrants, for instance, mediated by the media or an international diaspora, then again, feelings of (international) relative deprivation might also play an important role in the decision on international migration. Further research, however, is needed to disentangle and to better understand the role of established migratory systems and systemic linkages between internal and international migration processes.

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## Annex

**Table A1:** Descriptive statistics and definitions

Variable	Definitions	Mean	Std. Dev.	Min	Max
Outmigration	Dummy variable set to one if a household is a migrant-sending household	0.27	0.445	0	1
Outmigration_short	Dummy variable set to one if former household member has migrated within the state/union territory	0.73	0.445	0	1
Outmigration_long	Dummy variable set to one if former household member has migrated outside the state/union territory, but within India	0.23	0.422	0	1
Outmigration_abroad	Dummy variable set to one if former household member has migrated abroad	0.04	0.192	0	1
Household size	Number of household members including out-migrants	5.06	2.709	1	37
Hindu	Dummy variable set to one if household is Hindu	0.83	0.418	0	1
Muslim	Dummy variable set to one if household is Muslim	0.11	0.322	0	1
Christian	Dummy variable set to one if household is Christian	0.03	0.250	0	1
Scheduled tribe	Dummy variable set to one if household belongs to a scheduled tribe	0.09	0.344	0	1
Scheduled caste	Dummy variable set to one if household belongs to a scheduled caste	0.20	0.373	0	1
Upper social class	Dummy variable set to one if household neither belongs to a scheduled tribe nor scheduled caste	0.30	0.468	0	1
Land possession (<1 ha)	Dummy set to one if household possesses less than 1 hectare of land	0.86	0.344	0	1
Land possession (>6)	Dummy set to one if household possesses more than 6 hectares of land	0.01	0.086	0	1
Employment	Dummy set to one if the main reason for out-migration is employment	0.30	0.458	0	1
Studies	Dummy set to one if the main reason for out-migration is studies	0.05	0.213	0	1
Marriage	Dummy set to one if the main reason for out-migration is marriage	0.54	0.498	0	1
Forced displacement	Dummy set to one if the main reason for out-migration is forced displacement	0.001	0.037	0	1
HH consumption	Total annual household consumption expenditures (in 10000 Rs)	4.512	3.924	0.058	234.99
SE Non-agricultural HH	Dummy set to one for a rural household if the household is self-employed in non-agriculture	0.10	0.304	0	1
Agricultural HH	Dummy set to one for a rural household if the household is self-employed in agriculture	0.25	0.433	0	1
SE urban HH	Dummy set to one for an urban household if the household is self-employed	0.10	0.305	0	1
Urban casual work HH	Dummy set to one for an urban household if the household is casually employed	0.04	0.189	0	1
Urban regular work HH	Dummy set to one for an urban household if the household receives regular salary	0.12	0.321	0	1
Male migrant	Dummy set to one if out-migration is male	0.361	0.480	0	1

RD_all India	Intra-group relative deprivation on an all India level (In 10000 Rs)	1.606	0.918	0	4.454
IRD_state	Intra-group relative deprivation on a state level (In 10000 Rs)	1.526	1.003	0	9.197
GRD_state	Inter-group relative deprivation on a state level (In 10000 Rs)	0.498	0.351	0	1.346
IRD_social group	Intra-group relative deprivation on a social group level (In 10000 Rs)	1.534	1.053	0	5.866
GRD_social group	Inter-group relative deprivation on a social group level (In 10000 Rs)	0.525	0.421	0	1.262
IRD_religious group	Intra-group relative deprivation on a religious group level (In 10000 Rs)	1.592	0.934	0	7.715
GRD_religious group	Inter-group relative deprivation on a religious group level (In 10000 Rs)	0.092	0.048	0	0.657
IRD_multiple	Intra-group relative deprivation 'index' based on component 1 of PCA of all three group categories	0.000	1.878	-3.471	8.809
GRD_multiple	Inter-group relative deprivation 'index' based on component 1 of PCA of all three group categories	0.000	1.146	-2.459	4.127