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The multi-level determinants of international migration aspirations in 25 communities in Africa, Asia and the Middle East



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ABSTRACT

In this article we ask which societal circumstances and individual characteristics make people wish to migrate to another country. Drawing on a large-scale survey conducted in 25 communities in ten countries across Asia, Africa and the Middle East, we conduct multi-level regression analysis, allowing us to assess the effects of diverse individual and community-level determinants on international migration aspirations. This multi-level design has delivered two insights in particular. First, determinants at the individual and community level both contribute to forming migration aspirations. Second, the analysis at the community level shows that individual-level factors are far from consistent in determining who has migration aspirations and who does not. We conclude that such multi-level analysis holds much potential for generating greater understanding of how migration processes work.

1. Introduction

Why do people migrate? Remains a question that continues to preoccupy politicians, policymakers and academics. To advance the academic literature and contribute to the development of well-founded migration policies, in this article we share novel insights on the determinants of migration aspirations – the circumstances, experiences, and perceptions that might sway people's views on leaving versus staying. Our specific contribution is an empirical analysis of the multilevel determinants of international migration aspirations, across 25 diverse communities in Africa, Asia and the Middle East.

Academic research increasingly thinks of migration as a stepwise process, starting with the formation of migration aspirations, which people may succeed – or not – in converting into actual migration (Carling, 2002; Carling and Schewel, 2018; de Haas, 2021). Whether migration then takes place depends on different factors, for instance the migration infrastructure, "the systematically interlinked technologies, institutions and actors" that can facilitate the conversion from aspirations to actual migration (Xiang and Lindequist, 2014: 124) and, crucially, the ability to migrate (Carling and Schewel, 2018; de Haas, 2021). While broadly speaking, there is a strong association between

migration aspirations and actual migration (Docquier et al., 2014; Tjaden et al., 2018), disentangling the distinct steps involved in migrating, has allowed for a better understanding of how migration works, particularly in a world with widespread barriers to mobility.

In this article, we focus on the determinants of migration aspirations, the conviction that staying is better than leaving. We use multi-level analysis that allows us to assess the role of both individual level and community-level determinants. While existing analysis has mostly focused on studying the role of either individual level determinants, such as having transnational migration networks (Aslany et al., 2021), or the determinants at the community level, such as the level of inequality (Czaika and de Haas, 2012), we opt to bring together both levels within the same analysis. To the best of our knowledge this is one of the first analyses that brings together community-level and individual-level factors alongside to answer the question of what determines international migration aspirations across a large number of varied communities. We show that both levels can contribute to the formation of migration aspirations.

More broadly, our article relates to the determinants of migration in countries of origin – those factors that are often called "push factors". As such it relates to the body of literature on the effects of development on

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migration, both to some of the foundational migration theories and more recent empirical work. Migration theories have often considered migration to be the result of changes taking place in societies, from what we might call transitions. Among the first contributions, for example, stands out the work from the geographer Wilbur Zelinsky who linked demographic transitions with economic development to explain country-level migration patterns at different stages of development in the "Model of Mobility Transition" (Zelinsky, 1971). Similarly, the sociologist Douglas Massey argued that capitalist development transforms and destroys the foundations of rural, agrarian societies, leaving a pool of people who seek better opportunities elsewhere (Massey, 1988). More recent empirical studies have often taken stock at one particular point in time, making comparisons across countries and looking at the correlation between specific indicators of "development", such as GDP per capita, and migration patterns. Reinforcing the hypotheses made in these migration theories, there is a clear consensus that higher levels of development tend to be associated with higher levels of migration until an upper-middle-income level (Clemens, 2014; de Haas, 2007; de Haas, 2010). More recent contributions have simply put 'underdevelopment' forward as a broad cause of migration (Gamso and Yuldashev, 2018; Gent. 2002).

A key characteristic of these studies is that they often focus on the *development* of a country as a whole –relying on aggregate indicators, such as levels of GDP per capita, and broad migration trends. By adopting aggregate measures of development, a country-level focus precludes a deep understanding of the specific *developments* that might affect migration dynamics within local communities. For example, while one community within a country may be affected by a combination of economic stagnation and a deterioration of security, another one may be experiencing an educational expansion. Each of these combinations of developments are associated with different migration patterns. Since most countries show diversity in developments across communities, national averages can often obscure insights into specific community and therefore into migration dynamics.

In this article, we draw on a unique survey on migration and development that conducted more than 13,000 interviews with young adults in 25 communities in ten countries across Asia, Africa and the Middle East. Using this rich dataset, we conduct a multi-level analysis, allowing us to assess the effects of diverse individual and communitylevel determinants on international migration aspirations. In summary, the focus of this article is to examine which societal circumstances and individual characteristics make people wish to migrate to another country.

In the next section we describe the survey and our dataset, before laying out our empirical strategy. We then describe and justify the inclusion of our dependent and independent variables. The results section presents the results and relate these to the literature. In the conclusion we summarise our key findings and discuss areas for further research.

2. Data

This article uses data from the MIGNEX survey. The survey covers a range of topics related to migration – from migration aspirations and experiences, to transnational networks, and perceptions of migration – and development, at the community level and individual/ household level. It was specifically designed to allow for comparison across communities.

There has been a surge of analyses that examine the determinants of migration aspirations based on nationally representative data, often using broad data sets such as the Gallup World Poll and the Arab Barometer that are not designed primarily for analyses of migration. Our data complements this research in two ways. First, the dataset has the rare combination of (a) spanning 25 communities spread across ten countries and (b) containing a range of detailed migration-specific variables. Second, by being representative of local populations in selected areas, rather than country-wide, it allows for analyzing community-level dynamics. This is important since national averages are fairly abstract constructions, especially in large and diverse countries such as Ethiopia, Nigeria and Pakistan.

The MIGNEX survey was conducted in 25 communities in Afghanistan, Cabo Verde, Ethiopia, Ghana, Guinea, Nigeria, Pakistan, Somalia, Tunisia, Turkey (Fig. 1). The countries were selected given the diversity in their migration dynamics – some are countries of origin, others destination or transit countries or all of these – and also because they are important in relation to migration to Europe. The communities, on the other hand, were systematically selected in order to ensure a *theoretically relevant diversity* of development experiences. Some communities are in stagnation while others are flourishing and some are insecure while others are peaceful, and so on. This kind of diversity allows for an examination of each type of influence on migration. Each community is a reasonably well-defined local society such as an island, a town, a rural community, or a distinct neighbourhood of a city, generally with a population of 10,000–100,000 people. The communities¹ are not necessarily administrative units.

This dataset is therefore only representative of young adults in the community. It does not represent a larger geographic area and cannot be aggregated at the national level to make cross-country comparisons. Likewise, the dataset it is not representative of all households in each community given that we only interviewed respondents in households with members in the target population between the ages of 18–39.² However, its richness lies on its diversity allowing to capture a wide spectrum of localities to examine which common determinants patterns are shared between them.

The survey was conducted by means of face-to-face interviews using the SurveyCTO software on tablets. Data collection took place between October 2020 and February 2022, with most data being collected between May-August 2021 when Covid-19 restrictions had eased in most countries. The survey covered more than 13,000 young adults (aged 18–39), with a sample size of at least 500 respondents in each community.

The survey is approximately representative of the 18–39-year-old population in each community. It rests upon a sampling strategy designed to be workable in all 26 communities. For instance, as sampling frames were not available for most communities, we developed a process to estimate number of households in a community using information derived from satellite maps, and then used these population estimates to apply cluster sampling and systematic random walks (Hagen-Zanker et al., 2023a). Formally, the sampling strategy is a threestage probability-proportional-to-size (PPS) cluster sampling strategy with systematic random walks. The first stage used the population estimates derived from satellite maps and applied PPS with stratification to sample clusters. In the second stage enumerators, used a *systematic* random walk, described in detail in Hagen-Zanker et al. (2023a), to sample households. In the third stage, a young adult was randomly selected within a household.

The survey focuses on young adults who were living in the community at the time of the survey, some of whom may have migration experiences and some who do not. This definition includes former or return migrants but not young adults who have moved out of the community and have not (yet) returned. This means that contrary to the challenge faced in much research on migration, which surveys those who have moved and therefore suffers from a 'mobility bias', our data could conversely be challenged as having a 'immobility bias'.

We use the MIGNEX survey dataset restricted-access variant, version 1. Individual level weights were calculated to correct for sampling design and were used in the analysis. A detailed discussion of the

¹ In project documents, they are referred to as 'research areas'.

 $^{^2}$ The dataset is only representative of households with young adults between the ages of 18 to 34. For further detail on sampling strategy, refer to Hagen-Zanker et al. (2023b).



Fig. 1. MIGNEX communities. Note: Kombolcha (Ethiopia) is excluded from the analysis because survey data collection was halted prematurely for security reasons.

survey's implementation, data cleaning and preparation of weights and other variables can be found in Hagen-Zanker et al. (2023b).

3. Empirical strategy

To assess the strength of the statistical relationship of each potential determinant of international migration aspirations, we employ a multi-level modelling approach. A multi-level model allows us to differentiate between individual level determinants (individual perceptions of community conditions) and community-level determinants (community level incidences of individual experiences) and their distinct effect on the formation of international migration aspirations. Another key advantage of estimating a multilevel model is that it accounts for the nested and hierarchical structure of the data in which individuals belong to any of the 25 community and between-community differences, resulting in more efficient estimators than those produced by traditional linear regression.

Multi-level approaches have been used previously to study migration processes, including the determinants of migration aspirations and intentions (Bertoli et al., 2022; Creighton, 2013; De Jong, 2000; Williams et al., 2018). However, these studies often focus on one country (Creighton, 2013; de Jong, 2000) or on one specific geographical region (Bertoli et al., 2022; Williams et al., 2018). To the best of our knowledge, this is one of the first studies that employs a statistical multi-level modelling strategy to study cross-regional, cross-country and crosscommunity determinants of international migration aspirations empirically drawing on data from 25 communities across 10 countries in Africa, Asia and the Middle East.

Drawing on Rabe-Hesketh and Skrondal (2006) and Carle (2009) work, we estimated a multi-level mixed-effects logistic regression for complex survey data derived from multistage sampling.³ Our data were weighted to reflect the survey design.⁴ We chose to estimate a logistic regression given the nature of our outcome of interest, *having resolute migration aspirations or not*, where logistic regressions allow us to model

probabilities that are naturally bounded between 0 and 1. Likewise, a logistic regression provides interpretable coefficients related to odds, and its error distribution is appropriate for binary outcomes, avoiding the inefficiencies and biases that can arise when using linear regression in this context. In addition to the multi-level mixed-effects logistic regression, we also estimated several other models as robustness checks including multi-level mixed-effects linear regression model (Mixed) and a generalised linear latent and mixed model (GLLAMM) with a logistic link (see Appendix Table A1). Lastly, we also include the regression results separately for each of the 25 communities employing logistic regression analysis for the 25 communities (see Appendix Table A2) and a linear probability model (see Appendix Table A3).

A limitation of the current analysis is the potential presence of endogeneity in our model specification. Endogeneity might arise if our determinants are correlated with unobserved characteristics both at the individual and community levels that are part of the error term. As a result, our analysis does not account for causal pathways between migration aspirations and individual and community-level determinants. Instead, we identify statistical associations between migration aspirations and those determinants. Lastly, because our data covers young adults in what are mostly communities of origin, we cannot account for the proportion or traits of those who may already have left the community. In our regression analysis we attempt to control for any observable factors, however, we are aware that nevertheless our findings will retain some bias from the composition of our sample.

4. Variables

4.1. Dependent variable

In this article we focus on the determinants of migration aspirations, rather than on actual migration. There are both pragmatic and theoretical rationales for doing so. Pragmatically, analyses of migration aspirations can be based on cross-sectional survey data of the general population of potential migrants. Theoretically, it matters that the drivers of migration operate through migration aspirations. As noted above, actual migration is conditioned by many other factors, including migration infrastructure in a broad sense (Carling et al., 2023; Xiang and Lindquist, 2014) and having the ability to migrate (Carling and Schewel, 2018; de Haas, 2021).

Migration aspirations can be broadly understood as the conviction that migrating would be preferable to staying (Carling 2014). In

³ We do this by employing the Stata command melogit, more information can be found here: https://www.stata.com/manuals/memelogit.pdf.

⁴ For further details on the MIGNEX survey design, refer to Hagen-Zanker et al. (2023a) where we describe the data preparation and calculation of weights based on our three-stage probability-proportional-to-size (PPS) cluster sampling strategy with random walks.

quantitative research, a range of closely related concepts and operationalizations have been applied, often with scant precision (Carling and Schewel 2018). The MIGNEX survey and subsequent analyses sought to develop more nuanced measures that reflect diverse aspects of individuals' thoughts and feelings about migrating (Carling et al., 2023). In the present analyses, we use a compound measure that we refer to as *resolute migration aspirations*. It is a binary variable that identifies individuals who (1) have *seriously considered* migrating internationally during the past year, (2) would *prefer* to migrate internationally sometime during the coming five years, and (3) are *ready to seize the opportunity* to migrate if it were offered to them. The composite measure thus excludes, for instance, respondents who expressed an eagerness to migrate in the context of the survey interview, but had not previously given it any thought.

Survey questions did not use the word migration, which has diverse and unpredictable connotations, but referred to 'living or working in another country' instead. Table 1 presents the prevalence of resolute migration aspirations in each community, while Table 3 shows the average across all communities.

4.2. Independent variables

While our dependent variable — having resolute migration aspirations — is at the individual level, the independent variables could be situated at different levels. The ones that we include take two forms: *individual-level variables* that relate to a respondent or their household, and *community-level variables* that relate to the specific community among the 25 that are covered in the dataset. Individual-level variables include personal perceptions about the community (for instance about security or livelihood opportunities) since they vary from person to person.

Community-level determinants, play a key role in the analysis, reflecting the overall project design, and building on research highlighting the importance of the community level alongside the individual one (de Jong and Gardner, 2013; Massey and Espinosa, 1997; Massey

Table 1

Drovalonco	of resolute	migration	achirations	hv	community
Prevalence	of resolute	migration	aspirations,	Dy	community.

Community	Community ID	Country	Resolute migration aspirations (%)
São Nicolau	CPV1	Cabo Verde	28.1
Boa Vista	CPV2	Cabo Verde	27.4
Boffa	GIN1	Guinea	39.0
Dialakoro	GIN2	Guinea	16.9
Gbane	GHA1	Ghana	27.7
Golf City	GHA2	Ghana	36.3
New Takoradi	GHA3	Ghana	40.6
Down Quarters	NGA1	Nigeria	32.3
Awe	NGA2	Nigeria	8.2
Ekpoma	NGA3	Nigeria	45.3
Batu	ETH2	Ethiopia	16.5
Moyale	ETH3	Ethiopia	7.1
Erigavo	SOM1	Somalia	12.8
Baidoa	SOM2	Somalia	7.2
Enfidha	TUN1	Tunisia	46.3
Redeyef	TUN2	Tunisia	34.6
Нора	TUR1	Turkey	27.1
Yenice	TUR2	Turkey	15.5
Kilis	TUR3	Turkey	10.2
Shahrake Jabrael	AFG1	Afghanistan	19.3
Behsud	AFG2	Afghanistan	21.0
Shahrake	AFG3	Afghanistan	19.8
Mahdia		8	
Chot Dheeran	PAK1	Pakistan	5.8
Youhanabad	PAK2	Pakistan	4.4
Keti Bandar	PAK3	Pakistan	1.7

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Note: Community IDs are included to serve as a legend for Figures 2–7.

et al., 1993). They are the factors that may explain why the prevalence of migration is *generally* higher in some communities than in others. For instance, migration aspirations may be affected by the overall level of poverty in the community or its general access to public services. Most community-level variables in our analysis, such as the prevalence of poverty, are aggregated from information about individuals.

If we take two individuals among the respondents – one who has migration aspirations and one who does not – and they come from different communities, the explanation for the difference in migration aspirations can be broken down as follows:

One part of the explanation lies in the characteristics of their respective communities, such as the general level of insecurity, or the level of inequality. These characteristics can only contribute to explaining why the *overall level* of migration aspirations is higher in some areas than in others.

A second part of the explanation lies in the characteristics of each person, or their household. For instance, having experienced violence, or being unemployed are individual characteristics that might affect the individual's migration aspirations. Only such characteristics can explain differences between individuals in the *same* community.

Our independent variables measure potential precursors of migration aspirations – the circumstances, experiences, and perceptions that might sway people's views on leaving versus staying. Each of these could be pursued further upstream in a possible causal chain. For instance, our variable of perceived insecurity could lead to an enquiry into how that is affected by crime rates, which in turn could inspire examination of the causes of crime. The further upstream one goes, the more 'fundamental' the causes are, but at the cost of an increasingly tenuous link with migration outcomes.

In the pooled analyses we include 33 independent variables that might explain resolute migration aspirations. We have grouped these independent variables into four categories: root causes; migration experiences and networks; other individual characteristics and other community characteristics. Table 2 gives an overview of independent variables.

We have created the separate category of root causes to capture a specific set of drivers that have had sustained policy interest (Carling et al., 2023). There is no established consensus on what root causes are, or how they can be measured, so we base our operationalization on the following specific definition of root causes:

Root causes of migration are widely experienced hardships, to which migration is a possible response, that are perceived to be persistent, immediately threatening, or both. (Carling et al., 2023:7).

This definition broadly aligns with existing usage. Importantly, it spans the problematic divide between 'forced' and 'voluntary' migration and covers various forms of hardship. It also excludes many forms of hardship, such as those that are particular to an individual or a household. To give an example, an individual's unemployment we would not classify as a root cause as it is not widely experienced; it is an individual hardship, classified under other individual level characteristics.

Based on the definition of the root causes of migration we have identified four main domains of root causes:

- 1. Livelihoods and poverty.
- 2. Governance and public services.
- 3. Security and conflict.
- 4. Environment hazards and stresses.

This is a convenient breakdown that can accommodate the factors that are typically mentioned as root causes in the literature (Aslany et. al, 2021; Carling and Talleraas, 2016; Castles and Van Hear, 2010; Czaika and Reinprecht, 2022). They also largely align with other previous proposed breakdowns. Within the root causes category, we include both individual and community level variables. Individual-level root cause variables are based on individual perceptions of local conditions, for example each respondent's perception of whether it is safe to walk the streets at night. Community-level root cause variables are based on incidences of individual experiences and characteristics, such as the

Table 2

Overview of independent variables.

	Measurement level Individual level	Community level
Root causes, by domain Livelihoods and poverty Governance and public services	 Livelihoods hardships Discontent with public services Distrust in institutions Disapproval of government 	PovertyCorruption experience
Security and conflict Environmental hazards and	Perception of insecurity	Violence and crimeEnvironmental
stresses Migration experiences and networks	 Has lived in high- income country Is aware of migrant Has received remittances 	hazards and stresses Culture of migration
Other individual and community level characteristics	remittances Is female Age Is married/cohabiting Grew up in local area Linguistic minority status Household wealth Employment and workforce participation Years of completed education Perceived relative wealth Has experienced hunger Life satisfaction Was negatively affected by Covid-19 Has experienced violence Affected by environmental problem Uncertainty acceptance Thinks most people can be trusted Conservative gender norms	 Gini index Linguistic fractionalisation Presence of international actors

proportion of respondents who have been victims of crime. In total we have included nine root cause variables.

In the online supplement we provide a detailed description of how each variable is constructed. In the reminder of this section we justify the inclusion and briefly discuss the variables included and listed in Table 2.

Among the four root cause domains, livelihoods and poverty is probably the most prominent in the literature. Neoclassical economic migration theories focused on income differentials between urban and rural areas as a driver of migration (Harris and Todaro, 1970) and the ability to get greater returns on educational investments in other labour markets, as theorised in the Human Capital approach (Sjaastad, 1962), while the New Economics of Labour Migration points to absolute deprivation (that is, poverty) as one driver of migration (Stark, 1991). Yet, the literature also notes that migration from the poorest areas and amongst the poorest people is often lower, most importantly because of their lower ability to migrate (Castles, 2000; de Haas, 2007; Nyberg-Sørensen et al., 2002). We cover livelihoods and poverty by means of two variables. Individual-level Livelihoods hardships is based on the perceived difficulty of 'finding a good job' and 'earning a living and feeding a family' in the community. The second variable, communitylevel Poverty, is based on self-assessment of the household's current financial situation and the reported frequency of hunger in the

household.

Secondly, another root cause that has a prominent place in the literature is governance and public services. Political scientists have long posited that 'exit' is one response to dissatisfaction with governance in countries of origin, and that the provision of public goods such as 'guaranteeing human rights and democratic liberties' can be one way to prevent departure (Hirschman, 1978: 105). And indeed, existing studies have generally found a positive association between dissatisfaction with governance, distrust in institutions and dissatisfaction with public services and migration aspirations (Aslany et al., 2021; Caso et al., 2023; de Haas, 2011; Dustmann and Okatenko, 2014).

The variables that we include in this domain measure both overall perceptions of governance, as well as specific aspects of it. *Discontent with public services* is based on individual perceptions of the quality of two key critical services to be delivered by government: health care and education. With *Distrust in institutions* we measure another specific aspect of governance, namely the extent to which individuals trust different institutions that are generally considered fundamental to effective governance (the armed forces, police, and courts) and overall perceptions of corruption in the area. The third individual-level variable, meanwhile, is based on overall perceptions of both local and central government. Finally and given that corruption captures an important aspect of governance, we also include a *Corruption experience* rate at the community level.

Insecurity, violence, and conflict are also root causes frequently referred to. Generally speaking, the literature shows a strong correlation between insecurity, conflict and violence and internal/ international migration (Adhikari, 2013; Davenport et al., 2003; Hagen-Zanker and Mallett, 2016; Moore and Shellman, 2004). The literature also shows that motivations to leave can also be influenced by more subjective feelings or perception of insecurity and danger for life (Lundquist and Massey 2005; McAuliffe, 2017; van Wijk 2010). We cover both the more 'objective' and 'subjective' aspects of conflict and violence that might influence migration aspirations. Capturing subjective aspects is the individual level variable *Perception of insecurity*, which is based on the respondent's perception of safety in walking the streets in the local area at night. The second variable *Violence and crime* is an aggregation of experiences of crimes and violence at the community level.

A more recent domain added to the root cause discussions are environmental hazards and stresses. These can be seen as both as a predisposing factor that makes migration more likely in the long run as well, as an immediate trigger in the case of a sudden environmental shock. There is some evidence that, particularly in rural areas or more agricultural countries, slow-onset changes in temperature and precipitation are correlated with out-migration (Black et al. 2011; Cai et al., 2016; Koubi et al., 2016). Sudden-impact environmental shocks can also result in migration, though often just temporarily and within a country's borders (Beine and Parsons, 2015; Carling et al., 2020; Islam, 2018). In our analysis we include an *Environmental hazards and stresses* index that captures the extent to which the households in a community have been affected by droughts, floods, soil degradation or crop and livestock disease in the past five years.

Migration-related factors, such as experiences and networks, are another key set of critical determinants as identified in the migration literature. In our analyses we include three migration related variables at the individual level and one at the community level.

At the individual level, experience of international migration can influence thoughts and feelings about migrating again in the future. This might be because migration feels more familiar and less frightening, or because of a better understanding of how the process works, and how to convert migration aspirations into actual migration (Aslany et al., 2021). We include a variable called *has lived in high-income country* to exclude the shorter distance, less expensive forms of mobility.

Migration theory has long established that migration fosters more migration (Massey et al. 1993) and to study migrations aspirations it is therefore necessary to consider the influences of past and current

migration. We include the variables *Is aware of current, recent or former international migrant* and *has received remittances in the past year*, as the literature shows that people who receive remittances are more likely to hold migration aspirations (Aslany et al., 2021).

Some areas of out-migration are characterised by a 'culture of migration' in which migration reproduces itself through norms and values. As an early elaboration of the concept put it, 'migration becomes deeply ingrained into the repertoire of people's behaviours, and values associated with migration become part of the community's values' (Massey et al. 1993: 452–453). Therefore at the community level we have included a variable that measures a *culture of migration*, as elaborated in Carling et al. (2023).

We include a further 17 additional variables at the individual level. We include six measures that capture our sample's demographic characteristics and general family status. The literature shows that men are more likely to aspire to migrate compared to women (Aslany et al., 2021), and we too have included *gender* of the respondent. It also shows that younger individuals are more likely to aspire to migrate internationally (Aslany etal., 2021; Nieri et al., 2012) due to their higher propensity to take risks, ability to migrate, work opportunities abroad, cultural and social constructs around adulthood; we have include *age* and its squared form to account for non-linearities.

Marital and cohabitational status can also affect aspirations as can parenthood status, for instance the responsibility of having children one the one hand represents a motivation to not migrate in order to care for the children but on the other hand migration is an opportunity to provide greater financial resources, as shown in a systematic review of the determinants of migration aspirations (Aslany et al., 2021). We have included both variables.

Identities with respect to social, cultural and economic groups such as ethnicity, religious constructs, caste and class, can affect an individual's sense of belonging to a specific area and in turn influence their aspirations to migrate or to stay. In our analysis, we assess the degree of belonging to a minority group by including a measure of *linguistic minority status*. Finally, we include a variable to account for *having grown up in a specific community* as it can influence someone's aspirations to migrate in multiple ways, for instance due to feeling attached to the area (Aslany et al., 2021).

We include six measures that capture socio-economic status and life satisfaction. Objective and subjective measures of economic status and well-being can influence migration aspirations in diverse ways. There can be counteracting forces; where on the one hand higher socioeconomic status can lead to higher professional ambitions and desires to migrate, while individuals from lower socio-economic status might benefit the most from migrating by gaining access to a different pool of opportunities and therefore aspire to migrate (Aslany et al., 2021; Vacchiano, 2018). To capture such dynamics we include household wealth and its squared value and perceived relative wealth. We include Has experienced hunger to account for household-level poverty, in addition to having included it as one aspect of community level poverty as a root cause above, as it also measres food insecurity at the individual level that might not be widely experienced and recurrent. In addition, we include *life satisfaction* to account for overall life satisfaction (Caso et al; 2023), driven by both economic well-being and subjective factors such as relationships with family and friends and having a fulfilling job.

Unemployment has long been seen as a central driver of migration in influential migration theories, for instance in Massey (1988), discussed above, and the Two-Sector model of Harris and Todaro (1970), as well as in empirical work (Aslany et al., 2021). We include *Is unemployed* and *Is not in the workforce* to account for individual employment status, while the *livelihoods hardships* variable captures perceptions of livelihood opportunities in the community. As noted above, the ability to get greater returns on education investment is included in migration theory (Sjaastad, 1962) and is seen as a key determinant in empirical research (Aslany et al., 2021); we include *education attainment* as measured in years of completed education.

A third group of individual level variables we include are negative household shocks.

We include three household shocks. Was *Negatively affected by Covid-*19 accounts for the timing of the survey, where the shocks associated with Covid-19, including severe illness and lockdowns, may have either dampened or heightened migration aspirations. The other two variables account for individual level experiences of variables that are also included at the community level within the root causes group above: *Experience of physical violence* and *Negatively affected by environmental problem*. As noted for unemployment above, we have included these variables to also control for individual level experiences, which are not neccesarilu widely experienced, in addition to the broader trends within a community in the root causes measures.

Lastly, at the individual level, we include three measures of personal traits of respondents in the analysis. The willingness to accept uncertainty and to take risks is a key personal trait that shapes migration aspirations, with the literature generally showing that more risk tolerant people have stronger migration aspirations (Aslany et al., 2021); we include three variables that measure *Acceptance of uncertainty*. Social cohesion and attachment to the place where people reside can influence one's desire to migrate or to stay. The research finds that when people feel more attached to their communities, they are less likely to leave (Aslany et al., 2021). We use Trust *in other people in the community* as a proxy of social cohesion or place attachment. Finally, conservative gender norms can influence migrations aspirations in very different ways, with context specific findings (Hagen-Zanker et al., 2023c). We include a *Conservative gender norms* index to control for these.

The final group of variables we include are three other community characteristics. Vertical, within-country income inequality has long been seen as a driver of migration (Massey et al. 1993; Stark, 1991), though more recent empirical studies have shown a variety of patterns, suggesting that the relationship between inequality and migration can be positive (Stark et al., 2009), negative (Czaika & de Haas, 2012), or even follow an inverse U-shape (Peridy, 2006). We have included a *Gini Index* based on the wealth distribution in a community.

Various forms of social identities at the individual level including ethnicity, religious affiliation, racialized identities and minority group belonging can shape and influence migration aspirations (Aslany et al., 2021); we account for this with a *Linguistic fractionalization* index, as described in the online appendix. Finally, we include a variable called *Presence of international actors*, which captures connections to the outside world beyond transnational migration network, including international aid, international investment and international tourism, all of which might foster or dampen migration aspirations.

Table 3 provides an overview of all variables together with some summary statistics highlighting the communities where the highest and lowest average was found for each indicator.

5. Results

Our main findings are shown in Table 4. The table includes the results of the mixed effects logistic regressions at the pooled data level with their respective marginal effects. We provide full regression results for each community in Appendix Table A2.

We also provide a set of robustness checks in Appendix Table A1 and Appendix Table A3 Appendix Table A1 shows the multilevel regression results employing two additional estimation methods: the multi-level mixed-effects linear regression model (Mixed) and generalised linear latent and mixed model (GLLAMM) with a logistic link. These checks, show consistent statistically significant findings for most coefficients. Appendix Table A3 presents the community-level results employing a linear probability model. While all the community level, the LPM and logit marginal effect coefficients results are not exactly the same, they are very similar, pointing to a high consistency in our results.

In this section we first discuss the statistical association between our independent variables and resolute migration aspirations – our

Table 3

Descriptive statistics.

Variable	Level*	Scale	Mean	Standard deviation	**Community with lowest mean	*** Community with highest mean		
Desclute microtical eminations	IND	Dimoury	0.00	0.40	0 00in Kati Dan dan (DAK2)	0 46:- E-Edha (TUNI)		
Resolute migration aspirations	IND	Binary	0.22	0.42	0.02in Keti Bandar (PAK3)	0.46m Ennaña (TUNT)		
Livelihoods hardships	IND	0–10	7.70	2.26	5.21 in Yenice (TUR2)	9.28in Behsud (AFG2)		
Poverty	LA	0–10	3.28	0.85	1.8in São Nicolau (CPV1)	4.55in Awe (NGA2)		
Discontent with public services	IND	0–10	4.66	2.18	3.07in Awe (NGA2)	7.16in Keti Bandar (PAK3)		
Distrust in institutions	IND	0–10	4.92	2.49	1.98in Kilis (TUR3)	6.77in Ekpoma (NGA3)		
Disapproval of government	IND	0–10	6.73	2.31	4.69in Kilis (TUR3)	8.62in Ekpoma (NGA3)		
Corruption experience (%)	LA	0–100 %	17.72 %	10.97 %	2.13 %in São Nicolau (CPV1)	38.33 %in Ekpoma (NGA3)		
Perception of insecurity	IND	Binary	0.47	0.50	0.06in São Nicolau (CPV1)	0.89in Shahrake Mahdia (AFG3)		
Violence and crime	LA	0–10	2.16	1.16	0.3in Youhanabad (PAK2)	4.9in Shahrake Jabrael (AFG1)		
Environmental hazards and stresses	LA	0–10	2.66	1.72	0.2in Youhanabad (PAK2)	7.73in Gbane (GHA1)		
Has lived in high-income country	IND	Binary	0.01	0.11	0in Shahrake Mahdia (AFG3)****	0.04in Boa Vista (CPV2)		
Is aware of migrant	IND	Binary	0.62	0.49	0.04in Keti Bandar (PAK3)	0.99in Boa Vista (CPV2)		
Has received remittances	IND	Binary	0.19	0.40	0in Keti Bandar (PAK3)	0.59in São Nicolau (CPV1)		
Culture of migration	LA	0–10	5.15	1.78	1.53in Keti Bandar (PAK3)	7.87in Boa Vista (CPV2)		
		D .	0.50	0.50				
Is female	IND	Binary	0.53	0.50	0.33in Keti Bandar (PAK3)	0.76in Chot Dheeran (PAK1)		
Age	IND	18-39	27.25	6.50	25.31in Erigavo (SOMI)	29.28in Boa Vista (CPV2)		
Age (squared)	IND	324-1521	784.61	368.45	677.51in Erigavo (SOM1)	891.99in Boa Vista (CPV2)		
Is married/cohabiting	IND	Binary	0.52	0.50	0.23in Redeyer (TUN2)	0.9in Dialakoro (GIN2)		
Is a parent	IND	Binary	0.52	0.50	0.22in Hopa (TURI)	0.96in Dialakoro (GIN2)		
Grew up in local area	IND	Binary	0.67	0.47	0.23in Golf City (GHA2)	0.96in Keti Bandar (PAK3)		
Linguistic minority status	IND	0-1	0.25	0.28	0in Shahrake Mahdia (AFG3)	0.71in Golf City (GHA2)		
Household Wealth	IND	0-10	4.96	2.16	1.51in Keti Bandar (PAK3)	8.18in Enfidha (TUN1)		
Household Wealth (squared)	IND	0-100	29.28	22.18	4.34in Keti Bandar (PAK3)	67.93in Enfidha (TUN1)		
Is unemployed	IND	Binary	0.15	0.35	Oin Youhanabad (PAK2)	0.32in Erigavo (SOM1)		
Is not in the workforce	IND	Binary	0.33	0.47	0.13in Dialakoro (GIN2)	0.7in Chot Dheeran (PAK1)		
Years of completed education	IND	0–23	8.75	5.60	2.4in Dialakoro (GIN2)	12.78in Ekpoma (NGA3)		
Years of completed education (squared)	IND	0–529	107.84	92.40	26.48in Dialakoro (GIN2)	174.07in Redeyef (TUN2)		
Perceived relative wealth	IND	1 - 10	4.42	2.06	3.39in Chot Dheeran (PAK1)	5.87in Erigavo (SOM1)		
Has experienced hunger	IND	Binary	0.25	0.44	0.02in Hopa (TUR1)	0.58in Moyale (ETH3)		
Life satisfaction	IND	1 - 10	4.89	2.56	2.82in Dialakoro (GIN2)	6.59in Erigavo (SOM1)		
Was negatively affected by Covid-19	IND	Binary	0.38	0.49	0in Golf City (GHA2)	0.88in Behsud (AFG2)		
Has experienced violence	IND	Binary	0.10	0.30	0.01 in Chot Dheeran (PAK1)	0.25in Behsud (AFG2)		
Affected by environmental problem	IND	Binary	0.50	0.50	0.05in Youhanabad (PAK2)	0.93in Gbane (GHA1)		
Would sometimes accept uncertainty	IND	Binary	0.20	0.40	0.05in Awe (NGA2)	0.3in Youhanabad (PAK2)		
Would often accept uncertainty	IND	Binary	0.14	0.35	0.03in Awe (NGA2)	0.31in Erigavo (SOM1)		
Would always accept uncertainty	IND	Binary	0.08	0.28	0.01in Boffa (GIN1)	0.21in Keti Bandar (PAK3)		
Thinks most people can be trusted	IND	Binary	0.42	0.49	0.1in Ekpoma (NGA3)	0.72in Yenice (TUR2)		
Conservative gender norms	IND	0–10	3.00	2.88	0.62in Ekpoma (NGA3)	6.46in Keti Bandar (PAK3)		
Gini index	LA	0–1	0.29	0.09	0.16in Youhanabad (PAK2)	0.57in Keti Bandar (PAK3)		
Linguistic fractionalisation	LA	0–1	0.41	0.28	0in Hopa (TUR1)	1in Golf City (GHA2)		
Presence of international actors	LA	1–4	1.93	0.60	1.00in New Takoradi (GHA3) *****	3.33in Boa Vista (CPV2)		

Notes: * IND denotes individual level, LA denotes community level. **Is the lowest mean value across the 25 communities. ***Is the highest mean value across the 25 communities **** The same value is found in Gbane (GHA1), Down Quarters (NGA1) and (PAK3). ***** The same value is found in Down Quarters (NGA1), Awe (NGA2), Chot Dheeran (PAK1), Redeyef (TUN2), Hopa (TUR1) and Yenice (TUR2).

dependent variable – at the pooled data and, where relevant, we also describe findings at the community level.

5.1. Root causes

Livelihoods and poverty domain. The regression findings specified in Table 4 show that both variables part of this domain are statistically significant. The Livelihoods *hardships* coefficient is positive, indicating that the harder the livelihoods conditions, the greater the aspirations to leave. This is consistent with the broader literature, which finds that poorer livelihood and economic opportunities are often an important motivation for wanting to leave (Aslany et al., 2021; Carling and Talleraas, 2016; Hagen-Zanker and Mallett, 2016; OECD, 2017; Van Hear et al., 2018).

The magnitude of the effect is fairly small, however. A one unit increase in *livelihoods hardships* is associated with a 0.81 % higher likelihood of having resolute migration aspirations. This means that a shift

from the lowest possible value of 0 (which means finding it easy to find a good job and making ends meet) to the highest possible value of 10 (finding it very difficult to find a good job and making ends meet) is associated with a 8.1 % higher likelihood of having resolute migration aspirations.

As the Livelihood *hardships* index is at the individual level, we can also analyse the variation of its effect across communities. The full regression results are included in Appendix 1, but here we provide an overview of the statistical significance, sign and magnitude of coefficients of communities in Fig. 2. Each circle in the figure represents one community, and the colour indicates whether the estimated effect is positive or negative. The further a community is placed *towards the top* of the figure (i.e. moving up on the Y-axis), the *greater is the magnitude* of the *Livelihoods hardships* index on the likelihood of resolute migration aspirations, with the scale showing marginal effects. Communities where the marginal effect is negligible (less than 1 %) are not shown.

The further towards the right in the figure (i.e. moving right on the X-

Table 4

Pooled regression results (mixed effects logistic regression).

Variables	Measurement level	Marginaleffects	Standard errors
Root causes			
Livelihoods hardships	Individual	0.00807***	0.00254
Poverty	Community	-0.0684***	0.0259
Discontent with public services	Individual	0.0117***	0.00451
Distrust in institutions	Individual	0.00708***	0.00254
Disapproval of government	Individual	-0.00218	0.00374
Corruption experience	Community	0.281	0.171
Violence and crime	Community	0.0101	0.0134
Perception of insecurity	Individual	-0.00905	0.0108
Environmental hazards and	Community	0.00603	0.0145
stresses Migration experiences and			
networks			
Has lived in high-income country	Individual	0.104*	0.0560
Is aware of current, recent or former intl. migrant	Individual	0.0899***	0.0139
Household has received remittances (past year)	Individual	0.0656***	0.0110
Culture of migration	Community	0.0242**	0.00985
Other individual-level variables			
Is female	Individual	-0.0744***	0.0187
Age	Individual	0.00897	0.00685
Age (squared)	Individual	-0.000182	0.000117
Is married/cohabiting	Individual	-0.0242	0.0171
Is a parent	Individual	-0.0200	0.0162
Grew up in local area	Individual	0.00531	0.0157
Linguistic minority status	Individual	0.0284	0.0323
Household Wealth	Individual	-0.00830	0.0199
Household Wealth (squared)	Individual	0.000743	0.00174
Is unemployed	Individual	0.0132	0.0111
Is not in the workforce	Individual	-0.0265***	0.00972
Years of completed education	Individual	0.0101***	0.00260
Years of completed education (squared)	Individual	-0.000426***	0.000161
Perceived relative wealth	Individual	0.00102	0.00537
Has experienced hunger	Individual	-0.00800	0.0227
Life satisfaction	Individual	-0.0146***	0.00229
Was negatively affected by Covid-19	Individual	0.0356***	0.0101
Has experienced violence	Individual	0.0356***	0.00985
Affected by environmental problem	Individual	0.00712	0.0168
Would sometimes accept uncertainty	Individual	0.0142	0.0149
Would often accept uncertainty	Individual	0.0164	0.0110
Would always accept uncertainty	Individual	0.0415***	0.0124
Thinks most people can be trusted	Individual	-0.01000	0.0129
Conservative gender norms Other community-level	Individual	0.00197	0.00380
variables			
Gini index	Community	-0.0341	0.194
Linguistic fractionalisation	Community	0.166*	0.0901
Presence of international actors	Community	-0.0617***	0.0214
Number of observations	11,727		

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. *p < 0.1, **p < 0.05, *** p < 0.01. ■ Reference is "Working". ■ Reference group is "Would never accept uncertainty".

axis), the greater is the statistical confidence in the result. The communities that are *labelled* are those with a p-value < 0.1 and a marginal effect of at least 1 %. The underlying statistical principles mean that larger effects tend to have a higher level of confidence, but this is only a general tendency.

The majority of effects in this figure are positive (purple colour), but two are negative (red colour). A negative effect indicates that the greater the respondent perceives the local livelihood hardships to be, the lower



Fig. 2. Effects of Livelihoods hardships on resolute migration aspirations, by community, logarithmic scales. Data .

Source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Livelihoods hardships variable of the multi-level mixed-effects logistic regressions. Effects for communities where the marginal effect is smaller than 1% are not displayed; communities where the marginal effect is at least 5% or the *p*-value is <0.1 are labelled with the community ID. See Table 1 for community names and countries

the chance that they have resolute migration aspirations. However none of these negative effects are statistically significant at the 10 % level or lower, indicating that the community effects on the whole confirm the positive association between livelihood hardships and migration aspirations. We see the strongest finding in terms of statistical significance and effect size for Enfidha (Tunisia) with a marginal effect of 6.9 %, a town where despite high agricultural potential and significant infrastructure developments many young adults feel constrained by a lack of opportunity (Kasavan et al., 2022).

The *Poverty* variable, on the other hand, has a negative coefficient, indicating that young adults in poorer communities have *lower* migration aspirations. This finding is in line with the existing literature too. There are significant financial costs to migration and, as such, migration amongst poor people, and in poorer areas, tends to be lower because of their lower ability to migrate (Castles, 2000; de Haas, 2007; Nyberg-Sørensen et al., 2002; Skeldon, 2002) but perhaps also because they may feel more constrained in their aspirations (Appadurai, 2004; Carling, 2002).

The magnitude of the effect is sizeable, with a one unit increase in *Poverty* at the community level associated with a 6.8 % decrease in resolute migration aspirations. As such, a shift from the lowest possible value of 0 (all respondents in the communit 'living comfortably' and never having gone to sleep without having had enough to eat that day) to the highest possible value of 10 (all respondents in the community reporting 'finding difficult to get by' and always having gone to sleep without having had enough to eat that day) is associated with a 68 % higher likelihood of having resolute migration aspirations. More concretely, and looking at the distribution of this variable within the

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MIGNEX dataset, a shift from the community with the lowest level of poverty, São Nicolau (Cabo Verde), to the community with the highest level of poverty, Awe (Nigeria), is associated with a 6.2 % increase in resolute migration aspirations.⁵

Governance and public services domain. Two of the four variables within this domain, *Discontent with public services* and *Distrust in institutions*, show a statistically significant effect and the association is positive. This suggests that the worse the hardships in terms of governance and public services, the higher the migration aspirations.

The positive statistical association of *Discontent with public services* and migration aspirations shows that the worse the perceived provision of public services, the higher migration aspirations. This is consistent with the existing literature showing the provision of more reliable or better-quality public services (such as education and health) tends to be associated with a decrease of migration aspirations (Aslany et al., 2021; Dustmann and Okatenko, 2014; Hirschman, 1978). The magnitude of the coefficient indicates a sizeable effect, with a one unit increase in the *Discontent with public services* index associated with a 1.2 % increase in resolute migration aspirations. This means that a shift from the lowest possible value of 0 (finding both the quality of schools and formal health provisions in the area "very bad") to the highest possible value of 10 (finding the quality of both "very good") is associated with a 11.7 % higher likelihood of having resolute migration aspirations.

Fig. 3 displays the results for *Discontent with public services* at the community level. The majority of effects in this figure are positive



Fig. 3. Effects of discontent with public services on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.

(purple colour), but one is negative (red colour). As such, in most communities the worse public services hardships, the higher the likelihood young adults in the area have resolute migration aspirations.

Distrust in institutions, also exhibits a statistically significant association with migration aspirations. The positive sign of the coefficient suggest that the higher the distrust in institutions, the higher the migration aspirations. This is in line with the literature; a systematic review found that the lower the satisfaction with the government's institutions, the higher the migration aspirations (Aslany et al., 2021).

The magnitude of the effect is small, however, with a one unit increase in the distrust in institutions index associated with a 0.71 % increase in resolute migration aspirations. More concretely, a move from lowest possible value of 0 (trusting all institutions completely and thinking that corruption is not a problem at all) to the highest possible value of 10 (not at all trusting all institutions and deeming corruption a serious problem) is associated with a 7.08 % higher likelihood of having resolute migration aspirations.

For *Distrust in institutions*, for the three communities where the effect is statistically significant at least at the 10 % level, the effect is positive (Fig. 4). This suggests that the higher the distrust in institutions, the higher the likelihood that respondents have resolute migration aspirations, confirming the pooled effect. One of the communities where the magnitude of the effect is close to 5 % includes Shahrake Mahdia (Afghanistan), where, as discussed above, young adults have become disillusioned with formal institutions.

The two other measures part of the *Governance and public services* domain, disapproval of government and corruption rate are not statistically significant. For disapproval of government, the non-significant effect at the pooled data level is negative, though at the community-level we see a both positive and negative effects indicating that the determinants of migration aspirations can have opposite effects in different contexts (Fig. 5). Three of these are statistically significant at least at the 10 % level, though all are relatively small in terms of marginal effect size.



Fig. 4. Effects of distrust in institutions on resolute migration aspirations, by community, logarithmic scales, logarithmic scales. See Fig. 2 for data source and explanations.

 $^{^5}$ This calculation is made as follows: the difference in the poverty rate between the two areas (2.4–1.5=0.9) is multiplied by the coefficient (-0.0684), which is 0.06156. The highest and lowest level of the poverty rate can be found in Table 2.





Fig. 5. Effects of disapproval of government on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.

Broadly speaking, the literature shows that worse perceptions of government tend to be associated with higher migration aspirations (Aslany et al., 2021). However, it can be challenging to disentangle views of government from economic motivations, as adverse political conditions are often closely linked to poor economic conditions (Aslany et al., 2021; de Haas, 2011). This might explain why we find no pooled effect here.

Corruption experience (%) at the community level is not statistically significant for the marginal effects model, which we are reporting here, though it is statistically significant for the likelihoods odds ratio model and the two other models run as robustness checks. The coefficient is positive in all cases. The existing literature also shows a positive link between corruption and migration aspiration, but finds that its effect is often indirect, with corruption impacting on migrations aspiration through its effect on economic development (Carling et al., 2015).

Security and conflict domain. Neither of the variables part of this domain is statistically significant at the pooled data level, though we do find some statistically significant effects at the community level (Fig. 6). However, on the whole, our findings suggest that this domain has less of an influence on migration aspirations.

Violence and crime, at the community level, has the expected positive sign, indicating that the greater the fear and experience of violence or crime in a local area, the higher the migration aspirations. The related literature also shows a correlation between conflict and migration, with the more threats or violence experienced resulting in greater migration (Adhikari, 2013; Davenport et al., 2003; Hagen-Zanker and Mallett, 2016; Moore and Shellman, 2004).

Perception of insecurity (based on assessments of the safety of walking the streets at night) has a negative relationship with resolute migration aspirations, though it is not statistically significant. In other words, those who feel more insecure are, surprisingly, less likely to want to leave. This counter-intuitive finding is not in line with the literature, which shows that feelings or perceptions of insecurity or danger result in stronger migration aspirations and a higher likelihood of out-migration (Lundquist and Massey 2005; McAuliffe, 2017; van Wijk 2010). One

Fig. 6. Effects of perception of insecurity on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.

potential explanation for our finding is that those who have a more anxious personality are less likely to want to migrate, though we do control for acceptance of uncertainty, as discussed below. A more likely explanation is that the actual experiences of violence and conflict are more important than general perceptions of security in determining migration aspirations, as we also found in other MIGNEX analysis (Hagen-Zanker et al., 2024).

Coming to community-level findings, Fig. 6 shows the effects of the *Perception of insecurity* on resolute migration aspirations. We see a mix of positive and negative effects across different local areas. There are two negative effects and two positive effects statistically significant at least at the 10 % level, indicating that the relationship between perception of insecurity and migration aspirations is not straightforward. Some of the effects are sizeable, for instance young adults in Enfidha (Tunisia), who feel unsafe walking the streets at night, are 14.5 % less likely to have resolute migration aspirations, while young adults in Golf City (Ghana), an urban area in the greater Accra region, who feel unsafe are 11.1 % more likely to have migration aspirations.

Environmental hazards and stresses domain. Our communitylevel variables capture both the pre-disposing factors that makes migration more likely in the long run as well, as immediate triggers in the case of a sudden environmental shock, such as a flood. As Table 4 shows, the variable is not statistically significant at the pooled data level. The sign of the coefficient is positive, as expected, indicating that greater environmental hazards and stresses results in higher migration aspirations.

The comparatively minor role of this domain may be surprising, though the literature shows the effects of climate-related shocks and stresses often only have an indirect impact, as a result of its negative impact on livelihoods and agricultural production (Dupre et al., 2022; Khavarian-Garmsir et al., 2019; Martin et al., 2014). The literature also shows that sudden-impact environmental shocks may be more likely to result in migration that is internal, rather than international (Koubi et al., 2016), and of a short-term nature (Beine and Parsons, 2015; Carling et al., 2020; Islam, 2018). This could also explain our lack of

association with international migration aspirations.

5.2. Migration experiences and networks

The four migration-related variables shown in Table 4 are all statistically significant and the coefficients are positive, showing that individual migration experience, awareness of migrants in the community, stronger migration networks and a stronger migration culture in the community are associated with raising migration aspirations. Our findings build on and confirm trends from a large body of evidence (such as Manchin and Orazbayev, 2018 in this journal).

Having lived in a high-income country is statistically significant at the 10 % level. The average comparable effect size is 0.104, indicating that those who lived in high-income country are 10 % more likely to have migration aspirations compared to those who have not. For specific research areas, the variable is statistically significant at least at the 10 % level for four research areas, with a positive effect for all. For Shahrake Jabrael (Afghanistan), the marginal effect is very large at 37 %, reflecting the time of the survey just before the fall of Kabul where previous migration experience, and thus having concrete knowledge of the migration process, is clearly a critical determinant of migration aspirations.

In terms of transnational networks, *being aware of a current, recent, or former international migrant* is statistically significant at the 1 % level. The coefficient is positive, confirming the existing literature's finding that migrant networks shape migration aspirations, and that migrants can act as "bridgeheads", someone who can provide information or other help (Böcker, 1994). The average comparable effect size of 0.089 is fairly small, indicating that exposure to international migrants is associated with an 9 % higher likelihood of having migration aspirations. At the community level, *Being aware of migrants* (that is, being aware of a current, recent, or former international migrant) tends to have a positive effect on resolute migration aspirations (Fig. 18). For the eight communities, where the coefficient is statistically significant, it is also positive; reinforcing the importance of migrants as role models in forming migration aspirations.

The other aspect of transnational networks, *Having received remittances*, is also statistically significant at the 1 % level, and positive, confirming the existing literature (Aslany et al., 2021). The magnitude of the coefficients tends is 0.0656. This means that respondents living in households that received remittances over the past year are 7 % more likely to have migration aspirations. Remittance receipt has a largely positive effect at the research area level, with only one of the effects (Fig 8) that is statistically significant at least at the 5 % level being negative, namely Kilis (Turkey) (Fig. 9). More than a third of the population in Kilis are Syrian refugees who have settled there, often receiving remittances from relatives in high-income countries like the US, with many not wishing to move on (Ensari et al., 2022). This potentially explains the negative association here.

The final variable captures the *Culture of migration* within a community.⁶ Consistent with the existing literature, the coefficient is always positive, where statistically significant, indicating that a stronger culture of migration within the community is associated with greater migration aspirations (Galam, 2015; Horváth, 2008; Massey et al., 1993). The magnitude of the coefficient is fairly large, and by far larger than the other migration experiences and networks variables, suggesting that is both the most important determinant of migration aspirations within this group of variables and one of the most important determinants across all domains. The average comparable effect size is 0.242, with a move from the bottom (1) to the top of the index (4), i.e. a stronger migration culture within the community, is associated with a 24 %

⁶ Because it is a variable that is fixed at the community level, as for all variables at the community level, we are unable to run a community level regression with this variable included.



Fig. 7. Effects of having lived in a high income country on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.



Fig. 8. Effects of being aware of a migrant on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.



Fig. 9. Effects of having received remittances on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.

increase of migration aspirations.

5.3. Other individual level variables

Demographic characteristics and general family status. Of the six variables included in this group, only one – gender – is statistically significant at the 10 % level. As expected on the basis of the existing literature (Aslany etal., 2021; Nieri et al., 2012), being female is associated with lower migration aspirations, more specifically with a reduction of 7 %. This finding is also very consistent at the community level, with all nine statistically significant effects having a positive sign (Fig. 10).

Socio-economic status and life satisfaction. As indicated by previous findings, this group of variables is relevant predictors of resolute migration aspirations. However, the magnitude of their effects in our analysis tends to be smaller in comparison to those of migration experiences and networks and root causes. As we would expect, higher levels of education are associated with higher migration aspirations (Aslany et al., 2021), albeit with a levelling off effect as indicated by the negative coefficient of the squared years of education.

Somewhat surprisingly, household wealth is not statistically significant, even though it is seen as important determinants of migration aspirations in the migration literature, though the negative coefficient with a levelling off effect reflects findings from the literature (Clemens, 2014; de Haas and Fransen, 2018). Perceived relative wealth, experience of hunger and unemployment status are also not statistically significant.

Not being in the workforce, on the other hand, is statistically significant, and negatively associated with migration aspirations. Not being in the workforce captures a wide range of activities, for instance, those caring for family might feel like they cannot even consider migration.

Meanwhile life satisfaction has a negative coefficient and is statistically significant, indicating that young adults more satisfied with their



Fig. 10. Effects of being female on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.

life as a whole are less likely to hold resolute migration associations. As indicated in the online appendix, the life satisfaction variable is measured in a 1 to 10 scale and its coefficient of -0.0146 indicates a fairly small effect. This is, a one point increase in the life satisfaction scale, is associated with 1 % less chances to hold migration aspirations. This finding is holds across all communities (Fig. 11). While the effect size is fairly small is remarkably consistent both in sign and significance across most of the communities.

Negative household shocks. Some hardships are likely to pass or concern only particular individuals, which means they are not 'root causes' of migration according to the definition we use. Still, they could affect migration aspirations. Being affected by an environmental problem is positively associated with aspiring to migrate, though the effect falls short of standard thresholds for statistical significant. Being negatively affected by the Covid-19 pandemic is associated with greater migration aspirations, as is the personal experience of violence by the respondent, with both effects on migration aspirations in the magnitude of about 3.6 %. At the community level, the findings are also relatively consistent, for example for being negatively affected by Covid-19, all six statistically significant coefficients are positive (Fig. 12).

Personal traits. Some personal traits variables are not statistically significant, such as the conservative gender norms index and the variable measuring trust in others. However, at the community level we can see that these traits are relevant in explaining migration aspirations within specific communities. Taking the conservative gender norms, we see that it is statistically significant in three communities (Fig. 13), with a negative effect indicating that those with more conservative gender norms, have lower migration aspirations.

In addition to the above, we see some interesting patterns for the respondents declared willingness to accept uncertainty. The positive sign of all three coefficients indicates that those willing to bear more uncertainty are more likely to hold resolute migration aspirations. The increasing magnitude of the coefficient with higher levels of uncertainty



Fig. 11. Effects of life satisfaction on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.



Fig. 12. Effects of Covid-19 on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.

and the fact that only the dummy for those always willing to accept



Fig. 13. Effects of conservative gender norms on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.

uncertainty is statistically significant at the 1 % level, means these findings chime with the positive association between risk tolerance and migration aspirations found in the wider migration literature (see for instance Huber and Nowotny, 2020 for a large-N cross-country study of 30 transition countries). At the community level, the effect varies, though is most frequently positive (see Fig. 14 for *always willing to accept uncertainty*).

5.4. Other community-level variables

We included three other community-level variables, two of which are statistically significant. Inequality, as measured by the Gini index, is not statistically significant.

Meanwhile greater presence of international actors, indicating greater employment opportunities, and potentially the presence of development aid, is associated with lower migration aspirations (see also Lanati and Thiele (2018) in this journal on the relationship between aid and migration). The sign indicates a negative association between presence of international actors and migration aspirations, potentially because of an indirect effect, with international actors having a positive effect on local economic development. The effect size is fairly small at -0.0617. This means that a shift from no international actors present to the greatest numbers of international actors present is associated with a 6 % decrease in migration aspirations.

Linguistic fractionalisation acts as proxy for ethnic fractionalisation. It is statistically significant and has a positive coefficient. This suggests that respondents in more fractionalised communities have greater migration aspirations. The fairly sizeable average comparable effect size of 0.166 indicates that a shift from '0' (everyone speaks the same language) to '1' (no-one speaks the same language) is associated with a 17 % increase in migration aspirations.



Fig. 14. Effects of always accepting uncertainty on resolute migration aspirations, by community, logarithmic scales. See Fig. 2 for data source and explanations.

6. Conclusion

In this article, we examined *which societal circumstances and individual characteristics make people wish to migrate to another country*. A unique strength of our analysis is the multi-level design, which we have leveraged in two ways. First, we have used multi-level regression analysis to show how migration determinants work at the level of individuals as well as at the level of local communities. Importantly, these are community-level factors that have a direct bearing on everyday lives, rather than national averages that gloss over heterogeneity. Second, we have run parallel regressions for all the communities and shown that individual-level factors are far from consistent across communities in determining who has migration aspirations and who does not.

When looking at specific determinants, many of our findings confirm previous research. We too find that women are less likely to hold migration aspirations (Aslany et al., 2021) or that access to transnational networks increases migration aspirations (Manchin and Orazbayev, 2018). We confirm the importance of poor livelihood and economic opportunities as a determinant of migration aspirations, found across much of the migration literature (see for example Aslany et al., 2021; Van Hear et al., 2018).

Alongside the broad patterns in the pooled data, it is essential to note the heterogeneity we find across different communities, where these generalised patterns often do not hold. Exploring puzzles such as why in some communities poor perceptions of government raise migration aspirations, while they lower aspirations in others, holds much potential for generating greater understanding of how migration processes work.

Moreover, our findings shine light on how individual and community level determinants co-exist and can explain international migration aspirations. Individual perceptions and experiences can matter as much as what is experienced collectively in a community. For instance, a strong culture of migration within a community level is a key determinant of migration aspiration, as are individual-level perceptions of livelihood hardships. In some contexts, these effects can even cancel each other out. As such, only focusing on one level would mean having an incomplete picture and understanding of the determinants of migration aspirations. Individual perceptions are as relevant as collective attitudes or experiences for explaining migration processes. This makes sense – people are social beings, and their decisions are affected as much by their environment as by their own preferences.

We also find that personal traits and other "invisible" factors such as tolerance for uncertainty play a role alongside more visible ones such as unemployment. In doing so, we have added to the growing body of literature on the more subjective and intangible aspects of migration decision-making (Hagen-Zanker et al., 2023). There is much potential in exploring these subjective and intangible factors, such as conservative gender norms, which lowered migration aspirations in some communities, while raising them in others.

In this analysis we have employed a multi-level approach to explain international migration aspirations demonstrating the relevance of individual and community-level determinants across a large number of communities in different regions of te world. We encourage future research that mirrors our approach to focus on the specific dynamics in local communities, rather than the national level, as there were clearly large disparities across communities in both the relevance of determinants of migration aspirations and nature of their effect, even within the same country. Our research has also indicated specific determinants and domains that warrant further exploration, including personal traits and other intangible factors.

CRediT authorship contribution statement

Jessica Hagen-Zanker: Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Conceptualization. Jørgen Carling: Writing – review & editing, Writing – original draft, Visualization, Project administration, Methodology, Investigation, Conceptualization. Nicolás Caso: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation. Marcela G. Rubio: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation. Marcela G. Rubio: Writing – review & editing, Data curation.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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Appendix A

Table A1

Multilevel mixed-effects (Mixed) and Generalised linear latent and mixed models (GLLAMM) regression results using pooled data.

Variables	Measurement level	Mixed		GLLAMM		
		Coefficient	Standard errors	Coefficient	Standard errors	
Root causes						
Livelihoods hardships	Individual	0.00864***	(0.00284)	0.0590***	(0.0186)	
Poverty	Community	-0.0399*	(0.0225)	-0.251***	(0.0676)	
Discontent with public services	Individual	0.00943***	(0.00280)	0.0882***	(0.0265)	
Distrust in institutions	Individual	0.00861***	(0.00265)	0.0531***	(0.0167)	
Disapproval of government	Individual	0.000946	(0.00236)	-0.0173	(0.0266)	
Corruption experience (%)	Community	0.309*	(0.170)	2.143***	(0.465)	
Violence and crime	Community	-0.0208*	(0.0109)	-0.108***	(0.0322)	
Perception of insecurity	Individual	-0.0119	(0.0126)	-0.0673	(0.0812)	
Environmental hazards and stresses	Community	0.00446	(0.0123)	0.0181	(0.0330)	
Migration experiences and networks						
Has lived in high-income country	Individual	0.0971*	(0.0576)	0.769*	(0.417)	
Is aware of current, recent or former international migrant	Individual	0.0954***	(0.0142)	0.660***	(0.103)	
Household has received remittances (past year)	Individual	0.0868***	(0.0111)	0.479***	(0.0838)	
Culture of migration (0-10 scale)	Community	0.0287**	(0.0115)	0.272***	(0.0343)	
Other individual and community-level variables						
Is female	Individual	-0.0724***	(0.0131)	-0.549***	(0.128)	
Age	Individual	0.0110	(0.00873)	0.0675	(0.0476)	
Age (squared)	Individual	-0.000217	(0.000150)	-0.00138*	(0.000815)	
Is married/cohabiting	Individual	-0.0366**	(0.0143)	-0.170	(0.121)	
Is a parent	Individual	-0.0223*	(0.0115)	-0.134	(0.126)	
Grew up in research area	Individual	-0.00825	(0.0145)	0.0565	(0.105)	
Linguistic minority status	Individual	0.0527*	(0.0275)	0.200	(0.215)	
Household Wealth	Individual	0.00178	(0.0135)	-0.0763	(0.120)	
Household Wealth (squared)	Individual	-8.54e-05	(0.00121)	0.00602	(0.0103)	
Is unemployed	Individual	0.0354**	(0.0139)	0.0928	(0.0714)	
Is not in the workforce	Individual	-0.0232**	(0.00961)	-0.203***	(0.0681)	
Years of completed education	Individual	0.00449	(0.00382)	0.0733***	(0.0186)	
Years of completed education (squared)	Individual	-0.000102	(0.000248)	-0.00305***	(0.00114)	
Perceived relative wealth	Individual	0.00133	(0.00330)	0.00970	(0.0400)	
Has experienced hunger	Individual	0.0114	(0.0144)	-0.0667	(0.154)	
Life satisfaction (1=dissatisfied, 10=satisfied)	Individual	-0.0145***	(0.00309)	-0.107***	(0.0150)	
Was negatively affected by Covid-19	Individual	0.0254***	(0.00730)	0.234***	(0.0671)	
Has experienced violence	Individual	0.0358**	(0.0144)	0.274***	(0.0708)	
Affected by environmental problem	Individual	0.00930	(0.0142)	0.0436	(0.124)	
Would sometimes accept uncertainty	Individual	0.0241**	(0.0106)	0.102	(0.104)	
Would often accept uncertainty	Individual	0.0281**	(0.0139)	0.116	(0.0762)	
Would always accept uncertainty	Individual	0.0571***	(0.0180)	0.309***	(0.0828)	
Thinks most people can be trusted	Individual	-0.00458	(0.00969)	-0.0717	(0.0892)	
Conservative gender norms	Individual	-0.000130	(0.00221)	0.0137	(0.0229)	
Gini index	Community	0.164	(0.114)	0.379	(0.687)	
Linguistic fractionalisation	Community	0.122	(0.0780)	0.997***	(0.333)	
Presence of international actors	Community	-0.0603***	(0.0196)	-0.384***	(0.0597)	
Number of observations		11,727		11,727		

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. *p <0.1, **p<0.05, *** p<0.01. Reference group is "Working".

Table A2

Logistic regression marginal effects by local community

	Shahrake Jabrael (AFG1)		Behsud (AFG2)		Shahrake Mahdia (AFG3)		São Nicolau (CPV1)		Boa Vista (CPV2)	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Livelihoods hardships	0.00350	(0.0111)	-0.0209	(0.0231)	0.0243*	(0.0132)	(0.0173)	(0.0106)	0.0132	(0.0156)
Discontent with public services	-0.00150	(0.00741)	0.0176	(0.0109)	-0.0271**	(0.0111)	(0.0215)	(0.00847)	0.0211*	(0.0103)
Distrust in institutions	0.00537	(0.00819)	0.0115	(0.0131)	0.0269***	(0.00956)	(0.0121)	(0.00748)	0.0126	(0.0125)
Disapproval of government	0.00453	(0.00979)	-0.0177	(0.0103)	0.00522	(0.0110)	(0.0164)	(0.00640)	-0.000322	(0.0135)
Perception of insecurity	0.0214	(0.0497)	0.0316	(0.0338)	-0.0356	(0.0528)	(0.155)	(0.0510)	-0.0752	(0.0682)
Has lived in high-income country	0.374*	(0.191)					(0.199)			
Is aware of current, recent or former international migrant	0.0930	(0.0650)	0.00282	(0.0599)	0.0629	(0.0696)		(0.0359)	0.0591	(0.0591)
Household has received remittances (past year)	0.126***	(0.0382)	0.0823	(0.0584)	0.0971	(0.0617)	(0.0289)	(0.0855)	0.130	(0.104)
Is female	-0.0260	(0.0406)	-0.256***	(0.0645)	-0.147***	(0.0465)	(0.0490)	(0.0460)	0.0277	(0.0530)
Age	0.0210	(0.0240)	0.0295	(0.0347)	0.0507	(0.0320)	(0.0348)	(0.0288)	0.0156	(0.0508)
Age (squared)	-0.000247	(0.000380)	-0.000621	(0.000584)	-0.000921	(0.000553)	(0.000632)	(0.000477)	-0.000285	(0.000917)
Is married/cohabiting	-0.0608	(0.0408)	0.0122	(0.0447)	-0.0281	(0.0428)	(0.0657)	(0.0665)	-0.0161	(0.0632)
Is a parent	0.102**	(0.0395)	-0.0363	(0.0394)	0.00669	(0.0504)	(0.0498)	(0.0651)	0.0674	(0.0718)

Table A2 (continued)

	Shahrake Jabrael (AFG1)		Behsud (AFC	Behsud (AFG2)		Shahrake Mahdia (AFG3)		São Nicolau (CPV1)		Boa Vista (CPV2)	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	
Grew up in local area	-0.0179	(0.0404)	0.0672	(0.0458)	0.0731*	(0.0391)	(0.124)	(0.0481)	-0.0355	(0.0429)	
Linguistic minority status	-0.0572	(0.130)	-0.0355	(0.0951)			(0.347)	(0.0879)	-0.161	(0.106)	
Household Wealth	-0.0147	(0.0370)	0.00721	(0.0249)	0.0482	(0.0348)	(0.0530)	(0.0237)	0.0654	(0.0386)	
Household Wealth (squared)	0.00466	(0.00405)	-0.00169	(0.00300)	-0.00617	(0.00402)	(0.00509)	(0.00216)	-0.00800	(0.00501)	
Is unemployed	-0.00634	(0.0468)	-0.00730	(0.0644)	-0.0582	(0.0605)	(0.0644)	(0.105)	0.0741	(0.0529)	
Is not in the workforce■	-0.0640*	(0.0373)	-0.00337	(0.0644)	-0.0616	(0.0375)	(0.0713)	(0.0532)	-0.0212	(0.0647)	
Years of completed education	-0.000188	(0.00928)	0.00241	(0.0135)	0.0153	(0.0125)	(0.0265)	(0.0122)	0.0182	(0.0172)	
Years of completed education (squared)	-2.00e-05	(0.000499)	-0.000410	(0.000898)	-0.00115*	(0.000663)	(0.00134)	(0.000754)	-0.000586	(0.00113)	
Perceived relative wealth	-0.00740	(0.0138)	-0.0220*	(0.0114)	-0.000722	(0.0185)	(0.0177)	(0.0100)	0.0227	(0.0176)	
Has experienced hunger	0.0534	(0.0488)	-0.111	(0.0726)	0.0506	(0.0508)	(0.0975)	(0.0536)	-0.0249	(0.0556)	
Life satisfaction	-0.0213*	(0.0116)	-0.0145	(0.0102)	-0.00921	(0.00923)	(0.0170)	(0.0117)	-0.00776	(0.0118)	
Was negatively affected by Covid-19	0.0355	(0.0574)	0.0524	(0.0681)	0.117*	(0.0576)	(0.101)	(0.0329)	-0.00708	(0.319)	
Has experienced violence	0.0215	(0.0479)	0.0425	(0.0334)	0.0124	(0.0342)	(0.121)	(0.0387)	0.0751	(0.0457)	
Affected by environmental problem	-0.108***	(0.0307)	0.0135	(0.0350)	-0.0957*	(0.0558)	(0.0501)	(0.0512)	-0.0731	(0.0829)	
Would sometimes accept uncertainty■■	0.0336	(0.0566)	0.0366	(0.0597)	0.0610	(0.0512)	(0.0653)	(0.0466)	0.0557	(0.0600)	
Would often accept uncertainty	0.0387	(0.0403)	0.0149	(0.0586)	0.0488	(0.0610)	(0.0769)	(0.0555)	0.0529	(0.137)	
Would always accept uncertainty	0.0189	(0.0549)	-0.00377	(0.101)	0.0609	(0.0442)	(0.117)	(0.0744)	0.127	(0.109)	
Thinks most people can be trusted	0.0164	(0.0323)	-0.0425	(0.0407)	-0.0107	(0.0374)	(0.0543)	(0.0423)	-0.0156	(0.0592)	
Conservative gender norms	0.00141	(0.00671)	0.00622	(0.00878)	-0.0238**	(0.00960)	(0.0196)	(0.00577)	0.0138	(0.00819)	
Number of observations	508		485		513		468		498		

 Number of observations
 506
 465
 515
 406
 496

 Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p <0.1, **p<0.05, *** p<0.01.</td>

 ■ Reference is "Working".
 ■ Reference group is "Would never accept uncertainty. Blank spaces in local area regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

	Batu (ETH2 Coef.) s.e.	Moyale (ETH: Coef.	3) s.e.	Gbane (GHA Coef.	A1) s.e.	Golf City (G Coef.	HA2) s.e.	New Takorad Coef.	li (GHA3) s.e.
Livelihoods hardships	0.0120	(0.00021)	0.000540	(0.00207)	0.0132	(0.0156)	0.0317**	(0.0153)	0.0204**	(0.0146)
Discontent with public services	0.0120	(0.00921)	0.000340	(0.00297)	0.0132	(0.0130)	0.0317	(0.0133)	0.0304	(0.0140)
Distruct in institutions	0.00345	(0.0104)	0.00200	(0.00236)	0.0211	(0.0105)	-0.00109	(0.0230) (0.0138)	-0.00524	(0.0220)
Disapproval of government	0.00240	(0.00000) (0.00975)	0.00131	(0.00230) (0.00284)	-0.000322	(0.0125) (0.0135)	0.0135	(0.0130) (0.0213)	-0.00324	(0.0136)
Perception of insecurity	-0.0495	(0.0078)	-0.00720	(0.00201)	-0.0752	(0.0100)	0.0100	(0.0210) (0.0544)	0.0891*	(0.0496)
Has lived in high-income	0.182	(0.0070)	0.00720	(0.00701)	0.07.02	(0.0002)	-0.376	(0.0011) (0.242)	0.00001	(0.0150)
country	0.102	(0.110)					0.070	(0.212)		
Is aware of current, recent or	0.0615*	(0.0344)	0.0314**	(0.0139)	0.0591	(0.0591)	0.118	(0.0887)	0.268**	(0.119)
former international migrant										
Household has received remittances (past year)	0.0725*	(0.0369)	0.00751	(0.0146)	0.130	(0.104)	0.0528	(0.0703)	0.0982*	(0.0546)
Is female	-0.0269	(0.0364)	0.000790	(0.0110)	0.0277	(0.0530)	-0.0981	(0.0711)	-0.233***	(0.0659)
Age	0.00386	(0.0251)	-0.0209**	(0.00775)	0.0156	(0.0508)	0.0312	(0.0418)	0.135**	(0.0613)
Age (squared)	-9.89e-05	(0.000417)	0.000356**	(0.000136)	-0.000285	(0.000917)	-0.000585	(0.000712)	-0.00257**	(0.00112)
Is married/cohabiting	-0.0332	(0.0444)	-0.0144	(0.0144)	-0.0161	(0.0632)	-0.221*	(0.116)	0.00782	(0.0775)
Is a parent	-0.0529	(0.0344)	-0.00749	(0.0127)	0.0674	(0.0718)	0.0695	(0.0956)	0.0242	(0.0710)
Grew up in local area	-0.0299	(0.0404)	-0.0134	(0.0161)	-0.0355	(0.0429)	0.140*	(0.0730)	0.00577	(0.0679)
Linguistic minority status	0.0126	(0.200)	0.0336*	(0.0186)	-0.161	(0.106)	-0.0286	(0.201)	0.147	(0.102)
Household Wealth	-0.0101	(0.0236)	0.0167*	(0.00854)	0.0654	(0.0386)	0.0636	(0.0611)	-0.0132	(0.0452)
Household Wealth (squared)	0.00120	(0.00248)	-0.00130	(0.000939)	-0.00800	(0.00501)	-0.00604	(0.00550)	0.00114	(0.00646)
Is unemployed	-0.0139	(0.0595)	-0.0314**	(0.0147)	0.0741	(0.0529)	0.144	(0.0972)	0.0303	(0.0969)
Is not in the workforce	-0.0958**	(0.0444)	-0.0127*	(0.00676)	-0.0212	(0.0647)	-0.0773	(0.0858)	-0.0847	(0.0740)
Years of completed education	0.0374**	(0.0160)	-0.00321	(0.00315)	0.0182	(0.0172)	0.0825*	(0.0418)	-0.0366	(0.0365)
Years of completed education (squared)	-0.00144*	(0.000731)	0.000150	(0.000230)	-0.000586	(0.00113)	-0.00289*	(0.00163)	0.000444	(0.00145)
Perceived relative wealth	0.0209**	(0.00987)	0.000250	(0.00236)	0.0227	(0.0176)	0.00223	(0.0210)	0.000387	(0.0182)
Has experienced hunger	0.0469	(0.0386)	0.0222**	(0.0107)	-0.0249	(0.0556)	0.0284	(0.0920)	-0.119	(0.0793)
Life satisfaction	-0.0116	(0.00904)	0.000840	(0.00205)	-0.00776	(0.0118)	-0.0186	(0.0192)	-0.0372**	(0.0162)
Was negatively affected by	0.0216	(0.0420)	-0.00376	(0.00830)	-0.00708	(0.319)	0.320	(0.241)	-0.214	(0.156)
Covid-19				(
Has experienced violence	0.0361	(0.0278)	0.0200	(0.0129)	0.0751	(0.0457)	0.106	(0.105)	-0.0668	(0.0769)
Affected by environmental	0.0433	(0.0356)	0.0110	(0.0110)	-0.0731	(0.0829)	-0.0750	(0.0629)	0.0297	(0.0720)
Would sometimes accept	0.00144	(0.0361)	0.0268**	(0.00992)	0.0557	(0.0600)	0.0187	(0.0812)	0.0296	(0.0676)
Would often accept	-0.0629	(0.0444)	2.00e-05	(0.0202)	0.0529	(0.137)	0.178*	(0.0976)	0.120	(0.145)
Would always accept	-0.0180	(0.0423)	-0.00336	(0.0252)	0.127	(0.109)	0.107	(0.106)	0.193	(0.135)
Thinks most people can be	0.0156	(0.0290)	0.00994	(0.00784)	-0.0156	(0.0592)	0.0336	(0.0718)	0.0623	(0.0683)
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	Batu (FTH2)		Movale (FTHS	Movale (FTH3)		Chane (CHA1)		14.2)	New Takoradi (GHA3)	
	Coef se		Coef se		Coef se		Coef se		Coef se	
	0001.	5.0.	0001.	5.0.	0001.	5.0.	0001.	5.0.	0001.	5.0.
Conservative gender norms	-0.0129	(0.00931)	-0.00170	(0.00199)	0.0138	(0.00819)	0.0275	(0.0174)	0.0153	(0.0133)
Number of observations	517		517		468		445		436	

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p < 0.1, **p < 0.05, *** p < 0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in local area regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

	Dialokoro (GI	N1)	Dialokoro (GI	o (GIN2) Down Quarters (N		rs (NGA1)	(NGA1) Awe (NGA2)			Ekpoma (NGA3)		
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.		
Livelihoods hardships	0.0149	(0.0149)	0.00955	(0.0106)	-0.0112	(0.0210)	-0.000670	(0.00109)	-0.000204	(0.0184)		
Discontent with public services	0.0115	(0.0127)	0.0214**	(0.00847)	0.000988	(0.0159)	0.00312**	(0.00148)	0.0258	(0.0222)		
Distrust in institutions	-0.0103	(0.0143)	-0.00830	(0.00748)	-0.00133	(0.00856)	-0.00121	(0.00129)	0.00646	(0.0160)		
Disapproval of government	-0.00516	(0.0145)	-0.0209***	(0.00640)	0.00675	(0.0195)	-0.00209	(0.00194)	-0.0233	(0.0317)		
Perception of insecurity Has lived in high-income country	0.0276	(0.0530)	-0.0815	(0.0510)	0.175	(0.140)	-0.00819 -0.00442	(0.00559) (0.0101)	0.00397 -0.0976	(0.0613) (0.396)		
Is aware of current, recent or former international migrant	0.283***	(0.0873)	0.0164	(0.0359)	0.205***	(0.0694)	0.00880	(0.00823)	0.171**	(0.0773)		
Household has received remittances (past year)	0.0360	(0.0741)	-0.0597	(0.0855)	0.127	(0.0903)	0.0227	(0.0177)	0.0736	(0.0717)		
Is female	-0.202***	(0.0618)	-0.160***	(0.0460)	-0.0663	(0.0713)	-0.0110	(0.00932)	-0.168**	(0.0801)		
Age	-0.0841**	(0.0312)	-0.00370	(0.0288)	0.0189	(0.0520)	-0.00327	(0.00403)	0.0449	(0.0444)		
Age (squared)	0.00119**	(0.000528)	3.79e-05	(0.000477)	-0.000213	(0.000861)	5.92e-05	(6.48e-05)	-0.000975	(0.000811)		
Is married/cohabiting	-0.0348	(0.0741)	0.0558	(0.0665)	-0.139*	(0.0703)	-0.0141*	(0.00769)	0.0945	(0.124)		
Is a parent	-0.00558	(0.0513)	0.0537	(0.0651)	-0.137	(0.0822)	0.0109*	(0.00613)	-0.173	(0.113)		
Grew up in local area	0.0597	(0.0555)	-0.0666	(0.0481)	0.0386	(0.0631)	0.0198	(0.0139)	0.0670	(0.0720)		
Linguistic minority status	0.255***	(0.0779)	0.0334	(0.0879)	0.239	(0.165)	0.00368	(0.00863)	0.176	(0.273)		
Household Wealth	0.00157	(0.0433)	-0.0460*	(0.0237)	0.0191	(0.0458)	-0.00313	(0.00371)	-0.0799**	(0.0348)		
Household Wealth (squared)	0.00256	(0.00475)	0.00455**	(0.00216)	-0.00232	(0.00525)	0.000385	(0.000517)	0.0100**	(0.00483)		
Is unemployed	-0.106	(0.127)	0.0284	(0.105)	0.0765	(0.0573)	0.00694	(0.0101)	0.120	(0.0916)		
Is not in the workforce	-0.221***	(0.0711)	0.0830	(0.0532)	-0.0349	(0.0909)	0.0137	(0.0101)	-0.0908	(0.0667)		
Years of completed education	0.0319*	(0.0162)	0.00357	(0.0122)	0.0513	(0.0521)	-0.00386	(0.00282)	0.0545	(0.0569)		
Years of completed education (squared)	-0.00109	(0.000990)	-0.000229	(0.000754)	-0.00140	(0.00224)	0.000324	(0.000208)	-0.00204	(0.00238)		
Perceived relative wealth	0.00976	(0.0137)	0.00623	(0.0100)	-0.0404	(0.0258)	-0.00319	(0.00245)	0.0551**	(0.0226)		
Has experienced hunger	0.0482	(0.0704)	0.00581	(0.0536)	-0.0729	(0.0698)	0.00188	(0.00695)	-0.0102	(0.0751)		
Life satisfaction	-0.0409***	(0.0142)	-0.0373***	(0.0117)	0.00827	(0.0180)	0.00235	(0.00297)	-0.00352	(0.0164)		
Was negatively affected by Covid-19	0.0765	(0.0541)	0.00663	(0.0329)	0.0978**	(0.0464)	0.00205	(0.00659)	0.0105	(0.0625)		
Has experienced violence	0.150**	(0.0549)	0.0561	(0.0387)	-0.0802	(0.0810)	0.00782	(0.00818)	0.148	(0.0881)		
Affected by environmental problem	0.0815	(0.0545)	0.0232	(0.0512)	0.104*	(0.0607)	-0.00126	(0.00486)	-0.0283	(0.0650)		
Would sometimes accept uncertainty	-0.116	(0.0935)	-0.00285	(0.0466)	0.160**	(0.0662)	-0.000545	(0.00609)	-0.0174	(0.0836)		
Would often accept uncertainty	0.0727	(0.0903)	-0.0319	(0.0555)	0.175*	(0.102)	-0.000237	(0.00770)	0.0322	(0.103)		
Would always accept uncertainty	0.202	(0.218)	0.0127	(0.0744)	-0.0869	(0.215)	0.0193	(0.0145)	0.157	(0.148)		
Thinks most people can be trusted	-0.0716	(0.0553)	-0.0940**	(0.0423)	-0.0213	(0.0724)	0.00266	(0.00601)	0.0103	(0.132)		
Conservative gender norms Number of observations	-0.00751 504	(0.00716)	-0.0103* 436	(0.00577)	-0.0405** 476	(0.0186)	0.00125 452	(0.00111)	0.00696 473	(0.0234)		

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p <0.1, **p<0.05, *** p<0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in comunity regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

	Chot Dheeran (PAK1)		Youhanabad (PAK2)		Keti Bandar (PAK3)		Erigavo (SOM1)		Baidoa (SOM2)	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.	Coef.	s.e.	Coef.	s.e.
						с.				
Livelihoods hardships	1.71e-05	(0.000279)	7.50e-05	(7.88e-05)			0.00317	(0.00557)	0.00242	(0.00218)
Discontent with public services	0.000302	(0.000330)	0.000164	(0.000219)			0.00704	(0.00982)	0.00576**	(0.00275)
Distrust in institutions	0.000732	(0.00101)	-6.14e-05	(0.000105)			-0.00195	(0.00926)	-0.000628	(0.00243)
Disapproval of government	0.000167	(0.000299)	0.000128	(0.000161)			0.0143*	(0.00820)	0.00171	(0.00370)
Perception of insecurity	0.000282	(0.000915)	7.68e-05	(0.000392)			-0.00357	(0.0221)	0.0101	(0.00598)
Has lived in high-income country	0.00705	(0.00915)	0.00100	(0.00123)					0.0354*	(0.0202)
Is aware of current, recent or former	0.00224	(0.00353)	0.00153	(0.00185)			0.0113	(0.0337)	0.00835	(0.0104)
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	Chot Dheeran (PAK1)		Youhanabad	(PAK2)	Keti Ba	ndar	Erigavo (SO)	Erigavo (SOM1) Baidoa (SOM2)		
	chief Briefi a		Touriuriubuu	(11112)	(PAK3)	21.64.10 (000)			
	Coef.	s.e.	Coef.	s.e.	Coef.	s.	Coef.	s.e.	Coef.	s.e.
						e.				
Household has received remittances (past year)	0.00385	(0.00587)	-0.000812	(0.00110)			0.0578*	(0.0329)	0.0156	(0.0114)
Is female	-0.00967	(0.0133)	8.09e-05	(0.000463)			-0.0117	(0.0260)	0.00688	(0.0106)
Age	-0.000640	(0.00143)	-0.000422	(0.000456)			-0.0261	(0.0210)	0.000491	(0.00809)
Age (squared)	9.90e-06	(2.33e-05)	7.07e-06	(7.34e-06)			0.000502	(0.000391)	-7.02e-06	(0.000140)
Is married/cohabiting	0.00264	(0.00371)	-0.000574	(0.000743)			-0.0374	(0.0258)	0.000392	(0.00946)
Is a parent	-0.00201	(0.00264)	-8.12e-05	(0.000393)			0.0124	(0.0271)	0.0202	(0.0135)
Grew up in local area	0.00151	(0.00312)	-0.000466	(0.000622)			0.131	(0.0861)	-0.0164	(0.0124)
Linguistic minority status	-0.00558	(0.00939)	-0.0106	(0.0134)			0.284	(0.172)	-0.0352	(0.0280)
Household Wealth	0.000337	(0.00152)	0.00263	(0.00320)			0.0263	(0.0196)	-0.00540	(0.00773)
Household Wealth (squared)	-2.57e-05	(0.000155)	-0.000194	(0.000235)			-0.00304	(0.00242)	0.000658	(0.000875)
Is unemployed							0.0124	(0.0418)	0.00713	(0.0126)
Is not in the workforce	0.00548	(0.00800)	-0.00160	(0.00201)			0.00921	(0.0368)	0.0126	(0.0103)
Years of completed education	8.82e-05	(0.000211)	-4.67e-05	(0.000100)			0.00845	(0.00639)	0.00354	(0.00378)
Years of completed education (squared)	-3.43e-06	(1.53e-05)	3.64e-06	(6.38e-06)			-0.000264	(0.000384)	-0.000103	(0.000196)
Perceived relative wealth	-6.78e-05	(0.000402)	-9.33e-05	(0.000133)			0.00643	(0.0121)	-0.0119*	(0.00585)
Has experienced hunger	-0.00368	(0.00716)	0.00115	(0.00148)			-0.0152	(0.0309)	-0.0360**	(0.0148)
Life satisfaction	0.000191	(0.000403)	4.43e-05	(6.90e-05)			-0.00267	(0.00876)	0.00523**	(0.00234)
Was negatively affected by Covid-19	0.000970	(0.00115)	0.000734	(0.000951)			0.0686**	(0.0320)	0.0250**	(0.0117)
Has experienced violence	0.00509	(0.00847)	0.00112	(0.00162)			-0.0807	(0.0525)	0.0111	(0.0129)
Affected by environmental problem	-0.00157	(0.00245)	0.000533	(0.000408)			-0.0127	(0.0295)	0.0107	(0.00883)
Would sometimes accept uncertainty	0.000226	(0.00186)	-0.000595	(0.000779)			0.0308	(0.0328)	-0.0234*	(0.0118)
Would often accept uncertainty	-0.00252	(0.00396)	0.000641	(0.000704)			0.0176	(0.0232)	0.000690	(0.0125)
Would always accept uncertainty	0.00161	(0.00223)	0.00138	(0.00162)			0.0947*	(0.0499)	-0.0290**	(0.0136)
Thinks most people can be trusted	-0.000171	(0.00153)	0.000891	(0.00122)			-0.0331	(0.0261)	-0.00526	(0.0117)
Conservative gender norms	8.69e-06	(0.000132)	-5.98e-05	(0.000107)			0.00214	(0.00433)	0.00285**	(0.00123)
Number of observations	320		509				414		472	

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. p < 0.1, p < 0.05, p < 0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in community regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction. It was not possible to run a logistic regression for the sample from Keti Bandar (PAK3) as too many variables were omitted, (10) variables were omitted due to perfect failure prediction and (2) variables were omitted due to collinearity.

	Enfidha (TUN1)		Redeyef (TUN	2)	Hopa (TUR1)		Yenice (TUR2)		Kilis (TUR3)	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Livelihoods hardships	0.0693***	(0.0119)	0.0173	(0.0179)	0.00421	(0.00785)	-0.00468*	(0.00227)	0.0158**	(0.00638)
Discontent with public services	0.0235	(0.0183)	0.0145	(0.0197)	-0.00114	(0.0129)	0.00476	(0.00472)	0.00580	(0.00615)
Distrust in institutions	0.0109	(0.0129)	0.00236	(0.0135)	0.0252***	(0.00815)	0.00755***	(0.00269)	0.00322	(0.00415)
Disapproval of government	-0.00900	(0.0196)	0.0220	(0.0189)	0.0172	(0.0143)	0.000399	(0.00446)	0.00258	(0.00416)
Perception of insecurity	-0.145*	(0.0752)	0.0115	(0.0453)	-0.0709**	(0.0326)	0.0222	(0.0185)	-0.0121	(0.0233)
Has lived in high-income country	0.428	(0.323)	0.121	(0.170)	0.159	(0.154)	-0.0696	(0.0682)	0.134**	(0.0510)
Is aware of current, recent or former international migrant	0.182	(0.118)	-0.0642	(0.0998)	0.0388	(0.0445)	0.0644***	(0.0176)	0.0571**	(0.0219)
Household has received remittances (past year)	0.171**	(0.0743)	0.108	(0.0710)	0.0929	(0.0614)	-0.0132	(0.0290)	-0.124*	(0.0671)
Is female	-0.197**	(0.0849)	-0.141**	(0.0607)	-0.0611	(0.0573)	-0.0376**	(0.0142)	-2.80e-06	(0.0227)
Age	0.0621	(0.0568)	0.0744	(0.0499)	-0.0656*	(0.0320)	0.0141	(0.0166)	0.0114	(0.0206)
Age (squared)	-0.00102	(0.00103)	-0.00159*	(0.000865)	0.00102*	(0.000548)	-0.000314	(0.000303)	-0.000186	(0.000360)
Is married/cohabiting	-0.121	(0.127)	-0.0194	(0.0898)	-0.203**	(0.0942)	-0.0224	(0.0231)	-0.0437	(0.0265)
Is a parent	0.0608	(0.118)	0.0139	(0.0779)	0.0582	(0.111)	-0.0134	(0.0348)	0.0271	(0.0275)
Grew up in local area	-0.0648	(0.105)	0.131	(0.153)	-0.142***	(0.0443)	-0.0293*	(0.0163)	-0.0107	(0.0299)
Linguistic minority status	1.133**	(0.454)	0.0685	(0.479)	0.0529	(0.100)	-0.00714	(0.146)	0.381***	(0.118)
Household Wealth	0.156	(0.0961)	-0.0608	(0.0617)	0.0152	(0.0428)	-0.0137	(0.0129)	-0.0116	(0.0266)
Household Wealth (squared)	-0.0137*	(0.00758)	0.00634	(0.00515)	0.000513	(0.00465)	0.00168	(0.00116)	0.000928	(0.00212)
Is unemployed	0.132	(0.0881)	-0.0801	(0.0788)	-0.0380	(0.0756)	-0.0515*	(0.0279)	0.0430**	(0.0202)
Is not in the workforce	0.0954	(0.0767)	-0.170**	(0.0660)	-0.114*	(0.0579)	-0.00980	(0.0176)	-0.0305	(0.0307)
Years of completed education	0.0887*	(0.0507)	-0.0516*	(0.0288)	0.0112	(0.0371)	0.0169	(0.0149)	0.00513	(0.00788)
Years of completed education (squared)	-0.00323	(0.00205)	0.00318**	(0.00123)	0.000287	(0.00147)	-0.000385	(0.000601)	-6.05e-05	(0.000454)
Perceived relative wealth	-0.0332	(0.0197)	-0.0152	(0.0168)	-0.00688	(0.0154)	0.000487	(0.00429)	0.00770	(0.00461)
Has experienced hunger	0.0556	(0.0984)	0.0833	(0.118)	0.148	(0.267)	0.149***	(0.0523)	0.00756	(0.0327)
Life satisfaction	0.00446	(0.0156)	-0.0457***	(0.0118)	-0.0137	(0.00815)	-0.0127***	(0.00410)	-0.0125**	(0.00468)
Was negatively affected by Covid-19	0.0627	(0.0725)	0.00493	(0.0574)	0.00926	(0.0363)	0.0245*	(0.0123)	0.0221	(0.0216)
Has experienced violence	0.0619	(0.114)	-0.0352	(0.117)	-0.0421	(0.0792)	-0.00554	(0.0284)	-0.0179	(0.0506)
Affected by environmental problem	-0.170*	(0.0865)	0.0232	(0.0564)	0.0731	(0.0593)	0.00800	(0.0157)	-0.0514	(0.0324)
Would sometimes accept uncertainty	0.00331	(0.0717)	0.0337	(0.0612)	-0.00551	(0.0625)	-0.00188	(0.0195)	0.0463	(0.0278)

	Enfidha (TUN1)		Redeyef (TUN	2) Hopa (TUR1) Yenice (TUR2) Kilis		Kilis (TUR3)	(ilis (TUR3)			
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Would often accept uncertainty	0.243**	(0.102)	0.150	(0.0963)	-0.0776	(0.0684)	0.0148	(0.0129)	0.0439	(0.0268)
Would always accept uncertainty	0.00845	(0.116)	0.0622	(0.131)	-0.101	(0.0673)	0.0145	(0.0205)	0.00545	(0.0368)
Thinks most people can be trusted	-0.0581	(0.0999)	-0.125**	(0.0606)	-0.0112	(0.0418)	0.0134	(0.0152)	0.000293	(0.0168)
Conservative gender norms Number of observations	0.00829 460	(0.0133)	0.00680 484	(0.0132)	-0.00380 500	(0.0160)	-0.00428 429	(0.00384)	-0.000692 421	(0.00356)

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p < 0.1, **p < 0.05, *** p < 0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in community regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

Table A3

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Linear probability model (LPM) results by local community

	Shahrake Jal	brael (AFG1)	Behsud (AFC	32)	Shahrake Ma	uhdia (AFG3)	São Nicolau (O	CPV1)	Boa Vista (C	3oa Vista (CPV2)	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	
Livelihoods hardships	0.00250	(0.0111)	-0.0285	(0.0289)	0.0208	(0.0122)	0.0103	(0.0139)	0.0285**	(0.0101)	
Discontent with public	-0.00154	(0.00776)	0.0156	(0.0120)	-0.0271**	(0.0116)	-0.00572	(0.0199)	-0.00504	(0.0106)	
services		()									
Distrust in institutions	0.00608	(0.00833)	0.0194	(0.0125)	0.0272***	(0.00868)	0.00560	(0.0111)	0.0195*	(0.0110)	
Disapproval of government	0.00684	(0.0101)	-0.0231*	(0.0118)	0.00650	(0.0113)	0.0208	(0.0144)	0.00542	(0.0117)	
Perception of insecurity	0.0158	(0.0497)	0.0310	(0.0335)	-0.0316	(0.0561)	-0.0232	(0.133)	0.0288	(0.0459)	
Has lived in high-income	0.559***	(0.175)	-0.223**	(0.0950)		. ,	-0.111	(0.137)	0.172	(0.137)	
country				(,							
Is aware of current, recent or	0.0866	(0.0512)	0.0110	(0.0504)	0.0362	(0.0444)	0.225*	(0.112)	-0.203	(0.271)	
former international				((
migrant											
Household has received	0.151***	(0.0459)	0.109	(0.0900)	0.110	(0.0820)	0.142***	(0.0253)	0.0824*	(0.0431)	
remittances (past year)				. ,		. ,		. ,		. ,	
Is female	-0.0255	(0.0455)	-0.270***	(0.0701)	-0.154**	(0.0552)	-0.0534	(0.0438)	-0.0365	(0.0597)	
Age	0.0140	(0.0243)	0.0300	(0.0366)	0.0564*	(0.0327)	0.0914***	(0.0294)	-0.0417	(0.0447)	
Age (squared)	-0.000125	(0.000394)	-0.000627	(0.000604)	-0.00102*	(0.000549)	-0.00170***	(0.000512)	0.000693	(0.000716)	
Is married/cohabiting	-0.0512	(0.0431)	0.0436	(0.0490)	-0.0232	(0.0520)	0.0849	(0.0582)	0.0107	(0.0497)	
Is a parent	0.0917**	(0.0383)	-0.0650	(0.0492)	-0.00973	(0.0575)	-0.107**	(0.0482)	-0.0969	(0.0581)	
Grew up in local area	-0.0277	(0.0420)	0.0787*	(0.0443)	0.0762	(0.0474)	0.112	(0.0956)	-0.104**	(0.0440)	
Linguistic minority status	-0.0675	(0.146)	-0.0349	(0.104)	0.376	(0.245)	0.632	(0.392)	-0.00740	(0.105)	
Household Wealth	-0.0139	(0.0360)	0.00821	(0.0334)	0.0533	(0.0334)	-0.0251	(0.0483)	0.0607	(0.0425)	
Household Wealth (squared)	0.00471	(0.00402)	-0.00154	(0.00384)	-0.00678*	(0.00387)	0.00247	(0.00480)	-0.00481	(0.00375)	
Is unemployed	-0.00782	(0.0507)	-0.0432	(0.0830)	-0.0628	(0.0685)	-0.0270	(0.0666)	0.0779	(0.0545)	
Is not in the workforce	-0.0607	(0.0357)	-0.00833	(0.0650)	-0.0612	(0.0414)	-0.0326	(0.0713)	-0.0328	(0.0471)	
Years of completed education	0.00268	(0.00970)	0.00844	(0.0146)	0.0177	(0.0130)	0.00472	(0.0223)	0.0304	(0.0214)	
Years of completed education	-0.000163	(0.000550)	-0.000916	(0.00102)	-0.00133*	(0.000720)	-0.000972	(0.00107)	-0.00172	(0.00117)	
(squared)				. ,		. ,				. ,	
Perceived relative wealth	-0.00858	(0.0128)	-0.0262*	(0.0146)	0.00143	(0.0184)	0.0274*	(0.0149)	-0.0240	(0.0150)	
Has experienced hunger	0.0617	(0.0567)	-0.110	(0.0681)	0.0561	(0.0562)	0.154	(0.104)	0.0948	(0.0741)	
Life satisfaction	-0.0206*	(0.0102)	-0.0234*	(0.0115)	-0.00921	(0.00873)	-0.0306**	(0.0136)	-0.0254**	(0.00946)	
Was negatively affected by	0.0396	(0.0495)	0.0585	(0.0682)	0.106**	(0.0481)	0.270**	(0.105)	-0.0322	(0.137)	
Covid-19				. ,		. ,				. ,	
Has experienced violence	0.0284	(0.0507)	0.0444	(0.0388)	0.00878	(0.0411)	-0.0629	(0.106)	0.0699	(0.0866)	
Affected by environmental	-0.125***	(0.0356)	0.0184	(0.0347)	-0.0936	(0.0658)	0.0240	(0.0421)	-0.00584	(0.0381)	
problem				. ,		. ,		. ,		. ,	
Would sometimes accept	0.0348	(0.0611)	0.0489	(0.0478)	0.0635	(0.0556)	0.124*	(0.0663)	0.0463	(0.0515)	
uncertainty						. ,				. ,	
Would often accept	0.0461	(0.0391)	0.00265	(0.0564)	0.0469	(0.0679)	0.0156	(0.0677)	0.0192	(0.0710)	
uncertainty											
Would always accept	0.0232	(0.0585)	0.00673	(0.0860)	0.0636	(0.0526)	0.142	(0.112)	-0.0566	(0.104)	
uncertainty						. ,				. ,	
Thinks most people can be	0.0154	(0.0342)	-0.0237	(0.0425)	-0.0105	(0.0415)	0.0131	(0.0480)	-0.0579	(0.0522)	
trusted											
Conservative gender norms	0.00440	(0.00668)	0.00857	(0.00999)	-0.0235**	(0.00967)	0.00663	(0.0190)	-0.00756	(0.0131)	
Number of observations	508		488		514		490		498		

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p <0.1, **p<0.05, *** p<0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in local area regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

	Batu (ETH2)		Moyale (ETH	13)	Gbane (GH/	A1)	Golf City (G	HA2)	A2) New Takoradi (GF				
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.			
Livelihoods hardships	0.0112	(0.00952)	-0.000152	(0.00865)	0.0126	(0.0135)	0.0265*	(0.0132)	0.0242**	(0.0111)			
Discontent with public services	-0.000529	(0.0133)	0.00650	(0.00531)	0.0204*	(0.0102)	0.00995	(0.0187)	0.0265	(0.0185)			
Distrust in institutions	0.000960	(0.00833)	0.00500	(0.00552)	0.0122	(0.0117)	-0.00362	(0.0117)	-0.00337	(0.0131)			
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	Batu (ETH2)		Movale (ETH	(3)	Gbane (GHA1) Golf City (GHA2)		New Takoradi (GHA3)			
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
-		(0.04.0=)		(0.00/00)		(0.04.00)		(0.01.00)		(0.04.00)
Disapproval of government	0.0185*	(0.0107)	0.0113*	(0.00638)	0.000363	(0.0129)	0.0105	(0.0182)	-0.0145	(0.0120)
Perception of insecurity	-0.0543	(0.0436)	-0.0168	(0.0258)	-0.0696	(0.0637)	0.0912*	(0.0461)	0.0747*	(0.0413)
Has lived in high-income country	0.355	(0.232)	-0.256**	(0.103)			-0.263*	(0.152)	0.477***	(0.108)
Is aware of current, recent or former international migrant	0.0534	(0.0364)	0.0854**	(0.0384)	0.0577	(0.0606)	0.0993	(0.0713)	0.219**	(0.0784)
Household has received remittances (past year)	0.121*	(0.0647)	0.0218	(0.0595)	0.146	(0.112)	0.0444	(0.0617)	0.0760	(0.0448)
Is female	-0.0139	(0.0407)	-0.0127	(0.0268)	0.0210	(0.0483)	-0.0753	(0.0620)	-0.201***	(0.0534)
Age	0.0133	(0.0272)	-0.0370*	(0.0184)	0.0114	(0.0469)	0.0276	(0.0369)	0.112**	(0.0472)
Age (squared)	-0.000227	(0.000440)	0.000611*	(0.000322)	-0.000206	(0.000840)	-0.000520	(0.000629)	-0.00211**	(0.000852)
Is married/cohabiting	-0.0445	(0.0558)	-0.0605	(0.0389)	-0.0168	(0.0594)	-0.187*	(0.0991)	0.00919	(0.0694)
Is a parent	-0.0595	(0.0426)	-0.0204	(0.0287)	0.0661	(0.0673)	0.0575	(0.0879)	0.0180	(0.0581)
Grew up in local area	-0.0199	(0.0423)	-0.0175	(0.0365)	-0.0366	(0.0414)	0.120*	(0.0602)	-0.00119	(0.0573)
Linguistic minority status	0.0505	(0.154)	0.0665	(0.0480)	-0.138	(0.0950)	-0.0263	(0.169)	0.117	(0.0832)
Household Wealth	-0.0142	(0.0318)	0.0277	(0.0182)	0.0576*	(0.0328)	0.0549	(0.0523)	-0.0121	(0.0376)
Household Wealth (squared)	0.00145	(0.00337)	-0.00220	(0.00216)	-0.00734	(0.00437)	-0.00521	(0.00472)	0.00102	(0.00533)
Is unemployed	-0.00149	(0.0779)	-0.0552**	(0.0230)	0.0752	(0.0554)	0.126	(0.0827)	0.0233	(0.0794)
Is not in the workforce	-0.0795**	(0.0366)	-0.0239	(0.0265)	-0.0205	(0.0583)	-0.0757	(0.0752)	-0.0665	(0.0655)
Years of completed education	0.0255*	(0.0129)	-0.00544	(0.00887)	0.0163	(0.0158)	0.0516**	(0.0199)	-0.0332	(0.0285)
Years of completed education (squared)	-0.000897	(0.000627)	0.000157	(0.000637)	-0.000483	(0.00111)	-0.00164*	(0.000906)	0.000512	(0.00116)
Perceived relative wealth	0.0207*	(0.0118)	-0.00203	(0.00477)	0.0230	(0.0170)	0.00454	(0.0183)	-0.000270	(0.0151)
Has experienced hunger	0.0431	(0.0466)	0.0444	(0.0285)	-0.0227	(0.0516)	0.0381	(0.0767)	-0.0989	(0.0672)
Life satisfaction	-0.0123	(0.00932)	0.00175	(0.00498)	-0.00766	(0.0109)	-0.0166	(0.0168)	-0.0301**	(0.0142)
Was negatively affected by Covid-19	0.0161	(0.0547)	-0.0310	(0.0263)	-0.0216	(0.276)	0.260	(0.226)	-0.104	(0.0701)
Has experienced violence	0.0613	(0.0475)	0.0933	(0.0622)	0.0747	(0.0477)	0.0965	(0.0910)	-0.0612	(0.0678)
Affected by environmental problem	0.0576	(0.0467)	0.0272	(0.0265)	-0.0749	(0.0856)	-0.0551	(0.0543)	0.0245	(0.0635)
Would sometimes accept	-0.00255	(0.0488)	0.0808	(0.0538)	0.0597	(0.0593)	0.0196	(0.0710)	0.0246	(0.0550)
Would often accept	-0.0765*	(0.0441)	-0.0219	(0.0381)	0.0481	(0.131)	0.143	(0.0883)	0.0987	(0.112)
Would always accept	-0.0405	(0.0509)	-0.0165	(0.0311)	0.113	(0.116)	0.0793	(0.0927)	0.157	(0.110)
Thinks most people can be trusted	0.0330	(0.0381)	0.0334	(0.0294)	-0.0175	(0.0542)	0.0321	(0.0603)	0.0475	(0.0590)
Conservative gender norms	-0.0149	(0.00956)	-0.00310	(0.00524)	0.0137*	(0.00790)	0.0238*	(0.0136)	0.0124	(0.0110)
Number of observations	517		519		468		445		437	

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p < 0.1, **p < 0.05, *** p < 0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in local area regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

	Dialokoro (Gl	N1)	Dialokoro (G	IN2)	Down Quarte	ers (NGA1)	Awe (NGA2)	Awe (NGA2) Ekpoma (NGA		
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Livelihoods hardships	0.0142	(0.0121)	0.00916	(0.00936)	-0.00916	(0.0179)	-0.00741	(0.00577)	-0.000957	(0.0160)
Discontent with public services	0.0107	(0.0106)	0.0262**	(0.0125)	0.00242	(0.0121)	0.0151*	(0.00849)	0.0210	(0.0193)
Distrust in institutions	-0.00956	(0.0119)	-0.00740	(0.00805)	-0.00125	(0.00735)	-0.00400	(0.00500)	0.00506	(0.0141)
Disapproval of government	-0.00630	(0.0129)	-0.0377***	(0.00929)	0.00351	(0.0162)	-0.0143	(0.00978)	-0.0213	(0.0274)
Perception of insecurity	0.0134	(0.0471)	-0.0741	(0.0544)	0.150	(0.0960)	-0.0427	(0.0274)	0.00286	(0.0536)
Has lived in high-income country	0.776***	(0.0810)	0.980***	(0.229)			0.205	(0.160)	-0.0898	(0.320)
Is aware of current, recent or former international migrant	0.187***	(0.0555)	0.0220	(0.0396)	0.191***	(0.0601)	0.0979	(0.0681)	0.150**	(0.0649)
Household has received remittances (past year)	0.0294	(0.0670)	-0.0605	(0.0892)	0.111	(0.0911)	0.353**	(0.145)	0.0605	(0.0617)
Is female	-0.159***	(0.0480)	-0.149***	(0.0451)	-0.0519	(0.0623)	-0.0339	(0.0263)	-0.142*	(0.0690)
Age	-0.0608**	(0.0235)	-0.0104	(0.0311)	0.0163	(0.0424)	0.00245	(0.0241)	0.0404	(0.0374)
Age (squared)	0.000841**	(0.000403)	0.000175	(0.000523)	-0.000206	(0.000704)	-2.73e-06	(0.000392)	-0.000864	(0.000675)
Is married/cohabiting	-0.0181	(0.0610)	0.0727	(0.0925)	-0.105	(0.0650)	-0.0758**	(0.0319)	0.0836	(0.110)
Is a parent	0.00322	(0.0420)	0.0212	(0.0913)	-0.113	(0.0677)	0.0469	(0.0302)	-0.149	(0.0961)
Grew up in local area	0.0530	(0.0448)	-0.0977	(0.0690)	0.0376	(0.0514)	0.0727***	(0.0247)	0.0598	(0.0609)
Linguistic minority status	0.203**	(0.0741)	0.0572	(0.135)	0.210	(0.143)	0.0350	(0.0365)	0.151	(0.220)
Household Wealth	0.00614	(0.0336)	-0.0538*	(0.0276)	0.0163	(0.0391)	-0.0530**	(0.0209)	-0.0696**	(0.0281)
Household Wealth (squared)	0.00163	(0.00385)	0.00526*	(0.00264)	-0.00170	(0.00446)	0.00694**	(0.00277)	0.00866**	(0.00380)
Is unemployed	-0.0810	(0.110)	-0.00797	(0.149)	0.0691	(0.0466)	0.0960*	(0.0535)	0.108	(0.0783)
Is not in the workforce■	-0.145***	(0.0493)	0.0519	(0.0653)	-0.0402	(0.0711)	0.0422	(0.0349)	-0.0734	(0.0583)
Years of completed	0.0245*	(0.0141)	0.00281	(0.0190)	0.0250	(0.0309)	-0.0248**	(0.00904)	0.0397	(0.0377)
education										

(continued)

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	Dialokoro (GI	N1)	Dialokoro (Gl	N2)	Down Quarte	rs (NGA1)	Awe (NGA2)		Ekpoma (NGA3)	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Years of completed education (squared)	-0.000791	(0.000890)	-6.24e-05	(0.00134)	-0.000432	(0.00150)	0.00204***	(0.000618)	-0.00150	(0.00170)
Perceived relative wealth	0.00804	(0.0116)	0.00846	(0.0158)	-0.0376*	(0.0215)	-0.00465	(0.00944)	0.0454**	(0.0175)
Has experienced hunger	0.0417	(0.0553)	0.0184	(0.0727)	-0.0632	(0.0597)	0.0169	(0.0298)	-0.00477	(0.0650)
Life satisfaction	-0.0344***	(0.0108)	-0.0385***	(0.0134)	0.00891	(0.0152)	0.0110	(0.0110)	-0.00257	(0.0139)
Was negatively affected by Covid-19	0.0629	(0.0427)	-0.00205	(0.0346)	0.0869**	(0.0410)	0.0157	(0.0235)	0.0109	(0.0533)
Has experienced violence	0.118**	(0.0463)	0.0735	(0.0502)	-0.0535	(0.0641)	0.0445	(0.0383)	0.123	(0.0775)
Affected by environmental problem	0.0649	(0.0439)	0.0261	(0.0577)	0.0910	(0.0558)	-0.0179	(0.0225)	-0.0274	(0.0553)
Would sometimes accept uncertainty	-0.111	(0.0790)	-0.00728	(0.0605)	0.143**	(0.0570)	-0.0119	(0.0446)	-0.0139	(0.0768)
Would often accept uncertainty	0.0450	(0.0746)	-0.0496	(0.0531)	0.153	(0.0986)	-0.0468	(0.0462)	0.0332	(0.0944)
Would always accept uncertainty	0.164	(0.187)	-0.0121	(0.0696)	-0.0913	(0.187)	0.380***	(0.0826)	0.141	(0.125)
Thinks most people can be trusted	-0.0506	(0.0464)	-0.0920	(0.0547)	-0.0438	(0.0566)	0.0142	(0.0239)	0.00706	(0.114)
Conservative gender norms	-0.00746	(0.00647)	-0.0131*	(0.00687)	-0.0291**	(0.0126)	0.00814*	(0.00394)	0.00578	(0.0192)
Number of observations	505		437		476		452		473	

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p <0.1, **p<0.05, *** p<0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in comunity regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

	Chot Dheeran (PAK1)		Youhanabad	(PAK2)	Keti Bandar	(PAK3)	3) Erigavo (SOM1)		Baidoa (SOM	12)
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Livelihoods hardships	-0.00248	(0.00710)	0.00319	(0.00803)	0.00458**	(0.00213)	0.00462	(0.00652)	0.00609	(0.00924)
Discontent with public services	0.00266	(0.00497)	0.00410	(0.00536)	0.00428	(0.00333)	0.0115	(0.0126)	0.0237***	(0.00734)
Distrust in institutions	0.0206***	(0.00715)	-0.00100	(0.00505)	0.00485**	(0.00213)	-0.000336	(0.0121)	-0.00199	(0.00725)
Disapproval of government	1.75e-05	(0.00677)	0.00692	(0.00738)	-0.00831*	(0.00439)	0.0185*	(0.00960)	0.00958	(0.0172)
Perception of insecurity	-0.0103	(0.0309)	-0.000310	(0.0236)	-0.0334**	(0.0131)	-0.0225	(0.0260)	0.0518	(0.0356)
Has lived in high-income	0.149	(0.296)	0.0542	(0.136)		(-0.177*	(0.0906)	0.472***	(0.146)
Is aware of current, recent or former international migrant	0.0344	(0.0293)	0.137**	(0.0606)	-0.0894**	(0.0372)	-0.00384	(0.0345)	0.0289	(0.0311)
Household has received remittances (past year)	0.173***	(0.0553)	-0.00120	(0.0852)	0.0662*	(0.0384)	0.0989*	(0.0514)	0.0693	(0.0660)
Is female	-0 258**	(0.105)	-0.00210	(0.0237)	-0.000626	(0.00831)	-0.0196	(0.0424)	0.0333	(0.0477)
Age	-0.0101	(0.100)	0.00612	(0.0267)	0.0263	(0.000001)	-0.0310	(0.0317)	-0.00889	(0.0777)
Age (squared)	0.000152	(0.000361)	-0.000146	(0.0100)	-0 000442	(0.00100)	0.000589	(0.000578)	0.000143	(0.00201)
Is married/cohabiting	0.0759	(0.0612)	-0.0609**	(0.0252)	-0.0454	(0.0304)	-0.0455	(0.0332)	-0.0139	(0.0396)
Is a parent	-0.0962*	(0.0012)	0.00463	(0.0252)	-0.0103	(0.0001)	0.0255	(0.0365)	0.0570	(0.0355)
Grew up in local area	0.0238	(0.0326)	-0.0349	(0.0133)	0.0157	(0.0110)	0.0200	(0.0303) (0.0434)	-0.0377	(0.0331)
Linguistic minority status	-0.105**	(0.0490)	-0.131	(0.117)	-0.00438	(0.0304)	0.420	(0.525)	-0.0379	(0.0621)
Household Wealth	0.0419	(0.0250)	0.0398	(0.0258)	0.00218	(0.0001)	0.0233	(0.0197)	-0.0182	(0.0159)
Household Wealth (squared)	-0.00464	(0.00274)	-0.00284	(0.00282)	-5.92e-05	(0.000751)	-0.00290	(0.00230)	0.00301	(0.00215)
Is unemployed	-0.205***	(0.0711)	-0.0934	(0.0557)	-0.0454	(0.0369)	0.0369	(0.0592)	0.00292	(0.0311)
Is not in the workforce	0.0310	(0.0491)	-0.0771**	(0.0295)	0.00803	(0.0122)	0.0172	(0.0481)	0.0438	(0.0441)
Years of completed education	0.00219	(0.00851)	-0.00624	(0.00504)	0.00371	(0.00322)	0.00985	(0.00759)	0.00624	(0.0116)
Years of completed education (squared)	4.18e-05	(0.000534)	0.000437	(0.000362)	6.73e-05	(0.000142)	-0.000276	(0.000549)	-0.000112	(0.000792)
Perceived relative wealth	-0.000658	(0.00936)	-0.00240	(0.00738)	0.00345	(0.00372)	0.00905	(0.0161)	-0.0281	(0.0164)
Has experienced hunger	-0.0556	(0.0364)	0.0469	(0.0343)	0.0231	(0.0206)	-0.0270	(0.0325)	-0.0933**	(0.0413)
Life satisfaction	0.00207	(0.00771)	0.00451	(0.00795)	-0.000255	(0.00274)	-0.00534	(0.0130)	0.0144	(0.0155)
Was negatively affected by Covid-19	0.0225	(0.0465)	0.0550**	(0.0224)	0.0240	(0.0220)	0.0902*	(0.0503)	0.0804*	(0.0466)
Has experienced violence	0.460**	(0.192)	0.0646	(0.109)	-0.0440**	(0.0199)	-0.0756	(0.0480)	0.0765	(0.0923)
Affected by environmental problem	-0.0259	(0.0337)	0.0395	(0.0896)	0.00926	(0.0155)	-0.0164	(0.0389)	0.0404	(0.0293)
Would sometimes accept	0.00461	(0.0386)	-0.0382**	(0.0172)	-0.0317	(0.0206)	0.0344	(0.0404)	-0.0572	(0.0425)
Would often accept	0.0146	(0.0541)	0.00952	(0.0224)	-0.0282	(0.0235)	0.0117	(0.0273)	0.00947	(0.0757)
uncertainty	010110	(0.00 11)	0100302	(0.022.1)	010202	(0.0200)	010117	(0.02/0)	0100317	(010707)
Would always accept uncertainty	0.000286	(0.0446)	0.0977	(0.0647)	-0.0410*	(0.0233)	0.166**	(0.0799)	-0.0746	(0.0582)
Thinks most people can be trusted	0.0179	(0.0166)	0.0286	(0.0262)	-0.00865	(0.0184)	-0.0524	(0.0349)	-0.0273	(0.0566)
Conservative gender norms	0.000878	(0.00408)	-0.00323	(0.00240)	-0.00357	(0.00256)	0.00231	(0.00532)	0.00674	(0.00519)
Number of observations	332		514		477		420		472	

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p <0.1, **p<0.05, *** p<0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in community regression

columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

	Enfidha (TUN	(1)	Redevel (TUN2)		Hopa (TUR1)		Vanica (TUP?)		Kilis (TUR3)	
	Coef	1) S A	Coef	5.) 5.0	Coef	5.0	Coef	5.0	Coef	5.0
	0001.	3.c.	6001.	5.0.	COCI.	3.0.	C0C1.	3.0.	6001.	3.0.
Livelihoods hardships	0.0525***	(0.00824)	0.0134	(0.0130)	0.00459	(0.00732)	-0.00827	(0.00679)	0.0164**	(0.00653)
Discontent with public services	0.0157	(0.0138)	0.00915	(0.0145)	-0.00467	(0.0122)	0.0104	(0.0121)	0.0102	(0.00906)
Distrust in institutions	0.00788	(0.0107)	0.00217	(0.0104)	0.0229***	(0.00797)	0.0278***	(0.00744)	0.00430	(0.00655)
Disapproval of government	-0.00633	(0.0141)	0.0171	(0.0148)	0.0164	(0.0126)	-0.00112	(0.0101)	0.00499	(0.00656)
Perception of insecurity	-0.107*	(0.0581)	0.0138	(0.0372)	-0.0762**	(0.0327)	0.0507	(0.0384)	-0.0219	(0.0321)
Has lived in high-income country	0.277*	(0.155)	0.0857	(0.151)	0.0964	(0.171)	-0.196	(0.118)	0.200	(0.125)
Is aware of current, recent or former international migrant	0.127	(0.0800)	-0.0479	(0.0861)	0.0416	(0.0401)	0.103***	(0.0246)	0.0753*	(0.0366)
Household has received remittances (past year)	0.130**	(0.0562)	0.0934	(0.0603)	0.0733	(0.0663)	0.0320	(0.0990)	-0.151**	(0.0718)
Is female	-0.155**	(0.0613)	-0.123**	(0.0524)	-0.0399	(0.0592)	-0.0698*	(0.0365)	-0.00155	(0.0349)
Age	0.0514	(0.0396)	0.0607	(0.0358)	-0.0531*	(0.0283)	0.0168	(0.0338)	0.0142	(0.0286)
Age (squared)	-0.000860	(0.000719)	-0.00126**	(0.000602)	0.000805	(0.000474)	-0.000351	(0.000565)	-0.000220	(0.000498)
Is married/cohabiting	-0.0870	(0.0930)	-0.00490	(0.0701)	-0.161**	(0.0729)	-0.0479	(0.0415)	-0.0772**	(0.0352)
Is a parent	0.0395	(0.0803)	0.0108	(0.0668)	0.0398	(0.0621)	-0.0651	(0.0435)	0.0532	(0.0391)
Grew up in local area	-0.0511	(0.0773)	0.0874	(0.106)	-0.152***	(0.0420)	-0.0365	(0.0415)	-0.0142	(0.0458)
Linguistic minority status	0.755***	(0.209)	0.0675	(0.479)	0.0531	(0.0921)	-0.0723	(0.298)	0.396	(0.273)
Household Wealth	0.105	(0.0750)	-0.0529	(0.0493)	0.0129	(0.0401)	-0.0169	(0.0285)	-0.0298	(0.0452)
Household Wealth (squared)	-0.00927	(0.00585)	0.00521	(0.00422)	0.000969	(0.00470)	0.00300	(0.00270)	0.00200	(0.00346)
Is unemployed	0.105	(0.0705)	-0.0614	(0.0689)	-0.0502	(0.0779)	-0.0943	(0.0838)	0.107**	(0.0477)
Is not in the workforce	0.0758	(0.0542)	-0.127**	(0.0580)	-0.0921	(0.0541)	0.0145	(0.0409)	-0.0308	(0.0423)
Years of completed education	0.0575	(0.0339)	-0.0408*	(0.0234)	-0.0127	(0.0211)	-0.0136	(0.0215)	0.00466	(0.0103)
Years of completed education (squared)	-0.00216	(0.00141)	0.00254**	(0.000987)	0.00106	(0.000966)	0.00106	(0.00105)	3.88e-05	(0.000664)
Perceived relative wealth	-0.0244	(0.0155)	-0.0133	(0.0126)	-0.00729	(0.0141)	-0.000694	(0.00991)	0.00890	(0.00885)
Has experienced hunger	0.0391	(0.0764)	0.0792	(0.108)	0.119	(0.266)	0.403***	(0.119)	0.0179	(0.0553)
Life satisfaction	0.00219	(0.0120)	-0.0390***	(0.00943)	-0.0128	(0.00835)	-0.0270***	(0.00759)	-0.0138**	(0.00623)
Was negatively affected by Covid-19	0.0460	(0.0572)	0.00526	(0.0451)	0.00978	(0.0331)	0.0551*	(0.0288)	0.0272	(0.0309)
Has experienced violence	0.0436	(0.0891)	-0.0312	(0.0886)	-0.0435	(0.0831)	-0.0474	(0.0923)	-0.0262	(0.0818)
Affected by environmental problem	-0.120*	(0.0612)	0.0152	(0.0440)	0.0554	(0.0545)	0.0307	(0.0391)	-0.0625	(0.0467)
Would sometimes accept uncertainty	0.00216	(0.0543)	0.0222	(0.0501)	-0.00340	(0.0628)	-0.0241	(0.0454)	0.0484	(0.0506)
Would often accept uncertainty	0.187**	(0.0757)	0.143*	(0.0787)	-0.0773	(0.0628)	0.0440	(0.0353)	0.0637	(0.0583)
Would always accept uncertainty	-0.0147	(0.0924)	0.0582	(0.121)	-0.0912	(0.0611)	0.0470	(0.0498)	0.0175	(0.0508)
Thinks most people can be trusted	-0.0315	(0.0730)	-0.102**	(0.0478)	-0.0123	(0.0410)	0.0183	(0.0387)	0.00352	(0.0215)
Conservative gender norms	0.00500	(0.00974)	0.00519	(0.0113)	-0.00264	(0.0135)	-0.00787	(0.00583)	0.000468	(0.00525)
Number of observations	460		484		500		429		421	

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Standard error in brackets. *p < 0.1, **p < 0.05, *** p < 0.01. Reference is "Working". Reference group is "Would never accept uncertainty. Blank spaces in community regression columns reflect that the variable was omitted when running the logistic regression due to perfect prediction.

References

- Adhikari, P. (2013). Conflict-Induced Displacement, Understanding the Causes of Flight. American Journal of Political Science, 57, 82–89. https://doi.org/10.1111/j.1540-5907.2012.00598.x
- Appadurai , A. 2004 . " The capacity to aspire: Culture and the terms of recognition ". In Culture and public action , Edited by: Rao , V. and Walton , M. 59 84 . Stanford, CA : Stanford University Press .

Aslany, M., Carling, J., Bålsrud Mjelva, M., & Sommerfelt, T. (2021). Systematic review of determinants of migration aspirations. Southampton: Peace Research Institute Oslo. Beine, M., & Parsons, C. (2015). Climatic Factors as Determinants of International

Migration. The Scandinavian Journal of Economics, 117, 723–767.

Bertoli, S., Docquier, F., Rapoport, H., & Ruyssen, I. (2022). Weather shocks and migration intentions in Western Africa: Insights from a multi-level analysis. *Journal* of Economic Geography, 22(2), 289–323.

Black, R., Adger, W. N., Arnell, N. W., Dercon, S., Geddes, A., & Thomas, D. (2011). The effect of environmental change on human migration. *Global Environmental Change*, 21, S3–S11. https://doi.org/10.1016/j.gloenvcha.2011.10.001

Böcker, A. (1994). Chain migration over legally closed borders: Settled immigrants as bridgeheads and gatekeepers. *The Netherlands' Journal of Social Sciences*, 30(2), 87–106.

Cai, R., Feng, S., Oppenheimer, M., & Pytlikova, M. (2016). Climate variability and international migration: The importance of the agricultural linkage. *Journal of* Environmental Economics and Management, 79, 135-151. https://doi.org/10.1016/j. jeem.2016.06.005

- Carle, A. C. (2009). Fitting multi-level models in complex survey data with design weights: Recommendations. BMC Medical Research Methodology, 9, 49. https://doi. org/10.1186/1471-2288-9-49
- Carling, J. (2002). Migration in the age of involuntary immobility: Theoretical reflections and Cape Verdean experiences. *Journal of Ethnic and Migration Studies*, 28, 5–42. https://doi.org/10.1080/13691830120103912
- Carling, J. (2014) The role of aspirations in migration. Paper presented at 'Determinants of International Migration' University of Oxford, 23-25 September. https://doi.org/ 10.5281/zenodo.10424068.
- Carling, J., & Schewel, K. (2018). Revisiting aspiration and ability in international migration. Journal of Ethnic and Migration Studies, 44(6), 945–963.
- Carling, J., & Talleraas, C. (2016). Root Causes and Drivers of Migration: Implications for Humanitarian Efforts and Development Cooperation. Oslo: Peace Research Institute Oslo.
- Carling, J., Paasche, E., Siegel, M., 2015. Finding Connections: The Nexus between Migration and Corruption. Finding Connections: The Nexus between Migration and Corruption. https://www.migrationpolicy.org/article/finding-connections-nexusbetween-migration-and-corruption (accessed 7.14.23).

Carling, J., Czaika, M., Bivand Erdal, M., 2020. Translating Migration Theory Into Empirical Propositions | Population Europe. Southampton. Carling, J., Caso, N., Hagen-Zanker, J., & Rubio, M. (2023). The multi-level determination of migration processes. MIGNEX Background Paper. Oslo: Peace Research Institute Oslo. Available at https://www.mignex.org/d061.

Caso, N., Carling, J., Hagen-Zanker, J., & Vargas-Silva, C. (2023). Migration and alternative responses to dissatisfaction. *MIGNEX Background Paper*. Oslo: Peace Research Institute Oslo. Available at.

Castles, S. (2000). International migration at the beginning of the twenty-first century: Global trends and issues. *International Social Science Journal*, 269–281.

Castles, S., & Van Hear, N. (2010). Root Causes. *Global Migration Governance*. Oxford: Oxford University Press.

Clemens, M.A., 2014. Does Development Reduce Migration? IZA Discussion Paper 8592. Creighton, M. J. (2013). The role of aspirations in domestic and international migration. *The Social Science Journal*, 50(1), 79–88.

Czaika, M., & Reinprecht, C. (2022). Migration Drivers: Why Do People Migrate? In P. Scholten (Ed.), Introduction to Migration Studies: An Interactive Guide to the Literatures on Migration and Diversity, IMISCOE Research Series (pp. 49–82). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-92377-8_3.

Czaika, M., & De Haas, H. (2012). The role of internal and international relative deprivation in global migration. *Oxford Development Studies*, *40*(4), 423–442.

Davenport, C., Moore, W., & Poe, S. (2003). Sometimes You Just Have to Leave: Domestic Threats and Forced Migration, 1964–1989. *International Interactions*, 29, 27–55. https://doi.org/10.1080/03050620304597

de Haas, H. (2021). A theory of migration: The aspirations-capabilities framework. Comparative Migration Studies, 9, 8. https://doi.org/10.1186/s40878-020-00210-4

de Haas, H., 2011. The determinants of international migration: Conceptualising policy, origin and destination effects. IMI Working Paper Series 32.

de Haas, H. (2010). Migration and Development: A Theoretical Perspective. International Migration Review, 44, 227–264. https://doi.org/10.1111/j.1747-7379.2009.00804.x

de Haas, H. (2007). Turning the Tide? Why Development Will Not Stop Migration. Development and Change, 38, 819–841. https://doi.org/10.1111/j.1467-7660.2007.00435.x

De Haas, H., & Fransen, S. (2018). Social transformation and migration. An empirical inquiry (No. Working Paper 141). Amsterdam: International Migration Institute.

de Jong, G. F., & Gardner, R. W. (Eds.). (2013). Migration decision making: multidisciplinary approaches to microlevel studies in developed and developing countries. Elsevier

- de Jong, G.F., 2000. Expectations, gender, and norms in migration decision-making. Population Studies, 54(3), pp.307-319.Docquier, F., Peri, G., Ruyssen, I., 2014. The Cross-country Determinants of Potential and Actual Migration. Int. Migrat. Rev. 48, 37–99. Doi: 10.1111/imre.12137.
- Dupre, S. I., Harvey, C. A., & Holland, M. B. (2022). The impact of coffee leaf rust on migration by smallholder coffee farmers in Guatemala. World Development, 156, Article 105918. https://doi.org/10.1016/j.worlddev.2022.105918
- Dustmann, C., & Okatenko, A. (2014). Out-migration, wealth constraints, and the quality of local amenities. *Journal of Development Economics, Land and Property Rights, 110*, 52–63. https://doi.org/10.1016/j.jdeveco.2014.05.008
- Galam, R. G. (2015). Through the prism of seamen's left-behind wives: Imagination and the culture of migration in flocos. *Philippines. Asian and Pacific Migration Journal*, 24 (2), 137–159.

Gamso, J., & Yuldashev, F. (2018). Does rural development aid reduce international migration? World Development, 110, 268–282. https://doi.org/10.1016/j. worlddev.2018.05.035

Gent, S. (2002). The Root Causes of Migration: Criticising the Approach and Finding a Way Forward. Falmer: Sussex Centre for Migration Research.

Hagen-Zanker, J., Mallett, R., 2016. Journeys to Europe: the role of policy in migrant decision-making.

Hagen-Zanker, J., Hennessey, G., Carling, J., & Memon, R. (2023a). Survey data collection, MIGNEX Handbook Chapter 7 (v2). Oslo: Peace Research Institute Oslo. Available at https://www.mignex.org/d031.

Hagen-Zanker, J., Carling, J., Caso, N., Hennessey, G., & Rubio, M. (2023b). Documentation of survey data, MIGNEX Handbook Chapter 10 (v3). Oslo: Peace Research Institute Oslo. Available at https://www.mignex.org/d032.

Hagen-Zanker, J., Hennessey, G., & Mazzilli, C. (2023c). Subjective and intangible factors in migration decision-making: A review of side-lined literature. *Migration Studies*, 11, 349–359. https://doi.org/10.1093/migration/mnad003

Hagen-Zanker, J., Rubio, M. G., & Erdal, M. B. (2024). How do perceptions, fears, and experiences of violence and conflict affect considerations of moving internally and internationally? *Journal of Refugee Studies*, 37(2), 416–437. https://doi.org/ 10.1093/irs/feae021 Harris, J. R., & Todaro, M. P. (1970). Migration, Unemployment and Development: A Two-Sector Analysis. *The American Economic Review*, 60, 126–142.

Hirschman, A. O. (1978). Exit, Voice, and the State. World Politics, 31, 90–107. https:// doi.org/10.2307/2009968

Horváth, I. (2008). The culture of migration of rural Romanian youth. Journal of Ethnic and Migration Studies, 34(5), 771–786.

Huber, P., & Nowotny, K. (2020). Risk aversion and the willingness to migrate in 30 transition countries. *Journal of Population Economics*, 33, 1463–1498. https://doi. org/10.1007/s00148-020-00777-3

Islam, M. R. (2018). Climate Change, Natural Disasters and Socioeconomic Livelihood Vulnerabilities: Migration Decision Among the Char Land People in Bangladesh. Soc Indic Res, 136, 575–593. https://doi.org/10.1007/s11205-017-1563-y

Kasavan, C., Azouzi, S., Hagen-Zanker, J., & Murray, H. (2022). Migration dynamics in Enfidha. Peace Research Institute Oslo, Oslo: Tunisia. MIGNEX Case Study Brief.

Khavarian-Garmsir, A. R., Pourahmad, A., Hataminejad, H., & Farhoodi, R. (2019). Climate change and environmental degradation and the drivers of migration in the context of shrinking cities: A case study of Khuzestan province. *Iran. Sustainable Cities and Society*, 47, Article 101480. https://doi.org/10.1016/j.scs.2019.101480

Koubi, V., Spilker, G., Schaffer, L., & Bernauer, T. (2016). Environmental Stressors and Migration: Evidence from Vietnam. World Development, 79, 197–210. https://doi. org/10.1016/j.worlddev.2015.11.016

Lanati, M., & Thiele, R. (2018). The impact of foreign aid on migration revisited. World Development, 111, 59–74. https://doi.org/10.1016/j.worlddev.2018.06.021

Lundquist, J. H., & Massey, D. S. (2005). Politics or Economics? International Migration during the Nicaraguan Contra War. J Lat Am Stud, 37, 29–53. https://doi.org/ 10.1017/S0022216X04008594

Manchin, M., & Orazbayev, S. (2018). Social networks and the intention to migrate. World Development, 109, 360–374. https://doi.org/10.1016/j.worlddev.2018.05.011

Martin, M., Billah, M., Siddiqui, T., Abrar, C., Black, R., & Kniveton, D. (2014). Climaterelated migration in rural Bangladesh: A behavioural model. *Popul Environ*, 36, 85–110. https://doi.org/10.1007/s11111-014-0207-2

Massey, D. S., & Espinosa, K. E. (1997). What's Driving Mexico-U.S. Migration? A Theoretical, Empirical, and Policy Analysis. American Journal of Sociology, 102, 939–999. https://doi.org/10.1086/231037

Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of International Migration: A Review and Appraisal. *Population and Development Review*, 19(3), 431–466.

McAuliffe, M. (2017). Seeking the views of irregular migrants: Decision-making, drivers and migration journeys. A Long Way to Go: Irregular Migration Patterns, Processes, Drivers and Decision-Making, 103–139. https://doi.org/10.22459/LWG.12.2017.05.

Moore, W. H., & Shellman, S. M. (2004). Fear of Persecution: Forced Migration, 1952–1995. Journal of Conflict Resolution, 48, 723–745. https://doi.org/10.1177/ 0022002704267767

Nyberg-Sørensen, N., Hear, N. V., & Engberg-Pedersen, P. (2002). The Migration-Development Nexus Evidence and Policy Options State–of–the–Art Overview. *International Migration*, 40, 3–47. https://doi.org/10.1111/1468-2435.00210

Oecd. (2017). Interrelations between Public Programmes. OECD, Paris: Migration and Development.

Peridy, N. J. (2006). Welfare magnets, border effects or policy regulations: What determinants drive migration flows into the EU? *Global Economy Journal*, 6, 1850097. https://doi.org/10.2202/1524-5861.1186

Rabe-Hesketh, S., & Skrondal, A. (2006). Multi-level modelling of complex survey data. Journal of the Royal Statistical Society, Series A, 169, 805–827. https://doi.org/ 10.1111/j.1467-985X.2006.00426.x

Skeldon, R. (2002). Migration and poverty. Asia-Pacific Population Journal, 17, 67–82. https://doi.org/10.18356/7c0e3452-en.

Sjaastad, L. A. (1962). The Costs and Returns of Human Migration. Journal of Political Economy, 70, 80–93.

Stark, O. (1991). The Migration of Labor. Oxford: Basil Blackwell Ltd.

Van Hear, N., Bakewell, O., & Long, K. (2018). Push-pull plus: Reconsidering the drivers of migration. Journal of Ethnic and Migration Studies, 44, 927–944. https://doi.org/ 10.1080/1369183X.2017.1384135

Van Wijk, J. (2010). Luanda – Holanda: irregular migration from Angola to the Netherlands. International Migration, 48, 1–30. https://doi.org/10.1111/j.1468-2435.2008.00485.x

Williams, A. M., Jephcote, C., Janta, H., & Li, G. (2018). The migration intentions of young adults in Europe: A comparative, multilevel analysis. *Population, Space and Place, 24*(1), e2123.

Xiang, B., & Lindquist, J. (2014). Migration Infrastructure. International Migration Review, 48, S122–S148.

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