MIGNEX

MIGNEX Background Paper

The multi-level determination of migration processes

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MIGNEX deliverable D6.1 v2 December 2023

Suggested citation

Carling, J., Caso, N., Hagen-Zanker, J. and Rubio, M. (2023) *The multi-level determination of migration processes.* MIGNEX Background Paper. Oslo: Peace Research Institute Oslo. Available at www.mignex.org/d061.

MIGNEX

MIGNEX (Aligning Migration Management and the Migration-Development Nexus) is a five-year research project (2018–2023) with the core ambition of creating new knowledge on migration, development and policy. It is carried out by a consortium of nine partners in Europe, Africa and Asia: the Peace Research Institute Oslo (coordinator), Danube University Krems, University of Ghana, Koç University, Lahore University of Management Sciences, Maastricht University, ODI, the University of Oxford and Samuel Hall.

See www.mignex.org.

MIGNEX has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 770453.

MIGNEX Background Papers

The MIGNEX Background Papers are scientific papers containing the documentation and analyses that underpin the project results. Selected insights from background papers are also presented in non-technical form in other formats, including MIGNEX Policy Briefs and MIGNEX Reports.

Acknowledgements

This document was reviewed by Oliver Bakewell (University of Manchester), Cathrine Talleraas (Chr. Michelsen Institute), and Melissa Siegel (Maastricht University) as part of MIGNEX quality assurance and review procedures. The authors are also grateful to Mathias Czaika and Marta Bivand Erdal for valuable contributions to the framing, analysis and interpretation of findings. The content of the document, including opinions expressed and any remaining errors, is the responsibility of the authors.

Publication information

Peace Research Institute Oslo, Oslo, Norway

December 2023

ISBN (print): 978-82-343-0515-3

ISBN (online): 978-82-343-0516-0

History of changes

Version	Date	Changes
1	31 October 2023	Version submitted as official deliverable to the EC.
2	30 December 2023	Corrected a misspecification in the regression model, where two variables were included at the individual level instead of research area level. After correction, the variable 'untreated health problem rate' was removed from the model due to high correlation with other research area level variables. Updated tables and figures accordingly. Relabelled the typology 'Typology of three-dimensional migration aspirations' (as opposed to 'Three-dimensional typology og migration aspirations'.

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We examine what drives migration aspirations, encouragement of other people's migration, and migration preparations. The answers lie partly in characteristics of the local area and partly in individual traits and experiences. Based on a new definition, we specifically examine the role of so-called 'root causes' of migration.

Drivers of migration are highly context specific. The same factors that increase migration aspirations in some areas can lower them in others.

Limited livelihood opportunities, perceptions of poor governance, and high levels of corruption are the root causes that most clearly affect migration aspirations.

Migration aspirations tend to be higher among wealthier people. But regardless of wealth, being dissatisfied with life tends to spur a wish to leave.

Introduction

'Every day, we see that conflict, climate change and instability are pushing people to seek refuge elsewhere' said President of the European Commission Ursula von der Leyen, in her 2023 State of the Union Address.[1] 'I have always had a steadfast conviction that migration needs to be managed' she continued.

An early response came from Director of the Migration Policy Centre Andrew Geddes. 'As often happens, the framing is a little apocalyptic: lots of

[1] State of the Union Address by President von der Leyen, 13 September 2023, available at: https://ec.europa.eu/commission/presscorner/detail/en/speech_23_4426

terrible things happening in the world that could cause migration', he wrote.[2] 'It's not that these don't matter but let's remember that most migration is for work, family, study – ambition, hope, aspiration not just desperation'.

In this paper we provide new insights into the factors that drive migration, based on extensive data from local communities in Africa, Asia and the Middle East. The analyses contributes to the scientific understanding of migration processes, which in turn can inform policy.

European migration policy increasingly seeks to affect the decision-making of potential migrants before they approach European borders. Prominent amongst such policy measures in the past decade is the 2015 European Trust Fund for Africa (EUTF) which funds projects with the objective to 'support all aspects of stability and contribute to better migration management as well as addressing the root causes of destabilisation, forced displacement and irregular migration, in particular by promoting resilience, economic and equal opportunities, security and development, and addressing human rights abuses' (EUTF, 2015:2). This objective reveals the EU's desire to 'manage migration' – that is reduce both the numbers of asylum-seekers and 'irregular' economic migrants coming to Europe. The underlying assumptions are that it is possible to identify such 'root causes', that policy measures to address them are effective, and that this indeed results in a reduction of migration outflows.

The specific contribution of this paper is to examine *which societal circumstances and individual characteristics make people wish to migrate, encourage others to do so, or make preparations for leaving.*

We start by briefly describing the MIGNEX project, as the context for this paper. Subsequently, we guide readers on how to approach the content of the paper and present the conceptual framework that underpins the analysis.

What is MIGNEX?

MIGNEX is a collaborative research project with the full name Aligning Migration Management and the Migration–Development Nexus (MIGNEX), carried out by a consortium of eight institutions, supported by seven subcontractors. The project's overall objective is to contribute to more effective and coherent migration management through evidence-based understanding of the linkages between development and migration.

A key aspect of the project design is the focus on local-level processes. We have collected data in 26 local areas in ten countries across Asia, Africa and the Middle East (Figure 1). The research areas were systematically selected in order to ensure a *theoretically relevant diversity* of experiences. Some areas are in stagnation while others are flourishing, some are insecure while others are peaceful, some are busy while others are quiet. It is this kind of diversity that allows for an examination of each type of influence on migration. Each research area is a reasonably well-defined local society such

[2] Andrew Geddes (@AndrewPGeddes) on X (formerly Twitter) 13 September 2023, available at https://x.com/AndrewPGeddes/status/1701933200803520758?s=20

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 research areas are not necessarily administrative units. For the sake of comparability, we rely only on primary data.

This MIGNEX Background Paper is one of several that examine the effects of development on migration, with different perspectives and methodologies. In particular, this paper draws mainly on survey data and uses regression analyses, while other papers also use qualitative data and other types of analyses. See mignex.org for more information.

Figure 1 MIGNEX research areas

Note: Kombolcha (ETH1) is excluded from the analysis in this paper because survey data collection was halted prematurely for security reasons.

How to read this paper

This MIGNEX Background Paper is relevant for both academic and policy audiences. We provide a thorough analysis of the multi-level determinants of migration aspirations and preparations, thus responding to long-standing policy debates and providing a systematic analysis of questions long explored in migration studies. Importantly, we also engage with the concept of root causes, providing a way forward for this at times contentious concept.

This paper provides the foundational analysis for much of the MIGNEX analysis on the causes of migration, it is thus lengthy and very detailed. Here we give an outline of the paper, to help readers navigate it and focus on the sections of interest. The section *Conceptual framework* provides a discussion on the providence and meaning of the term 'root causes' and we provide what we think is the first concrete definition of the term. This non-technical explanation is a key contribution of this paper. We also lay out the causal chain that we examine in the paper in this section. The sections *Methodology*, *Dependent variables* and *Independent variables* provide detailed explanations of analytical choices made and the variables used in this analysis, and are

more technical. Readers interested in the empirical findings can skip straight to section *The multi-level determination of migration processes*. This section provides a discussion of the hundreds of analyses conducted for this paper. We provide a synthesis of these analyses in the *Key findings* section of the *Conclusion,* where we also discuss the policy implications.

Conceptual framework

This paper is concerned with 'the multi-level determination of migration processes', a phrase with several concepts that merit conceptual unpacking. We address them in this section and link them with our approach to the 'root causes' of migration.

For the purpose of this paper, we use 'migration' as a shorthand for international migration. The underlying survey data is based on questions that specifically refer to going to live or work in another country.

Migration processes

We are broadly inspired by two-step approaches to migration, which separate the explanation of migration aspirations from the explanation of migration ability, or capabilities (Carling, 2002, Carling and Schewel, 2018, de Haas, 2021). This means that, for our analysis, we are examining a bundle of mechanisms that *leads towards* migration. The process of explaining or understanding, in other words, starts long before people depart and become migrants. We measure three types of outcomes, which are described in detail in the section 'Dependent variables':

- *Migration aspirations:* thoughts and feelings in favour of migrating rather than staying.
- *Encouragement of migration:* expressions of support for another person's migration.
- *Migration preparations:* actions taken to facilitate one's own migration.

There are two advantages of examining these types of outcomes as opposed to actual migration. First, when we want to understand the *root causes* of migration – which we define in a subsequent section – we must understand what makes people see migration as desirable or necessary. When they do, other influences beyond root causes might be decisive for the actual migration outcomes. As an example, imagine that two neighbouring countries are struck by the same devastating drought. If the citizens of the first country enjoy visa-free travel while those of the second country do not, the drought is likely to trigger more migration from the first country. But this does not make drought less of a 'root cause' of migration in the second country. Since actual migration is the combined outcome of aspirations and ability to migrate, the processes at work can be confounded. If our attention is fixed to actual migration flows, we can only obtain a patchy understanding of root causes.

Second, studies of actual migration are constrained by the fact that migrants have, by definition, left the country of origin. It is no longer feasible to survey them in large numbers and with high response rates, or compare them to those who do not want to leave or are unable to leave. And in the absence of first-hand information from (potential) migrants, it is impossible

to measure the circumstances, experiences, and perceptions that triggered a desire to migrate. Moreover, when data is collected from migrants, retrospective accounts of reasons for migration are necessarily selective and potentially biased. The information that can be gleaned from data on migration flows, or interviews with migrants, is therefore of a different nature.

Root causes[3]

The concept of root causes of migration plays a key role in our analyses. MIGNEX was funded through a call that specifically requested 'a better understanding of the root causes of migration' and made the assertion that immigration to Europe can only be successfully managed 'by fully addressing the root causes of migration'. Despite the centrality of root causes in policy debates, they remain elusive. That is, there is no established understanding of what root causes are, neither as a theoretical concept nor as empirically confirmed determinants of migration.

Faced with the growth of unwanted migratory movements to and towards Europe by asylum-seekers and lower-skilled workers, the term and policy approaches to 'addressing the root causes of migration' emerged in the 1980s as a way to both transform societies and prevent migration (Castles and Van Hear, 2010). While 'root causes approaches at first emerged fairly separately for economic and forced migration' (Castles and Van Hear, 2010:287), discussions and analyses have joined up and merged with the understanding that similar factors and motivations drive economic and forced migration.

The root causes of migration are generally thought of as the economic, social and political conditions that induce departures—especially poverty (Carling and Talleraas, 2016). Inequality – economic and in terms of other dimensions – between countries and regions is also seen as an important factor (Castles and van Hear, 2010). Moreover, insecurity, repression, political instability, and conflict are also often mentioned as root causes (Carling and Talleraas, 2016; Raghuram, 2009). The EUTF focuses on the economic and non-economic root causes, giving poor governance and a lack of social services as examples of the latter, and economic factors focusing on economic and employment opportunities (Coggio, 2021).

However, as alluded to above, there is no clear or common definition of root causes nor systematic evidence on its role in driving migration. Our response to the needs for better understanding root causes is fourfold:

- Proposing a definition of 'root causes of migration'
- Translating the conceptual definition into empirical measures
- Examining the effect of root causes on migration outcomes
- Assessing the value of and limitations of the 'root causes' concept

We begin by proposing a definition of the root causes of migration that broadly reflects how the term is currently used. It is clear that root causes should be understood as a subset of everything that might be seen as causing or predicting migration. Perhaps the broadest concept is *determinants of*

[3] For much of this paper we use the term 'root causes' without quotation marks both for ease but also because we provide a concrete definition for its use in this section.

migration (de Haas, 2011b; Yorimitsu, 1985). It is a term that was more commonly used in the past, and which has partly given way to more theoretically informed concepts (Carling and Collins, 2018). 'Determinants' are generally associated with statistical analyses, and potentially include factors that have predictive capacity, but do not represent 'causes' of migration. Gender, for instance, might be an important determinant, that is: in general men may be *more likely* to migrate, but being male is not a cause of migration.

A somewhat narrower concept is *drivers of migration*. Van Hear et al. (2018: 927) define them as 'forces leading to the inception of migration and the perpetuation of movement'. The reference to 'forces' and 'inception' implies a process of causation and implies that gender and age, for instance are not drivers of migration. Since the early 2000s, the concept 'drivers of migration' has been used ever more often in the literature (Carling and Collins, 2018).

The drivers of migration that Van Hear et al. (2018) describe include migrant networks, the 'culture of migration' and proximity to borders, for instance. These are likely to affect migration, but hardly represent 'root causes' of the kind implied by policy makers' stated ambition to 'address the root causes of migration'. In other words, 'root causes' should be understood as a narrower concept than 'drivers' of migration. Figure 2 illustrates the relationship between the concepts.

Additional pointers towards defining the root causes of migration lie in the uses of 'root causes' in other areas. It is a term that is established in diverse fields, including engineering, health care, and conflict resolution. The common element is that root causes are understood to lie at the beginning of causal chains that result in adverse outcomes – such as mechanical failure, medical errors, or political violence. The implication is that, while the outcomes might be partially contained by addressing proximate or triggering causes, sustained improvement might require addressing the root causes.

The parallel to migration rests on seeing migration as an adverse outcome. And 'root causes' are indeed discussed mainly in the context of those forms of migration that are seen as most problematic, such as undocumented migration, asylum migration, and refugee flows. The concept's resurgence in European policy was triggered, in part, by the 'migrant crisis' of 2015–2016 and the rise in the number of migrant deaths.

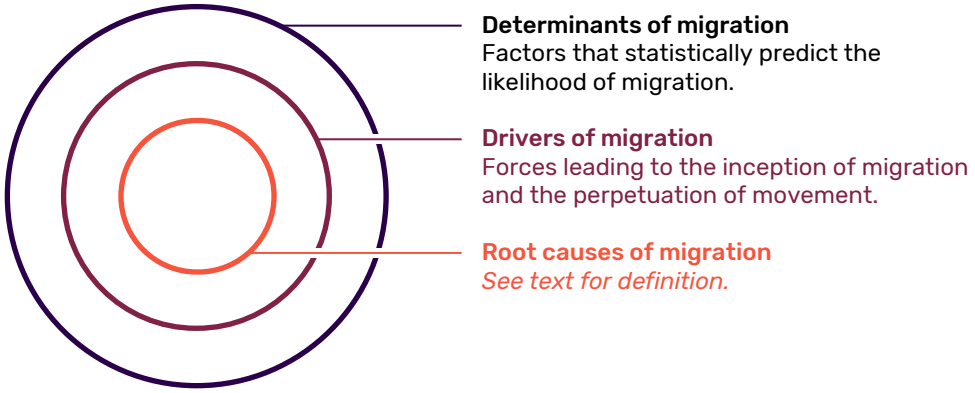

Figure 2. Root causes, drivers, and determinants of migration

With this background, we propose a definition of root causes – to our knowledge the first such definition formally stated. It breaks new ground by specifying the parameters of the concept, thereby making it possible to examine root causes empirically and also discuss their relationship with other influences on migration. The proposed definition is as follows:

> 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.

There are several points to note about the definition and its components.

1. We define root causes on the concept's own terms, with the aim to make its logic clear. This is not an endorsement, but rather a necessary step towards assessing whether, when, or how, the concept is analytically valuable.
2. The definition deliberately spans the problematic divide between 'forced' and 'voluntary' migration and covers various forms of hardship. The formulation 'persistent, immediately threatening, or both' is essential in this respect. For instance, insufficient income to support a family is a root cause if it is perceived to be persistent, while violent conflict need not be if it is not immediately threatening.
3. Many adversities are *not* root causes, according to our definition:

   - Difficulties that do not qualify as hardships, such as low quality of particular public services, unless the combined failures severely undermine livelihoods or living conditions.
   - Hardships that are manageable and likely to pass, such as disease outbreak or flooding, unless they are regular occurrences which would make them persistent.
   - Hardships that are particular to individuals, such as the death of a spouse, or an accident resulting in disability, unless they have structural, widely experienced causes.

4. Many other influences contribute to determining whether root causes actually result in migration:

   - Factors that make migration a particularly likely response to hardships, such as widespread transnational networks.
   - Factors that make migration attractive (pull factors), such as employment opportunities at potential destinations.
   - Factors that make migration accessible, such as provisions for free movement of persons.

We argue that root causes only affect migration aspirations and how people act upon those aspirations (i.e. preparations to migrate), not the outcome. In other words, root causes do not directly affect whether someone actually migrates; they intervene at an earlier stage of the causal chain.

Our definition of root causes accentuates the policy relevance of the concept. Root causes are factors that can potentially be addressed through policy measures that alleviate or prevent hardships. For instance, building a business park in an area that experiences protracted stagnation could reinvigorate the area and create jobs, and negotiating a ceasefire between warring parties could remove the threat faced by armed conflict.

The concept of root causes cuts across various aspects of societies and potential drivers of migration. We propose *four domains* of root causes:

- Livelihoods and poverty,
- Governance and public services,
- Security and conflict,
- Environment hazards and stresses.

This is a convenient breakdown that can accommodate all the factors that are typically mentioned in connection with root causes. In the section *Root causes* under *Independent variables* we show how we operationalise root causes within each domain, in line with our overall definition.

Multi-level determination

MIGNEX is designed to capture processes at several levels. The *outcomes* that we are interested in here, in this paper, are all at the individual level. That is, we seek to explain why some individuals have migration aspirations, for instance, while others do not. But the *influences on* these outcomes could be situated at different levels:

- Country
- Research area
- Household
- Individual

In the empirical analysis we separate only between the research-area level and the individual level. The country level is excluded because there are few relevant country-level factors that affect all research areas in the same way. The most obvious would perhaps be legal frameworks, national-level policies, or migration opportunities tied to specific citizenships. These might be pertinent to include in other analyses, but are not sufficiently important for our outcomes to merit inclusion here. Similarities between research areas in the same country are often reflected in the research area level variables. However, the analyses also show that there are sometimes great differences between research areas in the same country.

The research area-level variables play a key role in the analysis, reflecting the overall project design. They are the factors that may explain why the prevalence of migration aspirations or other outcomes is *generally* higher in some research areas than in others. For instance, migration aspirations may be affected by the overall level of poverty in the area as well as by each person's socio-economic situation. Most research-area-level variables, such as the prevalence of poverty, are aggregated from information about individuals. Others, such as the prominence of international tourism, are essentially characteristics of the area in the first place.

The household is not singled out as an analytical level but is part of the lowest level of analysis. That is, some of the data about individuals refer to the respondent personally, and some refer to their household. For instance, survey questions about work referred to the individual respondent while questions about experience of hunger and exposure to crime referred to the household as a whole. The choices about the most appropriate framing of questions were made analytically on a case-by-case basis.

We refer to all the variables related to respondents or their household as *individual-level variables,* since they the play the same role in the analysis. They serve to differentiate between individuals in each research area, for instance in explaining who has migration aspirations and who does not.

With the two levels *research area* and *individual* established, we can consider how they work together in determining migration processes. If we take two individuals among the respondents – one who has migration aspirations and one who does not – and they come from different research areas, 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 research areas, such as the general level of insecurity, or the level of unemployment. These characteristics can only contribute to explaining why the overall level of migration aspirations is higher in some research 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 research area.

At both the research area level and the individual level, we distinguish between three sets of factors:

- Root causes
- Migration-related factors
- Other characteristics

At each of the two levels, some factors qualify as root causes in line with our definition. Since we define root causes as *widely experienced,* 'individual-level root causes' are not individual traits or experiences (such as being unemployed), but rather individual-level perceptions of conditions in the research area (such as the general possibilities for earning a living). The distinction between individual-level and research-area-level root causes is further discussed in the section Independent variables.

Among the factors that are not root causes, we single out the migration-related ones. They are a coherent set of influences that reflect the largely self-perpetuating nature of migration, working at either the research arealevel or the individual level. Each research area is characterised by the absence or presence (in some form) of a *culture of migration*, a term used in the literature to describe societies where out-migration has become established in institutions and values. At the individual level, people differ in terms of their migration experiences and networks.

Beyond root causes and migration-related factors, there's a residual set of other potential influences on migration processes, both at the research area level and the individual level. They include demographic characteristics such as gender and age, and other factors at the research area level, such as the level of inequality.

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Figure 3 shows the two levels of determinants of migration processes, each with root causes in four domains, migration-related factors, and other characteristics. These categories will structure our presentation of independent variables in later sections.

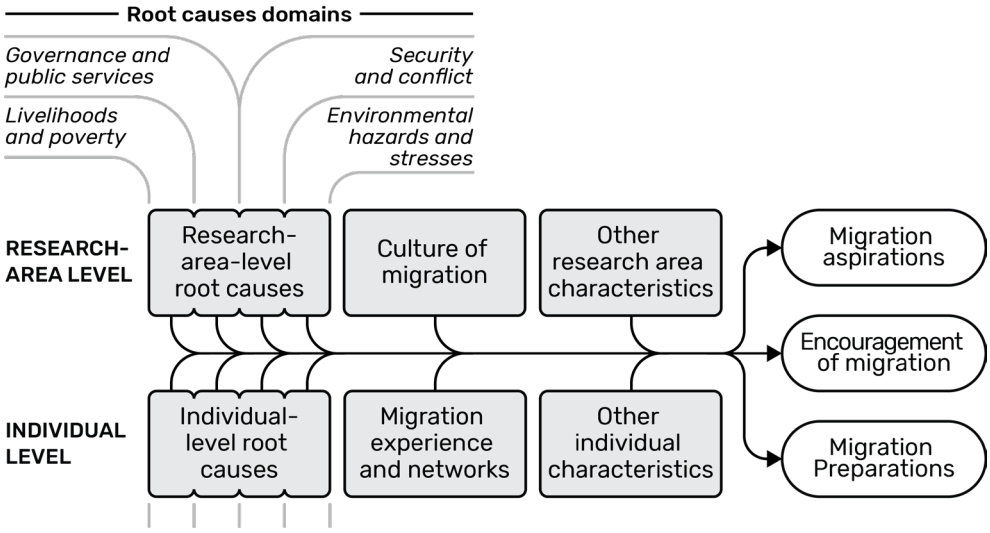

Figure 3. Two levels of determinants of migration processes

Methodology

Data

This paper draws primarily on the MIGNEX survey data, supplemented with input from qualitative fieldwork. The survey was conducted by means of face-to-face interviews using SurveyCTO software on tablets (Figure 4). Fieldwork took place between October 2020 and February 2022 and covered more than 13,000 young adults (aged 18-39) across 26 local areas in ten countries. The survey covers a range of topics related to migration and development and it was designed to allow for comparison across local areas, with more than 95% of survey items directly comparable, both in terms of wording of the survey item and response options.

The survey is approximately representative of the 18-39-year-old population in each research area, having applied a three-stage probability-proportional-to-size (PPS) cluster sampling strategy with systematic random walks, with weights at the individual level calculated and used in the analysis.

We use the MIGNEX survey dataset restricted-access variant, version 1. A detailed discussion of the survey's implementation, data cleaning and preparation of weights and other variables can be found in Hagen-Zanker et al., 2023.

The survey focuses on young adults who were living in the research area at the time of the survey. This means that our survey does not include young adults who have moved out of the research area and have not yet returned, though we do cover former or return migrants.

Figure 4. Survey enumerator with tablet and record of visits, Boa Vista (CPV2)

Photo: Diana Santos for MIGNEX.

Modelling strategy

The aim of this background paper is to examine the effects of diverse individual and local-level determinants on individual migration-related outcomes (aspirations, preparations, and encouragement of others to migrate). To do this, we employ regression analysis to assess the statistical relationship between migration measures and their multi-level determinants.

We estimate five different types of regression models which were identified based on four criteria: (1) the overall objective of the study which is to estimate the multilevel determinants of migration, this requires the inclusion of variables that measure both individual and research area- level factors; (2) the structure of the MIGNEX dataset has a nested/clustered nature, meaning that the 500 respondents per research area are nested within 25 different research areas. While the clustered nature of the MIGNEX data adds analytical richness, it also makes it necessary to account for the serial correlation of the error terms within clusters; (3) the type of dependent variables included in our model need to be considered in order to determine the optimal estimation model, i.e. binary vs. continuous measures result in different estimation models and (4) considerations for sampling weights to account for representativeness of the households and research areas of analysis.

Taking these four general objectives into account, we assess the statistical relationship between the dependent variables and the individual and research-area-level independent variables by employing four main estimation methods. We describe each of these in detail below:

- Linear probability model **(LPM):** We estimate a Linear Probability Model (LPM) with Ordinary Least Squares (OLS) to analyse the nine migration outcomes of interest. Each migration outcome, or dependent

variable has only two possible values, 0 or 1. In this model, we estimate the relationship between the migration outcomes and the set of independent determinants using ordinary least squares. The model assumes a linear relationship between the determinants and the probability of the migration outcome being equal to 1 and fits a linear equation to the data by minimising the sum of the squared differences between the predicted probabilities and the actual binary outcomes.

- Logistic regression model **(Logit):** A key drawback of estimating a linear probability model is that the predicted probabilities can fall outside the valid range of 0 to 1, making it less suitable for probability estimation. Consequently, for binary outcomes, logistic regression is often a preferred approach, as it ensures predictions that remain within the valid probability range while modelling the relationship between the predictors and the binary outcome more effectively.

- Mixed-effects model **(Mixed and Melogit):** While both models (linear and logistic regressions) are able to predict the probability of each migration outcome, they both lack the ability to include and differentiate between the two levels (individual and research area) of information. In addition to the above and considering the nested nature of the MIGNEX survey data where individuals are clustered within research areas, it is necessary to account for the nested nature of our data and standard errors. Failure to do so would lead to inconsistent and biased estimates, i.e. smaller standard errors, larger t-values, and smaller p-values. We do this by employing a multilevel mixed-effects model. We run two sub-types of mixed models: first we run a multilevel linear regression (Mixed) and then we also run a multilevel logistic regression (Melogit).

- Generalised linear latent and mixed models **(GLLAMM**): Alternatively, we run generalised linear latent and mixed models with a logistic link. Multilevel modelling of survey data varies from standard modelling in that weighted sampling can take place at multiple levels in the model, it is not sufficient to use the single sampling weight, because weights enter into the log likelihood at both the group level (research area) and the individual level. Instead, what is required for a two-level model under this sampling design is to use, the inverse of the probability that research area 'j' is selected in the first stage, the inverse of the probability that a respondent 'i' from research area 'j' is selected at the second stage conditional on the research area 'j' already being selected. A GLLAMM model allows to specify this characteristic of the sampling weights which results in more efficient estimates. We use this estimation mainly for robustness purposes and to compare its results with the other six specifications (LPM, LPM-FE, Logit, Logit-FE, Mixed and Melogit.

- Lastly, we carry out two robustness checks where we control for research area fixed effects for the LPM **(LPM-FE)** and logistic regression **(Logit-FE)** models to account for research area-specific factors that could be simultaneously impacting both our migration measures and independent variables. This allows us to test whether the previously observed effects hold once we remove research-area-specific heterogeneity. Given that we control for time-invariant heterogeneity as

the research area level, we are able to include measures at the individual level only.

In sum, we run up to seven different models (LPM, LPM-FE, Mixed, Logit, Logit-FE, Melogit and GLLAMM as presented in Table 1) for each dependent variable (migration outcome) to maximise comparability and assess the consistency of coefficients across different models and migration outcomes.

Individual-level and research-area level determinants of individual migration outcomes

There are at least two key advantages of analysing the determinants of migration aspirations and preparations at two levels (namely individual and research area levels). First, a multi-level model allows us to differentiate between individual level root causes (individual perceptions of research area conditions) and research area level root causes (research area level incidences of individual experiences). This differentiation allows us to examine the effects of each level separately but also complementary resulting in a more complete interpretation of our results.

Secondly, by acknowledging the existence of two levels of information, and that respondents are grouped or clustered in research areas, we can rely on multi-level statistical methods that provide more efficient estimates. While we construct several variables at the research area level that account for characteristics that 'affect' all the respondents in a research area, we also acknowledge that there are potentially some characteristics at the research area level that we have not measured and that could influence the aspirations or preparations to migrate at the individual level. Estimating multi-level models allows us to account for these unmeasured grouped characteristics and obtain more efficient and reliable estimations of the effects of individual characteristics on individual migration aspirations and preparations.

A four-step empirical strategy to assess consistency in the estimations

Following the above we have designed an empirical strategy that allows to identify consistency in our estimations while accounting for complex nesting (grouping) structures in our data. Our approach to assess whether our estimations are robust consisted in a four-step process:

1. First, we estimate the relationship between our (42) independent variables and one of our dependent variables. We do the first estimation based on our preferred model specification which is a mixed effects linear regression (see bullet point 3 from previous section).

2. Secondly, we estimate the same relationship that we estimated in step one but we run six additional regressions as robustness checks, these are: (1) single-level linear regression, (2) single-level linear regression with research area fixed effects, (3) single-level logistic regression, (4) single-level logistic regression with research area fixed effects, (5) multilevel logistic regression, and a (6) generalized linear latent and mixed model. Table 1 presents an overview of the model specifications.

Table 1. Overview of regression models

Abbreviation	Full name	Multiple levels	Survey correction[1]	Use: Pooled sample	Use: By research area	Stata command
LPM	Linear probability model	●	●	●	○	regress
LPM-FE	Linear probability model with research area fixed effects	●	●	●		regress
Mixed	Multilevel mixed-effects linear regression	●		●		mixed
Logit	Logistic regression	●	●	●	○	logit
Logit-FE	Logistic regression with research area fixed effects	●	●	●		logit
Melogit	Multilevel mixed-effects logistic regression	●		○		melogit
GLLAMM	Generalized linear and latent mixed model	●		●		gllamm

● Executing with all variables (and research areas, where relevant)
○ Not executing with all variables in all research areas.
Note: (1) Command compatible with Stata's svy prefix for complex survey design.

3. Thirdly we compare the effects of these seven model specifications on each dependent variable. In this phase we can assess whether the effect of the 42 independent variables on one dependent variable is consistent across these seven models.

4. Once we examined whether the effects of the independent variables are consistent on one dependent variable across seven models, we proceeded to compare these effects with the effects on another similar dependent variables. We define three groups of similar dependent variables: aspirations, preparations, and encouragement. While we include five dependent variables in the aspirations group, we have three variables that relate to preparations and one variable to measure encouragement. The variables that constitute each group of dependent variables are summarised in a later section, in Table 7.

While the main purpose of these 4-step process is to ensure that the results of our analyses are consistent across different models and similar dependent variables it also allows to estimate the overall significance of the relationship between our 42 independent variables and migration aspirations, preparations, and encouragement. In the following section we discuss the result of this 4-step process and assess how much our proposed empirical strategy allows to explain the different migration outcomes.

MIGNEX Background Paper

Dependent variables

In this section we provide an overview of the dependent variables in the analysis, giving both a conceptual discussion and descriptive statistics. We have a total of nine dependent variables, in three groups:

- Measures of migration aspirations (five variables)
- Encouragement of migration (one variable)
- Measures of migration preparations (three variables)

Measures of migration aspirations

This section lays out the conceptual and methodological background for our measures of migration aspirations.[4] It presents *consideration*, *preference*, and *readiness* for migration as three key measures and use then to create a new *typology of migration aspirations*, which is used to define two additional dependent variables in our analyses.

Isolating migration aspirations

Our analyses build on so-called two-step approaches in migration theory, which separate migration aspirations from the conversion of those aspirations into actual migration (Carling, 2020). The argument is that, in order to explain migration processes, we must understand both the conditions under which people see migrating as a better option than staying, and the conditions that determine their ability to migrate (Carling, 2002; de Haas, 2021).

Migration flows can respond to changes in either of the two sets of conditions. For instance, migration might subside because fewer people see it as attractive or necessary (*reduced aspirations*) or because new visa requirements or a clampdown on smuggling makes it harder to leave (*reduced ability*).

Since changes in either migration aspirations or migration capabilities can affect migration flows independently, it is important to measure them separately. Measures of migration aspirations should not be inadvertently confounded with elements of capabilities. What we aim for, are precise measures of migration aspirations only, which can subsequently be analysed in conjunction with indictors of migration capabilities. [5]

Differentiating migration aspirations

Past research has often treated migration aspirations as a binary variable, i.e. something that is either present or absent in an individual. This

[4] This section is drafted by Jørgen Carling and also draws upon research within the project Future Migration as Present Fact (FUMI), funded by an ERC Consolidator Grant under the European Union's Horizon 2020 research and innovation programme, grant agreement n° 819227.

[5] In the aspiration/ability model (Carling, 2002; Carling and Schewel, 2018) 'ability' refers specifically to the ability to realize migration aspirations. The model relates ability only to individuals who aspire to migrate, and ability can therefore be studied empirically as 'revealed ability' in the form of actual migration. In the aspirations-capabilities framework (de Haas, 2014, 2021) 'capabilities' are introduced from the capabilities approach in development studies, and refer simultaneously to the potential development outcomes of migration and the capability to migrate. The value of 'capabilities' is unrelated to whether the action in question is something that individuals aspire to, or would engage in if they have the opportunity. Consequently, 'migration capabilities' cannot be studies empirically through observed migration.

simplification can be valuable in theoretical models and empirical research alike (Carling and Schewel, 2018; de Haas, 2021; Docquier et al., 2014). However, it is often useful, to work with distinctions that are more in line with real-world complexity. The MIGNEX Survey allows for doing that.

When others have sought to differentiate beyond the presence or absence of migration aspirations, it has typically been based on an (implicit or explicit) notion of *tiers* or *thresholds* that run from vague preferences to specific plans and preparatory steps (Laczko et al., 2017; Migali and Scipioni, 2019; van Naerssen and van der Velde, 2015). Such approaches differentiate but have fundamental shortcomings.

Their underlying assumption is that there is a single dimension of differentiation, reflecting a rational process of transforming preferences to plans, and implementing plans by taking steps towards migration. This might be a fitting representation for some potential migrants, but not for many others. The reasons are threefold.

First, a neat step-wise planning process is at odds with much of the messy reality of decision-making and behaviour.

Second, the scope for planning migration is severely curtailed in contexts where migration is actively obstructed by policy measures. For people in a dangerous or degrading situation who have a burning desire to leave, lacking a specific plan for surmounting migration barriers does not make their migration aspirations less sincere. Planning might even be a poor predictor of actual migration.

Third, overcoming contemporary obstacles to migration sometimes requires agency that is agile and reactive, rather than meticulously planned. In contexts of uncertainty and marginalization, preparing for migration is often a matter of sensing and seizing opportunities, rather than devising step-by-step plans (Carling and Haugen, 2020). The collection and analysis of survey data on migration should not hinge on specific assumptions about the scope for planning, but be fit for capturing diverse dynamics.

When we reject differentiating migration aspirations on the basis of degrees of planning and preparation, we pursue an alternative approach to differentiating along several dimensions.

Three-dimensional migration aspirations

The MIGNEX survey was based on methodological preparations that identified distinct aspects of migration aspirations (Carling, 2019). The core of migration aspirations is whether the respondent thinks migrating would be better than staying. If so, migrating could be a burning desire, the lesser of two evils, or something in between. But seeing migration as desirable is not the same as being ready to seize the opportunity. Such readiness is therefore a separate aspect of migration aspirations, more closely related to current attachments or commitments that might stand in the way of migration. Finally, it differs whether international migration is something that the respondent has been thinking seriously about, or not. This is a question that, unlike the others, inquiries about an empirical fact rather than an opinion at the time of the interview.

The data confirm that salient variation can be captured with three dimensions of migration aspirations, each one assessed with a binary question from the survey:

- **Consideration:** whether or not the respondent has seriously considered migrating to another country. (Survey item C6: *During the past year, have you thought seriously about leaving [Country] to live or work in another country?*)
- **Preference:** whether the respondent would prefer to move to another country or stay in the country where they live. (Survey item C3: *Would you like to go and live in another country some time during the next five years, or would you prefer to stay in [Country]?*)
- **Readiness:** whether the respondent would seize an opportunity to migrate to another country. (Survey item C8: *If someone were to give you the necessary papers to live and work in a richer country, would you go, or would you stay in [Country]?*). Note that 'readiness' in this sense is about availability or state of mind, not about having made preparations.

We use this trio of variables to examine migration aspirations along three dimensions – hence *three-dimensional migration aspirations*. In a later section we address other aspects of migration, justify why they have been excluded from this core trio, and discuss how they can be incorporated in analyses.

Table 2 displays the prevalence of consideration, preference, and readiness for migration in each research area. The first columns demonstrate very wide ranges in the proportion of respondents who display consideration (6–53%), preference (4–86%) and readiness (23–92%) for migration. This diversity suggests that the three measures succeed in capturing the enormous differences in the role of migration across the research areas.

A key tenet of three-dimensional migration aspirations is that consideration, preference and readiness are *independent* of each other. That is, neither one determines any of the other. Among those who have seriously considered migration, for instance, some will also express a preference for migrating while others will have decided against it. Others have never thought seriously about migrating but express a preference for migration when it is brought up in the survey interview. Still others might prefer to stay but are nevertheless ready to seize the opportunity to migrate if it arises.

This last situation – preferring to stay yet being ready to leave – seems contradictory but is common for two reasons. First, as noted above, many people lead lives that are geared towards seeing and acting upon whichever opportunities emerge. Second, in contexts where migration is a scarce and coveted opportunity, people might be reluctant to pass on it, regardless of their own preferences.

It could be that certain combinations of consideration, preference, and readiness adominate in the data – even to the extent that the three cannot be used separately in analyses. To address this question, Table 2 also shows how the three variables are correlated, within each research area.

The correlation coefficients reflect whether respondents who have seriously considered migrating are likely to also express preference for migrating, and

likewise for the two other pairs of variables. A coefficient of 1.0 would mean that responses to the two variables were completely overlapping, while a coefficient of 0.0 would mean that there was no statistical relationship between the two sets of responses.

The coefficients in the table lie in between, mostly in the range 0.2 to 0.5, but in some cases as high as 0.7. In other words, there is always a positive corelation, and it ranges from weak to strong. But the correlations are sufficiently weak to treat the variables as three separate, conceptually independent dimensions that each make a distinct contribution to mapping migration aspirations.

Table 2. Consideration, preference, and readiness for migration: prevalence and pairwise correlations by research area

	Prevalence (%)			*Pairwise correlation coefficients*		
	Consideration	**Preference**	**Readiness**	**Consideration × preference**	**Consideration × readiness**	**Preference × readiness**
CPV1	37	58	83	0.302	0.159	0.513
CVP2	36	53	68	0.391	0.415	0.548
GIN1	53	56	85	0.446	0.259	0.392
GIN2	28	30	62	0.484	0.323	0.485
GHA1	33	58	85	0.387	0.207	0.434
GHA2	43	63	79	0.456	0.339	0.614
GHA3	46	75	86	0.400	0.326	0.629
NGA1	35	82	89	0.300	0.176	0.696
NGA2	10	45	64	0.252	0.195	0.577
NGA3	51	86	92	0.239	0.158	0.620
ETH2	25	44	65	0.311	0.195	0.556
ETH3	14	21	47	0.327	0.295	0.440
SOM1	21	41	54	0.246	0.181	0.685
SOM2	11	42	69	0.199	0.195	0.561
TUN1	52	72	81	0.369	0.369	0.708
TUN2	37	60	72	0.416	0.419	0.603
TUR1	34	51	64	0.472	0.379	0.659
TUR2	21	29	45	0.496	0.474	0.656
TUR3	20	21	43	0.438	0.317	0.457
AFG1	31	43	65	0.306	0.310	0.450
AFG2	30	39	71	0.500	0.317	0.457
AFG3	27	61	78	0.205	0.228	0.497
PAK1	8	15	35	0.481	0.356	0.457
PAK2	8	17	28	0.348	0.332	0.486
PAK3	6	4	23	0.337	0.272	0.307
Minimum	6	4	23	0.199	0.158	0.307
Maximum	53	86	92	0.500	0.474	0.708
Median	29	45	67	0.358	0.303	0.530
Mean	29	46	65	0.361	0.285	0.533

Data source: MIGNEX Survey (mxs-prep-merge-2023-01-11.dta). N=12,774. Code: bysort ra: pwcorr c03prefleavecntry_d c06conleavecntry_d c08wouldleave_d [aweight = y_adjweight]; tabstat c03prefleavecntry_d c06conleavecntry_d c08wouldleave_d [aweight = y_adjweight], stat(mean) by(ra). Data are weighted to reflect the survey design.

Using the three dimensions in empirical analyses

If we assert that consideration, preference, and readiness for migration should all be included in empirical analyses, there are several ways of doing so.

First, they can be used as three separate variables. Table 2 exemplifies this use in descriptive statistics. In regression analyses where migration aspirations figure among the *independent variables*, consideration, preference, and readiness for migration can be included as separate dummy variables.[6] If migration aspirations are *dependent variables* (as in this MIGNEX Background Paper), it is possible to run parallel logistic regressions of consideration, preference, and readiness.

A second approach to using the three dimensions is to superimpose them to create a composite binary measure. We could define migration aspirations as the simultaneous presence of consideration *and* preference *and* readiness for migration. Doing so would mean retaining the simplification that a person either has migration aspirations or not, but the combination of three conditions might make this measure more targeted and robust, compared with the common approach of deriving migration aspirations directly from the response to a single question. The logic would be parallel to the conventional definition of unemployment, which combines the conditions of not being employed, *and* having actively sought employment *and* being available to take up an employment opportunity.[7]

Third, the three dimensions can be combined to create a *typology* of migration aspirations. A typology allows for distinguishing between several forms of migration aspirations without placing them in an ordinal sequence. While there are people who are squarely oriented towards leaving, and others who are squarely oriented towards staying, there are diverse ways of being positioned in between – as shown by the preceding discussion of the three dimensions. As part of the analysis of migration aspirations, we therefore seek to develop a new typology. In the empirical analyses that follow, we use both the typology and the three dimensions (consideration, preference, and readiness) separately.

A typology of migration aspirations

We have established that the typology should be based on the three dimensions – consideration, preference, and readiness – and that we measure each with a binary survey question. From this starting point there are many ways to proceed, methodologically and conceptually.

We choose an approach that builds upon the binary measurement of each dimension. The survey questions simplify each dimension as an either/or question, which means that they can be interpreted as *conditions*. In other words, we can say that each respondent exhibits a certain combination of the conditions *consideration*, *preference*, and *readiness* for migration.

[6] The possibility of strong correlations (depending on the data used) should, of course, inform both the modelling approach and the interpretation of results.

[7] The exact wording and specification of time frames differ but are not important here. This general approach to defining unemployment is used by the International Labour Organization (ILO), for instance.

In total there are *eight possible combinations*, illustrated as a Venn diagram in Figure 5. The large circle encompasses all respondents, while each of the smaller circles represents consideration, preference, and readiness, respectively. The overlaps represent combinations. Consequently, each respondent can be placed in one of the eight areas, depending on their responses. Area 1 contains respondents who exhibit *none* of the three conditions, area 8 contains respondents who exhibit *all* three conditions, and areas 2–7 represent all the combinations with one or two conditions.

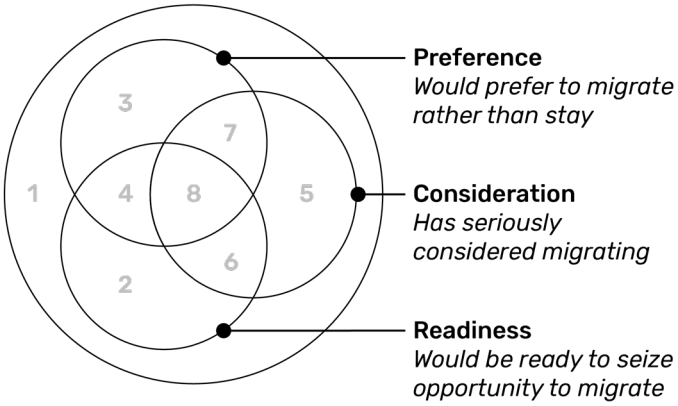

Figure 5 Venn diagram showing possible combinations of preference, consideration and readiness.

The eight possible combinations do not directly provide a meaningful typology with eight types. There are two reasons for this.

First, not all eight combinations are equally distinct from each other. Among respondents who exhibit neither preference nor readiness for migration, it is perhaps not decisive whether they have considered migration and decided against it, or not seriously considered it at all.

By contrast, among respondents who *would* prefer to migrate and *are* ready to do so, there is an important difference between those who have actively considered it during the past year, and those who have not but simply react to the proposition when it is brought up in the survey interview. In other words, consideration for migration is an important condition in some contexts, but not in others.

Second, some combinations of responses are common while others are rare. Table 3 shows the distribution of respondents among the 8 possible combinations of consideration, preference, and readiness, for the pooled survey dataset. The table also shows the lowest and highest value for each combination within any research area. For instance, the combination of all three conditions (area 8) includes 22.2% of respondents in the survey overall, but goes as low as 1.7% (in Keti Bandar, PAK3) and as high as 47.2% (in Awe, NGA2). Two of the possible combinations (3 and 7) do not occur at all in certain research areas.

The diversity of the research areas makes them a solid foundation of empirical input to a typology that can be applied more generally, beyond the MIGNEX project.

Table 3. Frequency of the eight possible combinations of consideration, preference and readiness for migration

	Conditions				*Extreme values among research areas (%)*	
Area in Figure 5	**Consideration**	**Preference**	**Readiness**	**Total (%)**	**Minimum**	**Maximum**
1	–	–	–	30.9	5.6	74.4
2	–	–	●	16.8	5.5	27.7
3	–	●	–	1.4	0.0	3.9
4	–	●	●	22.4	2.0	48.2
5	●	–	–	1.9	0.4	5.5
6	●	–	●	3.9	0.4	10.2
7	●	●	–	0.5	0.0	1.2
8	●	●	●	22.2	1.7	47.2
Total				100.0	–	–

Data source: MIGNEX Survey (mxs-prep-merge-2023-01-20.dta). N=12,575. Specifications: mx-mix-migasp-typology-v1p-2023-01-30.do. Data are weighted to reflect the survey design.

The two considerations – differences in the distinctiveness and frequency of the eight combinations– provide conceptual and empirical rationales for using the combinations selectively to create a typology that is *as simple as possible* yet *captures the most salient distinctions* in migration aspirations.

We propose a typology that we refer to as the Typology of three-dimensional migration aspirations. It uses the three dimensions to distinguish between five types, presented below. The simplification from eight possible combination to a typology of five categories is an analytical one, based on judgements of when and how each of the three dimensions make a difference.

No migration aspirations: preferring to stay and not being ready to seize the opportunity to migrate. Individuals with no migration aspirations might have considered migrating and decided against it, or they might not have thought about it at all.

Deferred migration aspirations: preferring to migrate, yet not being ready to seize the opportunity to do so. Migration aspirations are thus deferred, or placed on hold. It might be that the time is not right, for instance, or that current commitments make it too difficult to leave.

Ambivalent migration aspirations: preferring to stay, but being ready to seize the opportunity to migrate if it appeared. Ambivalent migration aspirations might, for instance, reflect a sense of obligation towards others (who would benefit from the migration), or being attuned to seizing whichever opportunities arise, without discriminating on the basis of preference.

Spontaneous migration aspirations: preferring to leave and being ready to seize the opportunity to do so, but not having given migration serious consideration. This form of migration aspirations are important from a

methodological point of view: they might reflect the influence of data collection itself on the attitudes expressed by the respondent.

Resolute migration aspirations: having seriously considered migrating, preferring to leave rather than stay, and being ready to seize the opportunity to do so. This type of migration aspirations is the strongest expression of determination to migrate.

The typology is illustrated in Figure 6, which builds upon Figure 5 and shows how the combinations of conditions are used to produce the five types. Table 4 presents the same definitions in tabular form.

Among the five types, *no migration aspirations* and *resolute migration aspirations* are extremes that are consistent with a binary approach to migration aspirations. But the three other types express ambivalence or inconsistency that reflect the complexity of migration decisions. While the types are roughly ordered from one extreme to the other in Table 4 and Figure 6, the typology is *not* an ordinal variable. In other words, there is no inherent ordering of the three middle types, which simply express complexity in different ways.

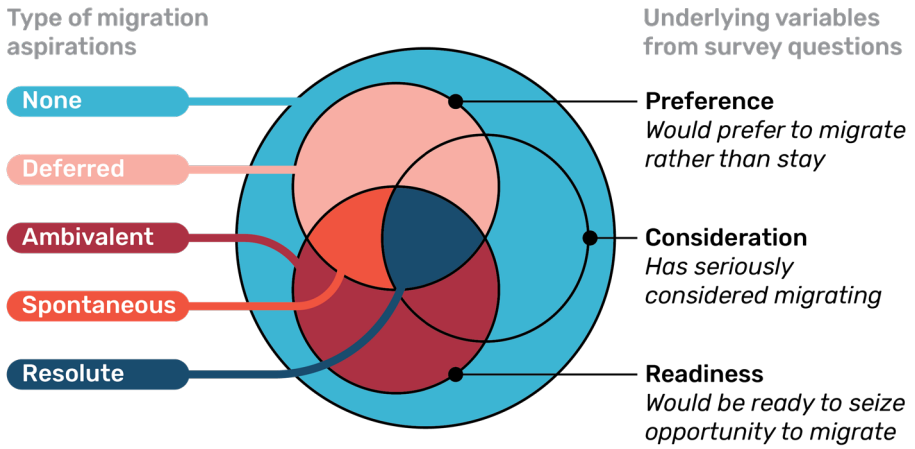

Figure 6. Venn diagram illustrating the Typology of three-dimensional migration aspirations

Table 4. Typology of three-dimensional migration aspirations

	Consideration	Preference	Readiness	
	Has seriously considered migrating	*Would prefer to migrate rather than stay*	*Would be ready to seize opportunity to migrate*	**Areas in Figure 5**
No migration aspirations	Yes or No	No	No	1, 5
Deferred migration aspirations	Yes or No	Yes	No	3, 7
Ambivalent migration aspirations	Yes or No	No	Yes	2, 6
Spontaneous migration aspirations	No	Yes	Yes	4
Resolute migration aspirations	Yes	Yes	Yes	8

Treatment of 'don't know' responses

The typology should be designed so that as few respondents as possible are dropped because of missing values, which by default result from responses of 'don't know' or 'refuse to answer'.

A considerable share of respondents answer 'I don't know' to the three questions that underpin the typology – especially the question on preference (C3. *Would you like to go and live in another country some time during the next five years, or would you prefer to stay in [Country]?*). The proportion of 'don't know' answers to this question is 2% for the survey overall and up to 8% for individual research areas.

The MIGNEX survey followed the best-practice approach of requiring a response to every question but always including 'don't know' and 'refuse to answer' as response options. Conventionally, both are treated as missing values. However, 'don't know' is open to different interpretations. First, it could reflect a lack of willingness to engage with the question, in which case 'don't know' provides no meaningful information about migration aspirations, only about levels of engagement or fatigue in the survey interview.

Second, don't know' might be interpreted as a substantive answer in between 'yes' and 'no'. A respondent who is in two minds about migration and is presented with a binary question about staying or going could most accurately express their state of mind by saying 'I don't know'. Alternatively, they would explain that they are unable to say one or the other, and the enumerator would be correct in recording 'don't know' as the most appropriate option.

In the MIGNEX survey, there are specific reasons for assuming that it is most appropriate to interpret 'don't know' as a substantive answer. Among the three questions, the one about consideration of migration has the lowest proportion of 'don't know' responses in every research area. For the survey sample overall, the proportion is 0.3%, compared to 1.9% for the question about preference. This is the only factual question among the three, referring to the respondent's own behaviour during the past year, and hence the one where not knowing is least plausible. However, this question also requires some mental effort. If 'don't know' responses mainly reflected fatigue or disengagement, their frequency would not be so consistently related to the content of the questions, but only to the effort required to answer.

Moreover, respondents who answered 'don't know' to more than 10% of the questions had the interview rejected in the quality assurance process and were replaced with new respondents. This too suggests that responses of 'don't know' reflect real engagement with the content of the question and can be interpreted as substantive answers.

When each condition is re-interpreted from a binary to a categorical variable with 'yes', 'don't know' and 'no' as nonmissing values, the number of possible combinations increases from 8 to 27. In other words, there are 19 additional situations that need to be allocated to one of the five types. We incorporate responses of 'don't know' in ways that reflect the conceptual distinctions

between each type. The handling of these responses can be summarized in four principles:

- The type *no migration aspirations* remains consistent, including only those respondents who say 'no' to the questions measuring preference and readiness.
- The types *resolute migration aspirations* and *spontaneous migration aspirations* both remain limited to respondents who say 'yes' to the questions measuring preference and readiness.
- The types *resolute migration aspirations* and *spontaneous migration* are distinguished by whether or not the respondent has seriously considered migrating during the past year. Not knowing if one has seriously considered migration or not is merged with not having seriously considered it.
- Responses of 'don't know' to the questions on preference *and* readiness are classified as *deferred migration aspirations*. The alternative would have been *ambivalent migration aspirations*, but it seems plausible that uncertainty about seizing an opportunity to migrate is more consistent with deference.

The allocation of 'don't know' responses according to these principles is illustrated in Figure 7. Though this approach eliminates loss of observations due to answers of 'don't know', missing values remain because of refusals to answer. In the MIGNEX data, they represent only 0.05% of the sample.

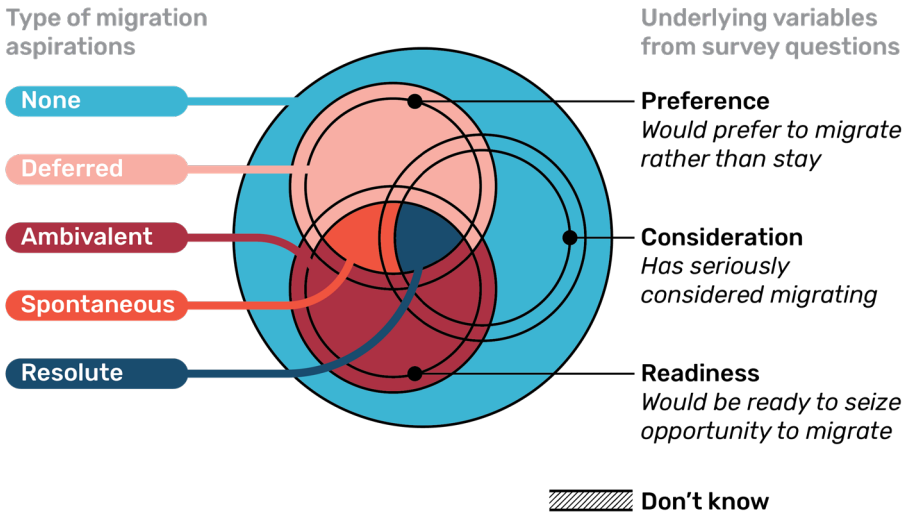

Figure 7 Classification of 'don't know' responses in the Typology of three-dimensional migration aspirations

Distribution of the five types per research area

Figure 8 presents the share of the five types of migration aspirations in each of the MIGNEX research areas. The areas are ordered by the ratio of *resolute migration aspirations* to *no migration aspirations*.

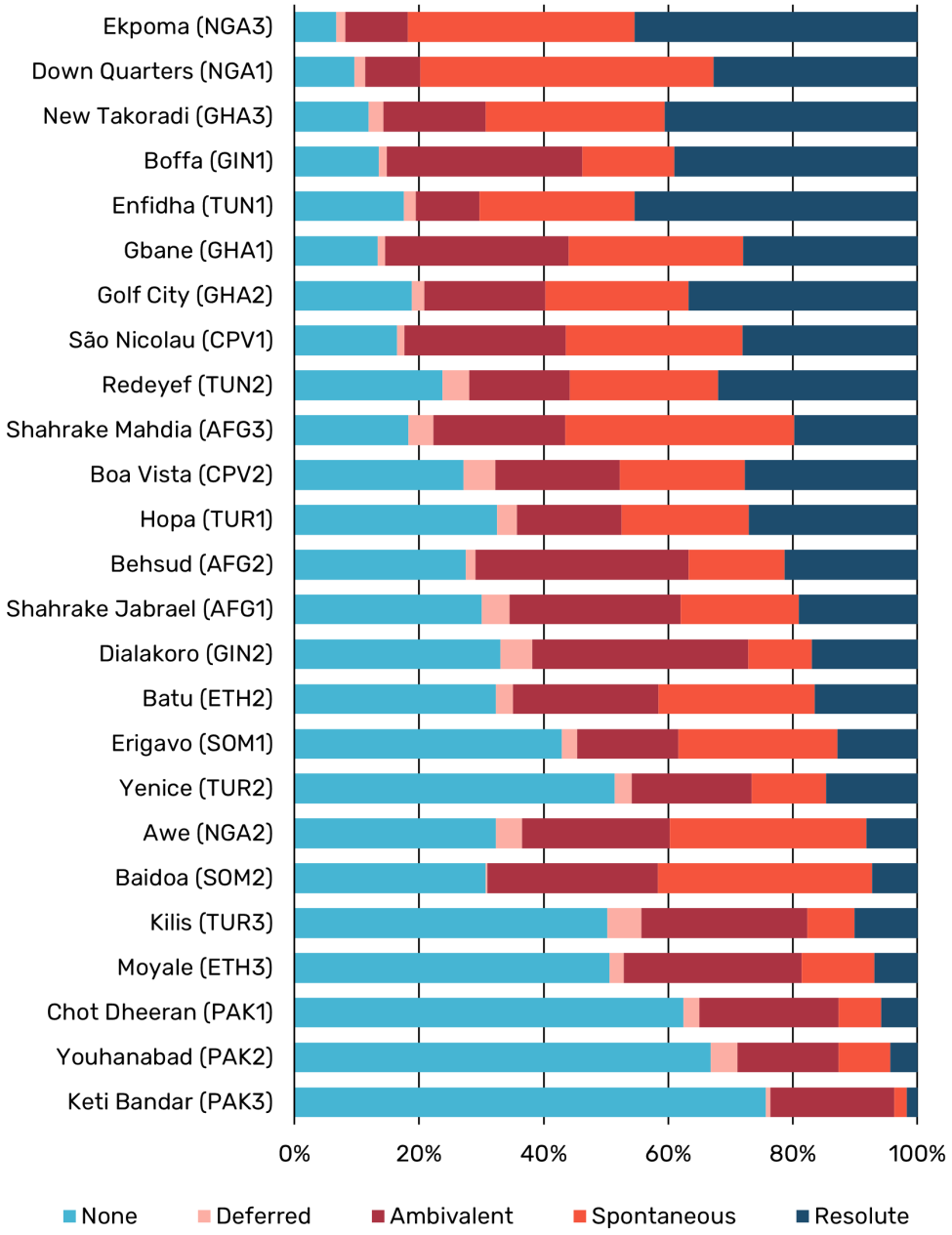

Figure 8. Types of migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,966. Data are weighted to reflect the survey design. Code: svy: tab ra typologyma_c5, row.

Other aspects of migration aspirations

The set of three dimensions – consideration, preference, and readiness – leaves out a range of other measures that have been used in past surveys but are not as conceptually robust (Carling, 2019; Carling and Mjelva, 2021; Carling and Schewel, 2018). For instance, asking whether respondents *intend* or *plan* to migrate can be misguided in settings where international migration is generally out of reach for people who would like to leave. It is akin to asking whether people 'intend to win the lottery'. Moreover, the verb intend is particularly poorly suited for translation.

Similarly, the set of three dimensions does not include *willingness* to migrate, which some surveys ask about. The problem with willingness is that it casts migration as something inherently undesirable, which it might be for some individuals but not for others. A survey question should map empirical differences, of course, but this mapping can be clouded if it intersects with disparities in awkwardness of the question itself. Consequently, the MIGNEX survey did not include questions about willingness to migrate.

Another dimension that we ask about in the MIGNEX survey, but keep apart from migration aspirations, is the *expectation* of migrating or staying. This is conceptually different from migration aspirations because it also incorporates perceptions of feasibility. Moreover, expressions of expectations are potentially quite sensitive to differences in personality and social norms. For people who wish to migrate, saying that they expect to be living abroad in five years' time is partly an affirmation of faith in their own success. The complexity of expectations does not make them uninteresting but calls for dedicated analyses rather than bundling with dimensions of migration aspirations.

Encouragement of migration

Migration decision-making is not always an individual concern. People can migrate for the sake of others, to enable others to stay, or even have decisions about their migration made by others. In the context of migration aspirations, we focus on one aspect of these interpersonal dimensions: encouraging others to migrate. It might be, for instance, that a woman who has young children and is reluctant to migrate encourages her husband to go and send remittances.

Our measure of migration encouragement is directly based on survey item 'C16. Have you ever encouraged anybody else in research area to go to a richer country?' The response options are 'Yes' and 'No', and the number of 'Don't know' and 'Refuse to answer' responses is very small at 15 and 4 observations, respectively.

Table 5 reports the proportion of respondents who have encouraged someone else to migrate across and by research area. On average, 24% of respondents have encouraged someone else to migrate across the 25 research areas. There is substantial variation by research area where the maximum proportion of 62% is observed in Redeyef (TUN2) and the minimum value of 3% is observed in Keti Bandar (PAK3). Interestingly, in some cases, the proportion of respondents who have encouraged others to migrate is similar across research areas within countries as is the case in research areas in Cabo Verde, Tunisia and Afghanistan. However, for most part, the prevalence of respondents who have encouraged others to migrate is very different across research areas within countries, such is the case in Nigeria, Ethiopia Guinea, and Ghana.

Table 5. Migration encouragement: prevalence (%) by research area

	Has encouraged someone else to migrate
São Nicolau (CPV1)	43
Boa Vista (CPV2)	44
Boffa (GIN1)	43
Dialakoro (GIN2)	14
Gbane (GHA1)	11
Golf City (GHA2)	30
New Takoradi (GHA3)	40
Down Quarters (NGA1)	34
Awe (NGA2)	9
Ekpoma (NGA3)	38
Batu (ETH2)	22
Moyale (ETH3)	9
Erigavo (SOM1)	11
Baidoa (SOM2)	4
Enfidha (TUN1)	56
Redeyef (TUN2)	62
Hopa (TUR1)	18
Yenice (TUR2)	12
Kilis (TUR3)	6
Shahrake Jabrael (AFG1)	22
Behsud (AFG2)	17
Shahrake Mahdia (AFG3)	26
Chot Dheeran (PAK1)	11
Youhanabad (PAK2)	5
Keti Bandar (PAK3)	3
Minimum	3
Maximum	62
Median	18
Mean	24

Data source: MIGNEX Survey (mxs-prep-merge-2023-01-11.dta). N=12,774. Data are weighted to reflect the survey design.

Measures of migration preparations

Migration aspirations are one component in the causal chain towards migration outcomes. Migration preparations provide another angle as they capture actions taken to effectively migrate, including actual planning and preparations to apply to visas, get a passport, obtain information from migrant networks. It is possible that a high fraction of any given population may be interested in moving abroad but a lower proportion will actually prepare to migrate and have the ability to do so (Migali and Scipioni, 2019).

A recent study examining the link between migration preparations and migration flows shows that on average a 1% increase in emigration plans or preparations increases migration flows by 0.75% (Tjaden, Auer and Laczko, 2019). This ratio is weaker in developing countries and varies substantially by context. Overall, it remains unclear whether the proportion of those who are planning or preparing to migrate is closely related to actual migration outcomes and flows (ibid).

Studies of potential migration sometimes cover preparatory steps that prospective migrants might take, such as seeking information or applying for a visa. Preparations for migration can obviously be of interest but are best separated from migration aspirations as such. It can be misleading to see preparations as a general marker of more sincere migration aspirations. For instance, people who are well-informed can refrain from taking preparatory steps such as submitting an expensive visa application if they know that it will almost certainly be rejected.

It is also exceedingly hard to measure preparations for migration in a survey that spans diverse societies and migration contexts. Apparently relevant preparations – such as applying for a visa or enquiring about employment opportunities – might not be the most pertinent in any given context. Respondents who have indicated to have not taken such steps might simply be preparing in less conventional ways, such as attending a prayer camp, which the MIGNEX survey fails to capture.

Moreover, preparatory steps might be diffuse and hard to identify as such. Building relationships with people who live abroad, for instance, might be among the most effective strategies for facilitating migration. Still, it is something that individuals might do with diverse and mixed motivations. Determining whether it should be interpreted as preparation for migration might be difficult in an in-depth interview, let alone in a standardised survey. Preparatory steps, like expectations, thus fall in the category of variables that may yield important insights but are poorly suited as overall measures of migration aspirations.

Migration preparations for emigration have been captured in the literature by survey items such as these: 'Have you done any preparation for this move (for example, applied for residency or visa, purchased the ticket, etc.)?' 'During the past five years, have you obtained a visa for going to Europe?' 'Have you applied for one during the past five years?' (Ersanilli, Carling, and de Haas, 2011). In a similar vein, the MIGNEX dataset incorporates comparable survey items which allow us to measure three different types of migration preparations: general migration preparations, preparations made by obtaining a passport and preparations made by applying for a visa. These three measures reflect a spectrum of concrete actions taken to migrate, where there is often a decline in prevalence as we move along the continuum of concreteness (Carling and Schewel, 2020).

Operationalisation of migration preparations

We employ three measures of migration preparations. The first measure is 'Has prepared but was unable to migrate (past 5 Years)', which is based on survey item 'C10. In the past five years, have you ever prepared to move to another country, but not been able to go?'. The response options are 'Yes' and 'No'; the 'Don't know' and 'Refuse to answer' responses are relatively low at 35 and 5 observations, respectively. We use this survey item as it is as it is clearly about migration preparations.

The other two variables capture concrete migration preparations of obtaining a passport and applying for a visa. However, since both a passport and a visa could be used for non-migration purposes too, (for instance, a

passport to register to vote or a visa for a holiday), we place a further restriction on the these two variables, restricting them to the sub-sample of respondents who would be willing to migrate if given papers. As such, we ensure that these responses do indeed capture migration aspirations.

The second measure of migration preparations is 'Has valid passport and would migrate to richer country if given papers' which captures more serious migration preparations of getting documentation. This variable is generated based on three survey items: 'C08. If someone were to give you the necessary papers to live and work in a richer country, would you go, or would you stay in (country)?'; 'C11. Have you ever had a passport for international travel?' and 'C12. And do you have a valid passport now?' More specifically, this measure equals '1' or 'Yes' if the respondent indicated to have a valid passport now and to be willing to go if someone gave them the necessary papers to live and work in a richer country. Moreover this measure equals '0' or 'No' in three scenarios: 1) if the respondent has a valid passport now but would stay in country if someone gave them the necessary papers to live and work in richer country; 2) if the respondent does not have a valid passport now or has never had a valid passport and would like to go if someone gave them the necessary papers to live and work in richer country; and 3) if the respondent does not have a valid passport now or has never had a valid passport and is not willing to go if someone gave them the necessary papers to live and work in richer country.

The third and last measure of migration preparations is 'Has applied for visa and would migrate for richer country if given papers' which aims to capture a further step in the preparation process of migration by applying for a visa. This measure is generated based on combinations of three survey items: 'C08. If someone were to give you the necessary papers to live and work in a richer country, would you go, or would you stay in (country)?'; 'C10. In the past five years, have you ever prepared to move to another country, but not been able to go?' and 'C13. the past five years, did you apply for a visa for going to a richer country?' More precisely, this variable equals '1' or 'Yes' if the respondent applied for a visa for going to a richer country in the past five years, and it equals '0' or 'No' in three cases: 1) If the respondent applied for a visa for going to a richer country in the past five years and would not be willing to go if someone gave them the necessary papers to live and work in richer country; 2) If the respondent did not apply for a visa for going to a richer country in the past five years or has never prepared to move to another country and would be willing to go if someone gave them the necessary papers to live and work in richer country; or 3) If the respondent did not apply for a visa for going to a richer country in the past five years or have never prepared to move to another country and would not be willing to go if someone gave them the necessary papers to live and work in a richer country.

Table 6 shows the prevalence of each of the three measures of migration preparations by research area, as well as the pairwise correlation between the three variables. Among the three measures, the highest prevalence is observed for the variable 'Has prepared but was unable to', where on average 17% of respondents have prepared to migrate but have not been able to do so across the 25 research areas. The other two measures show a lower average proportion of respondents who have prepared with a passport (9%) or with a visa (3%).

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Table 6. Migration preparations: prevalence and pairwise correlations by research area

	Prevalence (%)			*Pairwise correlation coefficients*		
	Prepared, but unable	**Passport and ready**	**Visa and ready**	**Prepared, but unable × Passport and ready**	**Prepared, but unable × Visa and ready**	**Passport and ready × Visa and ready**
São Nicolau (CPV1)	20	23	8	0.462	0.629	0.375
Boa Vista (CPV2)	20	22	8	0.279	0.538	0.320
Boffa (GIN1)	15	3	2	0.253	0.363	0.332
Dialakoro (GIN2)	15	1	0	0.034	0.167	-0.006
Gbane (GHA1)	8	2	0	0.346	0.166	0.351
Golf City (GHA2)	21	19	8	0.401	0.599	0.481
New Takoradi (GHA3)	23	14	3	0.269	0.373	0.289
Down Quarters (NGA1)	14	3	3	0.347	0.450	0.553
Awe (NGA2)	3	1	1	0.100	0.427	0.312
Ekpoma (NGA3)	23	5	3	0.408	0.341	0.518
Batu (ETH2)	18	6	5	0.197	0.445	0.189
Moyale (ETH3)	17	2	1	0.189	0.223	0.260
Erigavo (SOM1)	15	6	3	0.343	0.432	0.357
Baidoa (SOM2)	9	20	2	0.094	0.366	0.202
Enfidha (TUN1)	34	25	7	0.345	0.379	0.361
Redeyef (TUN2)	31	23	6	0.308	0.385	0.338
Hopa (TUR1)	13	10	5	0.348	0.544	0.492
Yenice (TUR2)	3	5	1	0.179	0.527	0.381
Kilis (TUR3)	4	3	1	0.021	0.409	0.121
Shahrake Jabrael (AFG1)	41	13	7	0.122	0.291	0.362
Behsud (AFG2)	31	13	7	0.183	0.465	0.303
Shahrake Mahdia (AFG3)	32	11	2	0.162	0.200	0.243
Chot Dheeran (PAK1)	8	4	2	0.345	0.398	0.510
Youhanabad (PAK2)	5	2	1	0.216	0.409	0.510
Keti Bandar (PAK3)	5	0	0	0.000	0.271	0.000
Minimum	3	0	0	0.000	0.166	-0.006
Maximum	41	25	8	0.462	0.629	0.553
Median	15	6	3	0.253	0.398	0.338
Mean	17	9	3	0.248	0.392	0.340

Data source: MIGNEX Survey (mxs-prep-merge-2023-01-11.dta). N=12,774. Data are weighted to reflect the survey design.

Likewise, the minimum and maximum proportions across the 25 research areas vary by migration preparation measure. For the measure 'Has prepared but was unable to migrate', Shahrake Jabrael (AFG1) shows a maximum average value of 41% while Yenice (TUR2) exhibits the lowest proportion at 3%. The percentage of respondents who have a 'valid passport and would migrate to richer country if given papers' is generally lower than those who prepared but were unable to, and it reaches a maximum of 25% in Enfidha (TUN1) and a minimum value of 0% in Keti Bandar (PAK3). Lastly, the measure 'Has applied for visa and would migrate for richer country if

given papers' gathers the lowest proportion of respondents with a maximum of 8% in São Nicolau (CPV1) and a minimum of 0% in several research areas.

There is some variation in the prevalence of migration preparations by research area, but for most part, research areas with the highest proportions of respondents who have prepared but were unable to leave also exhibit the highest percentage of those who have prepared by having a passport or by applying to a visa, with some exceptions. Research areas within Turkey, Somalia, Nigeria and Ghana in particular exhibit more heterogenous trends. For instance, in Baidoa (SOM2), 20% of respondents have a valid passport and would migrate to a richer country if given papers, compared to only 9% who have prepared but have been unable to leave and 2% who have applied for a visa and would migrate to a richer country if given papers. For most research areas, there is a sharp decline in the prevalence of preparations as we move from general preparations to more specific ones such as having a passport and applying for visa.

Lastly, there is some correlation between these three measures of migration preparations, but this varies substantially by research area. The measures 'Has prepared but was unable to migrate' and 'Has applied for visa and would migrate for richer country if given papers' exhibit the highest levels of correlation, with an average correlation of 0.392 and a maximum coefficient of 0.629 in São Nicolau (CPV1). On the other hand, the correlation between 'Has prepared but was unable to migrate (past 5 years)' and 'Has valid passport and would migrate to richer country if given papers' is the lowest among the three with an average corelation coefficient of 0.248.

Summary of dependent variables

Table 7 gives an overview of the nine dependent variables that have been presented in the preceding sections. The table shows the range in prevalence of the measures: almost two thirds of respondents say they would be ready to seize the opportunity to migrate to a richer country, while only 22% comply with the narrower definition of having resolute migration aspirations. As expected, specific preparations are rare in comparison.

Table 7. Dependent variables, prevalence in pooled sample (%)

Dependent variables	Prevalence
Migration aspirations	
Consideration: Has seriously considered international migration (past year)	29
Preference: Would prefer to leave (next 5 years)	46
Readiness: Would migrate to richer country if given papers	65
Has resolute migration aspirations	22
Has no migration aspirations	32
Encouragement of migration	
Has encouraged someone else in research area to migrate	24
Migration preparations	
Has prepared but was unable to migrate (past 5 years)	17
Has valid passport and would migrate to richer country if given papers	9
Has applied for visa and would migrate to richer country if given papers	3

Data source: MIGNEX Survey (mxs-restricted-v1.dta). N=12,966. Data are weighted to reflect the survey design.

Independent variables

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In modelling the multi-level determinants of migration processes, we consider the effect of different independent variables at the individual and research-area level. These variables relate to the different domains of root causes, to migration experiences, networks and other individual and research area characteristics that might explain migration processes. Table 8 gives an overview of the groups of independent variables. In total these amount to 41 independent variables. Figure 9 similarly shows how the variables are distributed across the groups as they were presented in the conceptual framework.

Table 8. Groups of independent variables

	Level of measurement	
Independent variables	**Individual**	**Research area**
Root causes		
Livelihoods and poverty	●	●
Governance and public services	●	●
Security and conflict	●	●
Environmental hazards and stresses		●
Migration-related factors		
Migration experience and networks	●	
Culture of migration		●
Other individual characteristics	●	
Other research area characteristics		●

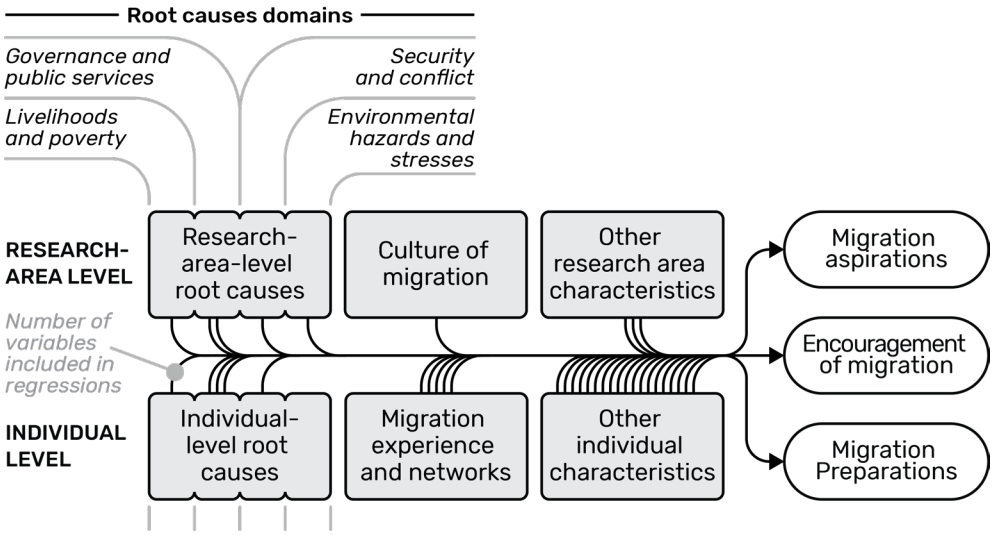

Figure 9. Two levels of influences on migration processes: variables included

Note: each curve contributing to the arrow represents one variable in conceptual terms (such as 'age') which in some cases is more than one variable in technical terms (such as a linear and squared terms for age).

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In preparing for the analysis, we first considered relevant variables within a group based on the conceptual framework, existing literature, and the available survey items from the MIGNEX survey. We then operationalised these variables by both selecting a survey item and developing indices that were then included in the regression analysis. In the following sub-sections, we give a more detailed description of how we operationalised the variables relating to these different groups of independent variables, justifying our choice on the basis of the survey data.

Root causes

Root causes of migration play a key role in MIGNEX analyses. Drawing on the conceptual framework discussed above and building on previous literature we define four domains of root causes:

I Livelihoods and poverty
II Governance and public services
III Security and conflict
IV Environmental hazards and stresses

Before justifying our selection of these four domains and the variables that constitute them, we introduce our general principles for operationalisation of root causes.

General principles for operationalisation of root causes

Each of the root cause domains contains several variables that denote the severity or hardship of each root cause. These variables are the result of the root causes operationalisation process, in which we summarise the information contained in 24 variables into ten variables and indices, explained below. In order to maximise the comparability between these domains and variables, we have defined a series of operationalisation principles that guide the transformation of the aforementioned variables into the ten main variables. They are as follows:

1. **Variables denote hardships.** When selecting a unique variable, or constructing an index, we include it in the form of the severity or hardship. While many of the survey questions were asked to capture how hard or difficult things were experienced by the respondents, this was not always the case. A good example of this is the 'Disapproval of government' which is the average of two variables, the 'Perception of the central government' and the 'Perception of the local government'. Originally both variables were measured in the survey with a 1 to 10 scale for which 1 is 'Terrible' and 10 is 'Excellent'. Therefore, before estimating the average between these two variables, it was necessary to reverse its values so 1 would indicate 'Excellent' and '10' would indicate 'Terrible' and the index would be expressed in terms of the hardship.

2. **Variables can be unique variables or composite indices.** There are mainly three ways in which the variables were operationalised:

- Unique variables: in some cases, we simply include one unique variable directly from one MIGNEX survey item.

- Indices made of only two variables: indices that contain only two variables, expressed on the same scale (or recalibrated to have the same scale), are made of the average of both variables. In the cases where missing values are encountered in the variables that constitute the index, we only include the available information for one of the two variables. If both variables contain a missing value, then the value of the index is missing.
- Indices that include more than two variables: these indices are constructed with the first component resulting from a Polychoric Principal Component Analysis. For all indices constructed this way, more than 50% of the variation is retained in the first component.

3. **Variables have the same (continuous) scale from 1 to 4 points**. In order to make the effects of these various variables as comparable as possible, we define a standard scale for all of them. We opted for a continuous four-point scale as it allows to capture as much variability as possible, based on the structure of most survey items. For example, many of the perception-based items include four possible ordinal responses to capture respondents' ranked preferences or perceptions. By including these four-point scales, we can capture stronger preferences or perceptions regarding a given dimension. Working with a standard four-point scale allows greater and easier comparability between variables, but also facilitates the operationalization process in which various indices are built from different variables. When a survey item did not have a predefined four-point scale, we adjusted responses to follow the same scale.

Levels of independent variables

As explained above, we focus on two levels: individuals and research areas. We operationalise root causes at each level based on the following definitions.

- *Individual level root causes:* these constitute individual perceptions of research area conditions. For example, a respondent's perception of how easy or difficult it is to find a job in the research area constitutes an individual level root cause perception.

- *Research area level root causes:* these constitute research area level incidences of individual experiences. For example, the level of poverty of a research area constitutes a research area level measure of the *Poverty* variable, which is estimated at the individual level.

By combining complementary information at both levels, we aim to capture several sources of variability that contribute to explaining the dependent variables, for our pooled data set.

We now discuss the relevant literature relating to each of the four root cause domains. Based on this, we then proceed to justify how we have operationalised the four domains.

I. Livelihoods and poverty

Of all the root causes, livelihoods and poverty are probably the most prominent. 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 / amongst the poorest people is often lower, because of their lower ability to migrate (Castles, 2000; de Haas, 2007; Nyberg–Sørensen et al., 2002) but perhaps also because they may feel more constrained in their aspirations (Carling, 2002). The empirical evidence on the relevance of this domain is large, often considering 'economic opportunities' more generally. Studies find that poverty alone acts as a root cause of migration under certain conditions and some parts of the world (Skeldon, 2022), while the evidence on (lack of/ poor) livelihoods and economic opportunities overwhelmingly points to the importance of these factors in contributing – at least in part – to migration decisions (Aslany et al., 2021; Carling and Talleraas, 2016; Hagen-Zanker and Mallett, 2016; OECD, 2017; Van Hear et al., 2018).

In the operationalisation of the Livelihoods and Poverty domain, we draw on two main variables, see Table 9.

Table 9. Livelihoods and Poverty root cause overview

	Level of measurement	
Variables	**Individual**	**Research area**
Livelihoods hardships	●	
Poverty		●

In the following we discuss each variable in greater detail and account for its operationalisation and implementation. In conjunction with presenting the two variables included and their construction, we also display the values for each component by research area.

I.I Livelihoods hardships

Within the Livelihoods and Poverty domain, the main aim of the *Livelihoods hardships* variable is to capture livelihoods hardships experienced by individuals that can result in migration aspirations or other migration outcomes. As an individual-level variable, we consider those *individual perceptions* of *research area-level* livelihood hardships to which migration could be a possible response. We operationalise livelihoods through the means of two main dimensions: *the labour market* and *meeting basic needs*. Each of these two dimensions is represented by one survey item in the MIGNEX questionnaire. The Livelihoods hardships variable is then the arithmetic mean of these two items.

- Labour market: in terms of labour market, we consider perceptions with regards to ease of finding a job in the area. This dimension refers to perceptions of current job prospects within the research area, drawing

on survey item B1 'How easy or difficult is it to find a good job in [RESEARCH AREA]?', with '1' referring to 'very easy' and '4' referring to 'very difficult'. Given this is an ordinal variable and the principles for operationalised outlined above, we include the variable unchanged in the calculation of the *Livelihoods hardships* variable. As shown in Table 10, the average value for this variable at the research area is 3.4, suggesting that on the whole respondents find it more difficult to find a job. This ranges from 2.6 in Erigavo (SOM1) to 3.7 in Gbane (GHA1) suggesting that respondents in Erigavo perceive it easier to find a job, compared to respondents in the latter research area.

- Meeting basic needs: in terms of meeting basic needs, we consider perceptions on the current conditions to earn a living and feeding a family in the research area. We draw on survey item B6 'In general, do you find that earning a living and feeding a family in [RESEARCH AREA] is…', with '1' referring to 'Easy', '2' 'Manageable' and '3' referring to 'Difficult'.

Table 10. Livelihoods hardships summary statistics

	Dimensions of livelihood		
Research area	**Labour market**	**Meetings basic needs**	**Livelihoods hardships (index)**
São Nicolau (CPV1)	3.2	3.5	3.3
Boa Vista (CPV2)	2.9	3.6	3.3
Boffa (GIN1)	3.6	3.6	3.6
Dialakoro (GIN2)	3.6	3.0	3.3
Gbane (GHA1)	3.7	3.4	3.6
Golf City (GHA2)	3.5	3.0	3.2
New Takoradi (GHA3)	3.6	3.2	3.4
Down Quarters (NGA1)	3.5	3.3	3.4
Awe (NGA2)	3.4	3.1	3.3
Ekpoma (NGA3)	3.4	3.3	3.3
Batu (ETH2)	3.2	3.5	3.3
Moyale (ETH3)	3.6	3.5	3.5
Erigavo (SOM1)	2.6	2.8	2.7
Baidoa (SOM2)	3.0	3.1	3.1
Enfidha (TUN1)	3.3	3.2	3.2
Redeyef (TUN2)	3.6	3.3	3.4
Hopa (TUR1)	3.0	2.5	2.8
Yenice (TUR2)	3.1	2.0	2.6
Kilis (TUR3)	3.6	3.5	3.5
Shahrake Jabrael (AFG1)	3.3	3.7	3.5
Behsud (AFG2)	3.7	3.8	3.8
Shahrake Mahdia (AFG3)	3.7	3.8	3.7
Chot Dheeran (PAK1)	3.1	3.1	3.1
Youhanabad (PAK2)	3.2	3.2	3.2
Keti Bandar (PAK3)	3.5	3.6	3.5
Total	3.4	3.3	3.3
Minimum	2.6	2.0	2.6
Maximum	3.7	3.8	3.8
N	12,844	12,926	12,924

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,926 (12,926 for 'Meeting basic needs'). Data are weighted to reflect the survey design. Specifications: mxs-gen-root-causes-v1-2023-07-11.do.

While the answers are already coded to denote hardships, the answers had to be rescaled to a scale from 1 to 4 points so both dimensions (labour market and meeting basic needs) are on the same scale before calculating the arithmetic mean between them. As shown in Table 10, the average value for this variable at the research area is 3.3 – suggesting that respondents do tend to find it difficult to meet basic needs – and ranges from 2.0 in Yenice (TUR2) to 3.9 in Behsud (AFG2) suggesting that most respondents in Behsud find it difficult to earn a living and feeding a family, whereas in Yenice, on average, respondents perceive this to be easier.

When constructing the *Livelihoods hardships* variable and missing values were encountered in any of these two survey questions, we followed the general principle for operationalising root causes constructed with only two variables. That is, when missing values are encountered, we include only the available information for one of the two questions. If both questions contained a missing value then the value of the Livelihoods hardships variable was missing.

Table 10 summarises the mean value of the *Livelihoods hardships* variable per research area, together with the value of both of the survey items that were used to construct it.

I.II Poverty

Within the Livelihoods and Poverty domain, we also construct a research area-level variable to capture the overall poverty level of each research area. We define *Poverty* as a condition in which households lack sufficient income and/or resources to meet their basic needs, leading to a lack of access to adequate food, housing, health care, education and other essential goods and services.

Our *Poverty* variable is estimated as the research area's mean value of two dimensions: household's current financial situation and its hunger frequency. Our measurement of poverty, therefore, implies examining the following two fundamental dimensions.

- Household's current financial situation: this dimension focuses on the perceived household current financial situation drawn from the survey item I4 'Thinking about your household's current financial situation, would you say your household is…' where '1' denotes 'Finding difficult to get by' and '3' denotes 'Living comfortably'. Before merging the information of this question with the hunger frequency question, the answers had to be reverses so they would represent an ordinal scale of hardships, that is with '1' denoting 'Living comfortably' and '3' 'Finding difficult to get by'. Subsequently we also rescale these values so they would be 4 points scale (this is that the original value 1 remains 1, value 2 changes to 2.5, and value 3 changes to 4). As Table 11 shows, the average household current financial situation varies greatly between research areas, with São Nicolau (CPV1) having the lowest average with 1.9 points and Kilis (TUR3) the highest average with 3.2 points. While, on average, in São Nicolau people think they are living comfortably, in Kilis a large group of people find it difficult to get by.

- Frequency of hunger: the second dimension included is the level of food insecurity and hunger experienced by a household. To account for this we draw on the survey item I8 where we asked *'Over the past month, how many times have you or anyone in your household gone to sleep without having had enough food to eat that day?'* and for which '1' represents 'Never' and '4' represents 'Always'. As this variable already denotes a hardship and is scaled in a 4 points scale, no transformations were necessary. Even though the overall average is relatively low with 1.3 points, indicating that the majority of the sample rarely experienced hunger, it is striking to see that in some research areas hunger has been experienced two times more often than in other ones. While in Hopa and Yenice in Turkey, no one declared to have experience hunger over the past month, we see that in Awe (NGA2) the average is 1.8 points, which means that roughly 60% of the sample answered 'sometimes', 'often', or 'always' to this question.

Table 11. Poverty summary statistics

	Dimensions of poverty		
Research area	**Household financial situation**	**Hunger frequency**	**Poverty (index)**
São Nicolau (CPV1)	1.9	1.1	1.5
Boa Vista (CPV2)	2.3	1.2	1.7
Boffa (GIN1)	2.9	1.3	2.1
Dialakoro (GIN2)	2.9	1.2	2.1
Gbane (GHA1)	2.9	1.5	2.2
Golf City (GHA2)	2.4	1.2	1.8
New Takoradi (GHA3)	2.4	1.2	1.8
Down Quarters (NGA1)	2.7	1.7	2.2
Awe (NGA2)	2.9	1.8	2.4
Ekpoma (NGA3)	2.6	1.6	2.1
Batu (ETH2)	2.7	1.2	2.0
Moyale (ETH3)	3.0	1.7	2.3
Erigavo (SOM1)	1.9	1.3	1.6
Baidoa (SOM2)	2.3	1.3	1.8
Enfidha (TUN1)	2.3	1.1	1.7
Redeyef (TUN2)	2.3	1.1	1.7
Hopa (TUR1)	2.2	1.0	1.6
Yenice (TUR2)	2.2	1.0	1.6
Kilis (TUR3)	3.2	1.1	2.2
Shahrake Jabrael (AFG1)	3.1	1.3	2.2
Behsud (AFG2)	2.9	1.6	2.3
Shahrake Mahdia (AFG3)	2.9	1.3	2.1
Chot Dheeran (PAK1)	3.0	1.2	2.1
Youhanabad (PAK2)	3.0	1.1	2.0
Keti Bandar (PAK3)	3.1	1.5	2.3
Total	2.7	1.3	2.0
Minimum	1.9	1.0	1.5
Maximum	3.2	1.8	2.4
N	12,951	12,916	12,973

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,973 (12,973 for 'Poverty'). Data are weighted to reflect the survey design. Specifications: mxs-gen-root-causes-v1-2023-07-11.do.

By including both the financial situation and the frequency of hunger experienced, we can construct a complete measure of poverty that accounts for both perceptions of the ability to meet basic needs but also the occurrence of extreme poverty proxied by hunger frequency.

As previously mentioned, the *Poverty* variable is the mean of both variables, we give equal weight to both dimensions and we follow the general principle for dealing with missing as outlined above.

Table 11 summarises the mean value of the *Poverty* variable per research area, together with the value of the survey items that are used to construct it. As can be seen from the table averaging, both variables bring nuance to the research area values and rank them differently than if we had only focused on the household current financial situation or the frequency of hunger.

II. Governance and public services

In addition to outright conflict, political repression and weak governance (or lack thereof), unreliable or poor access to basic services may also drive migration. This domain refers to a country or local area's political system, how it functions and the quality of its institutions. 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). Yet, except in the most obvious cases, it can be challenging to disentangle governance from economic motivations, as poor political conditions are often closely linked to poor economic conditions (Aslany et al., 2021; de Haas, 2011b). Along the same line, it can be hard to assess whether high levels of corruption are a direct driver of migration or whether corruption has an indirect effect through lower levels of economic development (Carling et al., 2015). Likewise, the provision of reliable public services, such as healthcare and education, can be perceived as a sign of political and economic stability as well as seen as a driver on their own (Aslany et al., 2021). Indeed, the existing literature shows that it is often a combination of factors that drives migration decisions. For instance, despite political repression and limited freedom of speech, out-migration from Gulf countries is low (de Haas, 2011b), in part because the political contract ensures citizens have access to well-paid jobs and generous benefits. On the whole, however, existing studies do point towards a positive correlation between poor governance and migration aspirations, that is: the worse the perceptions of governance, the lower the satisfaction with the government's institutions and so on, the higher the migration aspirations (Aslany et al., 2021). Likewise, the provision of reliable public services (such as education, health) tends to be associated with a decrease of migration aspirations (Aslany et al., 2021). For instance, Dustmann and Okatenko (2014) show contentment with public services to be almost as important a driver of migration aspirations as personal wealth.

In this paper, we operationalise the (perceived) quality of trust in governance and public services through the means of four key variables, three at the individual level and one at the research-area level (see Table 12).

Table 12. Governance and public services root cause overview

	Level of measurement	
Variables	**Individual**	**Research area**
Discontent with public services	●	
Distrust in institutions	●	
Disapproval of government	●	
Corruption experience (%)		●

In the following we discuss each variable in greater detail and account for its operationalisation and implementation. In conjunction with presenting the components (variables) included in their construction, we also display the values for each component by research area.

II.I Discontent with public services

Our first variable in this domain is *Discontent with public services* that aims to capture the quality of public services as perceived by each respondent. We operationalise public services through the means of two main dimensions: the perceived quality of schools and the perceived quality of formal health care. Each of these two dimensions is represented by one survey item. The *Discontent with public services* variable is then the arithmetic mean of these two items.

- Quality of schools: in terms of the perceived quality of schools, we use survey item A31 'Overall, would you say schools in [RESEARCH AREA] are…' with '1' referring to 'very bad' and '5' referring to 'very good'. Following our operationalisation principles, we reverse the scale so it denotes hardships. As shown in Table 13, the average value for this variable at the research area is 2.7, suggesting that, on the whole, respondents find the quality of schools in their research areas fair. It ranges from 2.0 in Golf City (GHA2) to 3.7 in Shahrake Mahdia (AFG3) suggesting that respondents in Golf City perceive the quality of their schools to be more good than bad, compared to respondents in the latter research area that find the quality of the schools in Shahrake Mahdia somewhere between bad and very bad.
- Quality of formal health care: in terms of the perceived quality of health care, we draw on the survey item D4 'Generally speaking, would you say formal health care in [RESEARCH AREA] is…', with '1' referring to 'Very bad' and '5' referring to 'Very good'. Following our operationalisation principles, we reverse the scale so it denotes hardships. As shown in Table 13, the average value for this variable at the research area is 3, suggesting that on the whole respondents find the quality of health care in their research areas fair, but slightly worse than education. It ranges from 2.2 in Awe (NGA2) to 4.1 in Keti Bandar (PAK3) suggesting that respondents in Awe perceive the quality of health care to be more good than bad, compared to respondents in Keti Bandar, who find the quality of health care very bad.

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Table 13. Discontent with public services summary statistics

Research area	*Dimensions of public services*		**Discontent with public services (index)**
	Schooling quality	**Health care quality**	
São Nicolau (CPV1)	2.4	3.3	2.4
Boa Vista (CPV2)	2.7	3.7	2.7
Boffa (GIN1)	2.4	2.4	2.1
Dialakoro (GIN2)	3.0	3.3	2.6
Gbane (GHA1)	2.5	2.7	2.2
Golf City (GHA2)	2.0	2.5	1.9
New Takoradi (GHA3)	2.1	2.3	1.9
Down Quarters (NGA1)	2.6	2.7	2.2
Awe (NGA2)	2.2	2.2	1.9
Ekpoma (NGA3)	2.5	2.7	2.2
Batu (ETH2)	2.5	2.4	2.1
Moyale (ETH3)	2.8	3.0	2.4
Erigavo (SOM1)	2.6	3.0	2.4
Baidoa (SOM2)	2.1	2.5	2.0
Enfidha (TUN1)	3.3	3.6	2.8
Redeyef (TUN2)	3.2	4.0	3.0
Hopa (TUR1)	3.0	3.2	2.6
Yenice (TUR2)	2.8	3.0	2.4
Kilis (TUR3)	2.7	2.7	2.2
Shahrake Jabrael (AFG1)	2.8	2.9	2.4
Behsud (AFG2)	3.3	3.8	2.9
Shahrake Mahdia (AFG3)	3.7	3.5	3.0
Chot Dheeran (PAK1)	2.2	2.7	2.1
Youhanabad (PAK2)	2.6	3.3	2.4
Keti Bandar (PAK3)	3.7	4.1	3.1
Total	2.7	3.0	2.4
Minimum	2.0	2.2	1.9
Maximum	3.7	4.1	3.2
N	12,685	12,836	12,935

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,935 (12,935 for 'Discontent with public services'). Data are weighted to reflect the survey design. Specifications: mxs-gen-root-causes-v1-2023-07-11.do.

While the scale for both survey items was already reversed to denote hardships, the *Discontent with public services* variable still had to be rescaled to a 1 to 4 points scale as both variables were originally coded on 1 to 5 points scales. As shown in Table 13, the average value for the *Discontent with public services* is of 2.4 points – suggesting that respondents tend to find the quality of public services across all research areas more bad than good, though not drastically bad. Keti Bandar (PAK3) is the research area with the worst average perception of public services (3.2 points) while Golf City (GHA2), New Takoradi (GHA3) and Awe (NGA2) had the most positive perceptions with average assessments of 1.9 points.

II.II Distrust in institutions

The second variable included in this domain is the individual-level *Distrust in institutions* variable that aims to capture the trust in public institutions by each respondent. We operationalise institutions distrust by means of four

dimensions: trust in courts of law, trust in police, trust in armed forces and an overall assessment of corruption in the research area. Each of these four dimensions is represented by one survey item. We construct the *Distrust in institutions* variable with the first component resulting from a Polychoric Principal Component Analysis of these four variables. Below we detail each component:

- Trust in the police: drew from survey item J8 'How much do you trust the police? Do you trust them…' for which '1' is 'Completely', '2' is 'Mostly', '3' is 'Don't know', '4' is 'A little' and '5' is 'Not at all'. For this question, we recode the 'Don't know' answers as the middle category, instead of missing value as it represents neither agreement nor disagreement.
- Trust in courts of law: drew on survey item J9 'How much do you trust the courts of law?' for which '1' is 'Completely', '2' is 'Mostly', '3' is 'Don't know', '4' is 'A little' and '5' is 'Not at all'. As before, we recode the 'Don't know' answers as the middle category.
- Trust in armed forces: drew on survey item J10 'And how much do you trust the armed forces?' for which '1' is 'Completely', '2' is 'Mostly', '3' is 'Don't know', '4' is 'A little' and '5' is 'Not at all'. As before, we recode the 'Don't know' answers as the middle category.
- Assessment of corruption: drew on survey item J13 'In [RESEARCH AREA], how much of a problem is corruption nowadays? Is it…' with '1' referring to 'Not at all a problem', '2' 'A small problem' or 'Don't know' and '3' 'A serious problem'. As with the trust questions, we decided to code 'Don't know' as a neutral, middle response given the respondent was not inclined to agree with either of the extreme statements.

The *Distrust in institutions* variable is then the resulting first component, rescaled to a 1 to 4 points scale.

As Table 14 shows, trust in institutions varies greatly between institutions and research areas. While, generally, the police are the least trusted institution, with an overall average of 3.2 points, the armed forces are the most trusted institution with an average of 2.3 points.

While the police are distrusted the most in Ekpoma (NGA3) where most of the people only trust them 'a little' (Average of 4.1 points) it is *mostly* trusted in Kilis (TUR3) with an average of 1.4 points. The lowest and highest trust levels in the courts of law are found in Shahrake Mahdia (AFG3) and Kilis (TUR3), with average scores of 4.0 and 1.8 points respectively. Finally, the highest level of trust is found in the armed forces in Kilis (TUR3), with an average score of 1.3 points, while in Ekpoma (NGA3) people the lowest level of 3.3 points is found. In terms of the perception of corruption as a problem, results between research areas do not vary as much as trust levels. With a minimum value of 1.5 and maximum value of 2.8 points, on average respondents think that corruption is relatively a small problem.

The resulting *Distrust in institutions* variable, which ranges from 1 to 4 points, shows that, overall, governance perceptions can be quite negative (e.g. 3.0 in Ekpoma) or quite positive (e.g. 1.6 in Kilis).

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Table 14. Distrust in institutions summary statistics

Research area	*Dimensions of governance*				Distrust in institutions (index)
	Trust in police	Trust in courts of law	Trust in armed forces	Assessment of corruption	
São Nicolau (CPV1)	3.4	2.9	2.9	2.1	2.5
Boa Vista (CPV2)	3.2	3.0	2.9	2.4	2.5
Boffa (GIN1)	3.2	3.0	2.9	2.7	2.8
Dialakoro (GIN2)	3.2	3.4	3.0	2.2	2.7
Gbane (GHA1)	3.6	3.0	2.0	2.4	2.5
Golf City (GHA2)	3.6	3.2	2.0	2.1	2.5
New Takoradi (GHA3)	3.8	3.4	2.2	2.2	2.6
Down Quarters (NGA1)	3.4	2.6	2.3	2.7	2.5
Awe (NGA2)	3.3	3.1	2.7	2.5	2.6
Ekpoma (NGA3)	4.4	3.6	3.2	2.6	3.0
Batu (ETH2)	3.2	3.0	2.9	2.7	2.6
Moyale (ETH3)	3.7	3.5	3.1	2.8	2.9
Erigavo (SOM1)	1.8	2.1	1.9	2.2	1.9
Baidoa (SOM2)	2.2	2.7	2.0	2.7	2.2
Enfidha (TUN1)	3.3	2.8	1.6	2.7	2.4
Redeyef (TUN2)	2.9	2.8	1.5	2.7	2.3
Hopa (TUR1)	3.0	3.7	2.2	2.3	2.5
Yenice (TUR2)	1.8	2.5	1.7	1.6	1.8
Kilis (TUR3)	1.4	1.8	1.3	2.5	1.6
Shahrake Jabrael (AFG1)	3.3	3.4	3.0	2.5	2.7
Behsud (AFG2)	3.0	3.8	2.4	2.6	2.7
Shahrake Mahdia (AFG3)	3.7	4.0	3.1	2.5	2.9
Chot Dheeran (PAK1)	3.6	3.3	1.8	1.6	2.4
Youhanabad (PAK2)	3.6	2.8	1.4	2.3	2.3
Keti Bandar (PAK3)	4.0	2.9	1.7	1.9	2.4
Total	3.2	3.0	2.3	2.4	2.5
Minimum	1.4	1.8	1.3	1.5	1.6
Maximum	4.4	4.0	3.2	2.8	3.0
N	12,941	12,931	12,938	12,947	12,873

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,947 (12,947 for 'Assessment of corruption'). Data are weighted to reflect the survey design. Specifications: mxs-gen-root-causes-v1-2023-07-11.do.

II.III Disapproval of government

The third individual-level variable included in this domain is respondents' perception of the local and central governments' performance. Following our principles for operationalisation for root causes constructed based on two variables, the government *Disapproval of government* variable is the arithmetic mean of the perception of the local and central government. Below we detail each variable and the necessary transformations to construct the *Disapproval of government* variable.

- Perception of local government: drew on the survey item J11 'All things considered; how good a job does the [LOCAL GOVERNMENT] do in running [RESEARCH AREA]? Using this card on which 1 means you think [LOCAL GOVERNMENT] is doing a terrible job and 10 means it is doing an excellent job in running this area, where would you put it?'

- Perception of central government: drew on the survey item J12 'Now thinking about the [CENTRAL GOVERNMENT OF COUNTRY], how good a job does it do in running [COUNTRY]? Using this card on which 1 means you think [CENTRAL GOVERNMENT OF COUNTRY]is doing a terrible job and 10 means it is doing an excellent job in running [COUNTRY], where would you put it?'

Both perceptions of government performance were reversed to denote hardships, so '1' would be 'Excellent job' and '10' 'Terrible job'. We then estimate the mean between both variables and finally we convert it to a 1 to 4-point scale. Table 15 shows the summary statistics for each variable and the resulting Disapproval of government variable.

Table 15. Disapproval of government summary statistics

	Government perception		**Disapproval of govern-ment (index)**
Research area	**Local government**	**Central government**	
São Nicolau (CPV1)	6.3	6.1	2.7
Boa Vista (CPV2)	6.5	6.6	2.8
Boffa (GIN1)	7.2	6.9	3.0
Dialakoro (GIN2)	7.7	6.4	3.0
Gbane (GHA1)	7.8	7.5	3.2
Golf City (GHA2)	7.8	5.9	3.0
New Takoradi (GHA3)	7.0	5.2	2.7
Down Quarters (NGA1)	8.3	8.0	3.4
Awe (NGA2)	7.2	6.8	3.0
Ekpoma (NGA3)	8.4	8.9	3.5
Batu (ETH2)	6.0	5.5	2.6
Moyale (ETH3)	6.9	5.4	2.7
Erigavo (SOM1)	5.4	4.9	2.4
Baidoa (SOM2)	6.3	5.2	2.6
Enfidha (TUN1)	7.7	8.7	3.4
Redeyef (TUN2)	7.6	8.7	3.4
Hopa (TUR1)	7.0	7.6	3.1
Yenice (TUR2)	4.4	5.9	2.4
Kilis (TUR3)	5.4	4.0	2.2
Shahrake Jabrael (AFG1)	6.2	7.8	3.0
Behsud (AFG2)	5.9	4.7	2.4
Shahrake Mahdia (AFG3)	8.0	8.5	3.4
Chot Dheeran (PAK1)	6.6	7.1	2.9
Youhanabad (PAK2)	6.3	6.7	2.8
Keti Bandar (PAK3)	6.4	7.0	2.9
Total	6.8	6.6	2.9
Minimum	4.4	4.0	2.2
Maximum	8.3	8.9	3.5
N	12,780	12,772	12,647

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,935 (12,780 for 'Perception of local government'). Data are weighted to reflect the survey design. Specifications: mxs-gen-root-causes-v1-2023-07-11.do.

As the table shows, perceptions of government performance are relatively bad with averages score of 6.8 and 6.6 for the local and central government respectively. While Ekpoma (NGA3) stands out as the research area with the worst evaluations of both the local (8.3) and the central (8.9) governments, Yenice (TUR2) has the best evaluation of their local government with 4.4 points, and Kilis (TUR3) has the best evaluation of the Turkish national government with 4.0 points. The mean value for the overall Disapproval of government is of 2.8, indicating that respondents, on the whole, think that governments are doing a fairly bad job. Overall the worst value is found in Ekpoma (NGA3) with 3.5 and the best one in Kilis (TUR3) with 2.2.

II.V Corruption experience

We estimate the rate of corruption experiences for each research area based on the survey item J14 'In the past year, has anyone in [RESEARCH AREA] asked you, or expected you, to pay a bribe for his or her services?'. As this is a binary variable, we estimate the corruption rate by calculating the mean value for this variable for each research area. The reported corruption rate varies greatly (between 2% and 38%). The highest reported corruption rate is found in Ekpoma (NGA 3), while the lowest reported corruption rates are in Cape Verde and Turkey, where it fluctuates between 2% and 6% respectively.

III. Security and conflict

Insecurity, violence, and conflict are also prominent root causes. Much of this literature refers to internal migration, as most people displaced by conflict and violence, move to another area within their country. And indeed, the literature shows that there is a correlation between conflict and internal/ international migration, with more threats or violence experienced resulting in greater migration (Adhikari, 2013; Davenport et al., 2003; Hagen-Zanker and Mallett, 2016; Lubkemann, 2005; Moore and Shellman, 2004). However, it is not just the direct exposure of violence that can drive these departures, but also indirect exposure to violence (Schon, 2019; Müller-Funk, 2023) and more subjective feelings or perception of insecurity and danger for life (Lundquist and Massey 2005; McAuliffe, 2017; van Wijk 2010). Many of these studies point to the close connection between conflict and violence and (lack or worsening of) economic opportunities (Czaika and Kis-Katos, 2009; de Haas, 2011a; Hagen-Zanker and Mallett, 2016; McAuliffe, 2017), noting that it is often hard to disentangle the two.

Drawing on these previous findings we operationalise the security and conflict root causes with two main variables, one at the individual level and one at the research area level as can be seen in Table 17.

Table 16. Security and conflict root cause overview

	Level of measurement	
Variables	**Individual**	**Research area**
Perception of insecurity	●	
Violence and crime		●

In the following, we discuss each variable in greater detail and account for its operationalisation and implementation. In conjunction with presenting the survey items used for each variable, we display the values for each variable by research area.

III.I Perception of insecurity

We operationalise the individual-level *Perception of insecurity* by means of survey item K1 'Do you think that here in [RESEARCH AREA] it is safe to walk the streets at night?', for which respondents could answer 'Yes', 'No', 'Don't know' or 'Refuse to answer'. To make the variable reflect a hardship, and be comparable with other measures, we use the 1–4 scale where 4 represents the opinion that it is not safe to walk the streets at night, and 1 represents the opinion that it is safe. We call the resulting variable *Perception of insecurity*.

Table 18 presents the average value for this question for each research area along other summary statistics. As Table 18 shows perceptions of safety vary greatly between research areas. While in research areas like Shahrake Jabrael (AFG1), Chot Dheeran (PAK1), Down Quarters (NGA1) and Shahrake Mahdia (AFG3) most people don't think that walking the streets at night is safe (with average scores between 3.3 and 3.7), in several research areas, people do feel safe, with places like São Nicolau (CPV1), Yenice (TUR2) and New Takoradi (GHA3) standing out as exhibiting low perceptions of insecurity with scores between 1.2 and 1.5 points.

III.II Violence and crime

We operationaliae the research area-level variable for security and conflict through the means of the *Violence and crime* variable. We construct it with the first component resulting from a Polychoric Principal Component Analysis (PPCA) of five variables drawn from unique survey items, which are:

- K3: 'In the past five years, have you or anyone in your household experienced theft, burglary, or robbery?'
- K4: 'In the past five years, have you or anyone in your household experienced assault or physical violence?'

And then three survey items, preceded with 'Please tell me whether, in the past five years, you have ever personally feared any of the following types of violence?'

- K5: 'Violence at a political rally, public protest, or demonstration'
- K6: 'An armed attack by armed forces or militias'
- K7: 'Any other types of violence among people in [RESEARCH AREA]'

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Table 17. Perception of insecurity

Research area	Perception of insecurity
São Nicolau (CPV1)	1.2
Boa Vista (CPV2)	2.0
Boffa (GIN1)	1.8
Dialakoro (GIN2)	1.8
Gbane (GHA1)	2.5
Golf City (GHA2)	2.6
New Takoradi (GHA3)	1.5
Down Quarters (NGA1)	3.6
Awe (NGA2)	2.6
Ekpoma (NGA3)	3.1
Batu (ETH2)	2.7
Moyale (ETH3)	3.0
Erigavo (SOM1)	2.0
Baidoa (SOM2)	1.7
Enfidha (TUN1)	2.5
Redeyef (TUN2)	2.8
Hopa (TUR1)	2.1
Yenice (TUR2)	1.5
Kilis (TUR3)	2.5
Shahrake Jabrael (AFG1)	3.3
Behsud (AFG2)	2.8
Shahrake Mahdia (AFG3)	3.7
Chot Dheeran (PAK1)	3.3
Youhanabad (PAK2)	1.9
Keti Bandar (PAK3)	2.3
Total	2.4
Minimum	1.2
Maximum	3.7
N	12,814

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,947 (12,947 for 'Assessment of corruption'). Data are weighted to reflect the survey design. Specifications: mxs-gen-root-causes-v1-2023-07-11.do.

The possible answers for all these variables were 'Yes', 'No', 'Don't know', and 'Refuse to answer', for which we coded 'Yes' as '1' and 'No' and 'Don't know' as '0' and we leave 'Refuse to answer as a missing value that is not considered in the principal component analysis. Table 19. Presents summary statistics for each variable together with the results of the resulting index in a 1 to 4 points scale per research area.

In general, experiences and fear of violence and crime are the highest among the three research areas from Afghanistan. While experiences of theft, burglary or robbery are as high as 44% in Shahrake Mahdia (AFG3), they can be as low as 5% to 7% in the three research areas from Pakistan.

Experiences of assault or physical violence are less common in comparison to experiences of theft, burglary or robbery but they can be as high as 26% in Behsud (AFG2) and as low as 2% in several other research areas.

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Table 18. Violence and crime summary statistics

	Dimensions of violence and crime					
Research area	Experience of theft, burglary or robbery	Experience of assault or physical violence	Has feared violence at political rally, protest or demonstration	Has feared attack by armed forces or militias	Has feared any other types of violence	Violence and crime (index)
	(%)	(%)	(%)	(%)	(%)	
São Nicolau (CPV1)	8	2	10	6	18	1.3
Boa Vista (CPV2)	17	9	15	11	30	1.5
Boffa (GIN1)	38	14	29	26	34	1.8
Dialakoro (GIN2)	22	18	2	2	9	1.3
Gbane (GHA1)	37	14	37	36	35	2.0
Golf City (GHA2)	37	6	18	12	13	1.5
New Takoradi (GHA3)	35	9	19	13	15	1.5
Down Quarters (NGA1)	35	19	35	34	47	2.0
Awe (NGA2)	22	13	24	22	32	1.7
Ekpoma (NGA3)	28	18	27	26	25	1.7
Batu (ETH2)	24	10	52	23	34	1.9
Moyale (ETH3)	15	11	35	34	56	2.0
Erigavo (SOM1)	19	10	10	16	7	1.3
Baidoa (SOM2)	11	6	23	25	14	1.5
Enfidha (TUN1)	14	11	14	15	27	1.5
Redeyef (TUN2)	14	9	16	15	27	1.5
Hopa (TUR1)	9	5	26	25	24	1.6
Yenice (TUR2)	7	2	26	28	27	1.6
Kilis (TUR3)	18	4	12	17	17	1.4
Shahrake Jabrael (AFG1)	38	15	51	74	57	2.5
Behsud (AFG2)	39	26	35	47	48	2.2
Shahrake Mahdia (AFG3)	44	19	48	52	50	2.3
Chot Dheeran (PAK1)	7	2	23	8	25	1.4
Youhanabad (PAK2)	5	2	3	2	3	1.1
Keti Bandar (PAK3)	6	3	5	4	6	1.1
Total	22	10	24	23	27	1.6
Minimum	5	2	2	2	3	1.1
Maximum	44	26	52	74	57	2.5
N	12,964	12,966	12,967	12,968	12,969	12,949

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,969 (12,969 for 'Fear of any other type of violence). Data are weighted to reflect the survey design. Specifications: mxs-gen-root-causes-v1-2023-07-11.do.

Fears, rather than experiences, tend to be more frequent across all research areas. While the three Afghan research areas rank among the highest in terms of all fears, they are also relatively frequent in other places like Batu (ETH2) (51% for fear violence at a political rally, public protest or demonstration) or Moyale (ETH3), where 57% of the sample fears any other types of violence. Nevertheless, the three research areas from Afghanistan present higher rates of fears that go from 35% of for fear violence at a

political rally, public protest or demonstration to 74% of fear an armed attack by armed forces or militias[8].

Aligned with these findings, the *Violence and crime* variable is the highest for the research areas in Afghanistan, with scores between 2.2 and 2.5 points. However, other research areas like Gbane (GHA1), Down Quarters (NGA1), Moyale (ETH3) and Batu (ETH2) also rank relatively high in terms of fears and experiences of violence and crime, with values of 2.0, 2.0, 2.0 and 1.9 respectively.

IV. Environmental hazards and stresses

Environmental hazards and stresses can be seen as both a pre-disposing factor that makes migration more likely in the long run as well, as an immediate trigger in the case of a sudden environmental shock, such as a flood. As a potential root cause, we are interested in both, long-run environmental degradation, and short-run shocks. 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 (Backhaus et al., 2015; Black et al. 2011; Bohra-Mishra and Massey, 2014; Cai et al., 2016), though some studies do note that the effect is often indirect, as a result of its negative impact on economic opportunities (Khavarian-Garmsir et al., 2019; Martin et al., 2014). In addition to this, others have also argued that particularly middle income-countries experience significant push and pull effects on migration from natural hazards (Gröschl and Steinwachs, 2017). Sudden-impact environmental shocks also affect mobility, though it may be of a more temporary nature and is more likely to be internal, than international (Beine and Parsons, 2015; Carling et al., 2020; Islam, 2018).

We account for the effects of different types of environmental hazards and stresses by building a composite measure that captures the frequency of four types of hazards within a unique index, capturing both rapid and slow onset hazards and stresses. We build a unique measure at the research area level as we do not have a measure of individual perceptions of research area conditions in terms of environmental hazards or stresses (see Table 20).

Table 19. Environmental hazards and stresses root cause overview

	Level of measurement	
Variables	**Individual**	**Research area**
Environmental hazards and stresses		●

IV.I Environmental hazards and stresses

Following our general principles for operationalisation, we construct *Environmental hazards and stresses* variable based on the first component resulting from a Polychoric principal component analysis (PPCA) based on the following four survey items, which were preceded by an introduction:

[8] The MIGNEX survey was conducted in Afghanistan in the summer of 2021, weeks before the Taliban takeover.

I am now going to ask about environmental problems in [RESEARCH AREA] which you may have experienced.

- L2: 'In the last five years, has your household been affected by droughts?'
- L3: 'Has it been affected by floods?'
- L4: 'Has it been affected by soil degradation?'
- L5: 'And has it been affected by crop or livestock disease?'

The possible answers for all these variables were 'Yes', 'No', 'Don't know', and 'Refuse to answer', for which we coded 'Yes' as '1'; 'No' and 'Don't know' as '0'; and leave 'Refuse to answer' as a missing value that is not considered in the principal component analysis. As we only count with information from these four types of hazards or stresses from the MIGNEX survey, we are constrained to only include these four types of hazards and stresses in our index. Conceptually we differentiate two of them as hazards (droughts and floods) and two of them as stresses (soil degradation and crop or livestock diseases). However, for the purpose of this analysis we combine the experience of any of these hazards or stresses into a one unique variable called *Environmental hazards and stresses*. Table 21 presents summary statistics for each variable together with the results of the resulting variable in a 1 to 4 points scale per research area.

As Table 21 shows, the experience of these four environmental hazards and stresses ranges from an average of 22% for floods to 34% for droughts and specific research areas show different levels of mean exposure to each hazard. While droughts are the environmental hazard most experienced for the whole sample (average of 34%), an 82% of the sample from Gbane (GHA 1) declared having been affected by droughts over the last five years. This value is very high in comparison to the (urban) research areas of Golf City (GHA2) or Down Quarters (NGA 1) where only 3% and 2% of the sample have experienced this hazard respectively.

Overall, Gbane seems to be the research area most affected by these hazards, with values that range from 68% to 85% depending on the hazards and with a resulting Environmental hazards and stresses value of 3.3 points. Gbane's result is much higher in comparison to the other research areas that range from as low as 1.1 to 2.7 points. The only research area for which the exposure to these hazards is as high as Gbane is Keti Bandar in Pakistan, where more than half of the sample had been affected by droughts, floods, soil degradation or livestock diseases.

Table 20. Environmental hazards and stresses summary statistics

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Research area	*Environmental hazards and stresses*				Environ-mental hazards and stresses (index)
	Droughts (%)	Floods (%)	Soil degra-dation (%)	Livestock disease (%)	
São Nicolau (CPV1)	57	16	37	48	2.2
Boa Vista (CPV2)	52	17	30	28	2.0
Boffa (GIN1)	50	9	40	57	2.2
Dialakoro (GIN2)	55	24	12	51	2.1
Gbane (GHA1)	82	74	68	85	3.3
Golf City (GHA2)	3	50	10	2	1.5
New Takoradi (GHA3)	11	7	7	2	1.2
Down Quarters (NGA1)	2	18	9	9	1.3
Awe (NGA2)	21	23	24	37	1.8
Ekpoma (NGA3)	12	10	9	5	1.3
Batu (ETH2)	12	5	10	21	1.4
Moyale (ETH3)	63	6	29	44	2.1
Erigavo (SOM1)	32	17	11	22	1.6
Baidoa (SOM2)	56	13	26	42	2.0
Enfidha (TUN1)	11	9	7	8	1.3
Redeyef (TUN2)	43	42	37	17	2.0
Hopa (TUR1)	23	54	40	19	2.0
Yenice (TUR2)	22	8	26	19	1.6
Kilis (TUR3)	14	6	13	9	1.3
Shahrake Jabrael (AFG1)	51	35	27	19	2.0
Behsud (AFG2)	41	35	23	35	2.0
Shahrake Mahdia (AFG3)	79	22	17	19	2.0
Chot Dheeran (PAK1)	10	1	4	5	1.2
Youhanabad (PAK2)	3	2	2	1	1.1
Keti Bandar (PAK3)	55	55	58	60	2.7
Total	35	22	23	27	1.8
Minimum	2	1	2	1	1.1
Maximum	82	74	68	85	3.3
N	12,968	12,971	12,970	12,970	12,966

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,971 (12,971 for 'Affected by floods). Data are weighted to reflect the survey design. Specifications: mxs-gen-root-causes-v1-2023-07-11.do.

Migration-related factors

Migration-related factors, such as experiences and networks, are also identified as critical determinants in the migration literature and we include variables at both the individual and the research area level.

Migration experience

Has lived in a high-income country

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 frightened, or because of a better understanding of how the process works, and how migration

aspirations can be converted into actual migration (Aslany et al., 2021). Moreover, former migrants might have an attachment to another country that could influence their decision-making (ibid). Altogether, those with a migration history should have stronger migration aspirations, than those who have never migrated, and the literature generally finds a strong positive association between the two (ibid).

The MIGNEX survey asks young adults whether they have ever been abroad. The vast majority of our sample – 80% - have never been abroad (Table 22). There is great variation between research areas, reflecting geographical location, conflict dynamics and history of migration in the research area, amongst other factors.

Table 21. Experiences of being abroad (%)

	Experiences of being abroad				
Research area	**Has never been abroad**	**Has been abroad but not lived abroad**	**Grew up abroad**	**Has lived abroad later in life**	**Grew up or lived in a high-income country**
São Nicolau (CPV1)	89	6	1	4	3
Boa Vista (CPV2)	82	7	6	6	4
Boffa (GIN1)	88	3	0	9	0
Dialakoro (GIN2)	45	18	5	33	0
Gbane (GHA1)	95	4	0	1	0
Golf City (GHA2)	73	17	1	9	3
New Takoradi (GHA3)	90	3	3	4	0
Down Quarters (NGA1)	96	3	0	1	0
Awe (NGA2)	99	0	0	1	1
Ekpoma (NGA3)	95	2	0	3	1
Batu (ETH2)	90	5	0	5	3
Moyale (ETH3)	83	9	1	8	0
Erigavo (SOM1)	86	9	1	5	2
Baidoa (SOM2)	91	1	0	7	1
Enfidha (TUN1)	84	12	0	4	2
Redeyef (TUN2)	72	21	0	7	2
Hopa (TUR1)	45	51	0	4	1
Yenice (TUR2)	89	9	1	1	1
Kilis (TUR3)	59	7	33	1	1
Shahrake Jabrael (AFG1)	60	7	14	19	1
Behsud (AFG2)	42	8	22	28	1
Shahrake Mahdia (AFG3)	68	6	3	24	0
Chot Dheeran (PAK1)	97	3	0	1	1
Youhanabad (PAK2)	97	1	0	2	1
Keti Bandar (PAK3)	97	3	0	0	0
Total	81	9	4	7	1
Minimum	42	0	0	0	0
Maximum	99	51	33	33	4
N	10,441	1,113	513	891	147

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,961 (12,813 for 'Has lived in a high-income country'). Data are weighted to reflect the survey design. Specifications: mxs-gen-migration-networks-and-infrastructure-jorgen-v0-2023-06-13.do.

Take Dialokoro (GIN2), where only 45% of young adults have never been abroad. Dialokoro is close to the Malian border, with much of the population crossing the Niger river for trade, jobs and services (Botta et al., 2022). Behsud (AFG2), meanwhile has even fewer young adults that have never been abroad (42%), as an area that is characterised by high levels of return migration. In other areas, such as Youhanabad (PAK2), Keti Bandar (PAK3), Down Quarters (NGA1) and Awe (NGA2) almost everyone has never been abroad.

Focusing now on those who have been abroad, we need to distinguish between those who have ever travelled abroad, e.g. for tourism, visiting family, from those who have ever lived abroad, because the former presumably do not have the strong attachment or knowledge of migration that the latter group have. Indeed, of the entire sample 8.5% have visited but not lived abroad, accounting for almost half of those who have ever been abroad. In some research areas, such as Keti Pandar (PAK3) or Hopa (TUR1) almost all experiences of having been abroad are short-term visits.

Those who have ever been abroad for longer periods of time includes two specific categories of people: those who grew up abroad (3.6% of the overall sample) and those who lived abroad later in life for at least one year (7.4% of the overall sample). Again, there is high variation by research area, for instance the 33% born abroad in Kilis (TUR3) accounts for the Syrian population in the sample, who settled in Kilis after fleeing from Syria. The 22% born abroad in Behsud (AFG2) presumably reflects the return of Afghanis born in Pakistan, Iran and other countries.

Given the high levels of cross-border and regional mobility within several research areas and the focus of this analysis on migration to richer countries, we further restrict the having lived or been born abroad variable those who grew up or lived in a *high-income country* for at least one year. We use the World Bank's income classification for this purpose. Only 1% of the overall sample has this experience, with five research areas having none. The highest share is in Boa Vista (CPV2) at 4.2%.

Knows of failed migration

We also include exposure to failed migration as another measure of international migration experience. The MIGNEX survey data asked respondents whether they knew someone who: got injured on their way to another country; lost their life on the way to another country; been detained and not reached their final destination; tried to move to another country but got stuck somewhere else instead and was forced to come back. They were also asked if any of these things happened to them personally, but we do not include these responses as part of our analysis because (1) it is measuring something very different (2) it overlaps with own migration experience as included above and (3) it is quite rare.

This awareness of failed migration captures an indirect aspect of migration experience: something they have not experienced themselves, but owing to the severity of the experiences, something that must make an impression on those aware of these experiences. On the one hand, those who are aware of failed migration may be deterred from aspiring to migrate themselves – this is the logic behind migration information campaigns, assuming that if only people were aware of the risks, they would not migrate. On the other hand,

this knowledge may not deter people from migration, but inform them of migration to richer countries and how to migrate more effectively. In this way it could also affect migration preparations.

In the analysis, we include a dummy variable for 'Knows of failed migration', which corresponds to '1' when respondents are aware of someone they know having experienced any of the different types of failed migration. For those who experienced it themselves but do not know anyone else who experienced failed migration, as well as those who don't know anyone including themselves, it is set at '0'.

Table 22. Knows of failed migration (%)

	Have you or someone you know in the past five years…					
Research area	**Been injured on the way to another country**	**Lost life on the way to another country**	**Been detained on the way to another country**	**Tried to move to one country, but been stuck in another one**	**Been deported**	**Total (knows of any failed migration experience)**
São Nicolau (CPV1)	1	8	2	6	19	24
Boa Vista (CPV2)	2	7	6	9	29	33
Boffa (GIN1)	23	29	25	39	35	52
Dialakoro (GIN2)	6	7	18	22	9	35
Gbane (GHA1)	5	4	4	3	6	7
Golf City (GHA2)	3	5	4	6	11	15
New Takoradi (GHA3)	40	51	41	38	44	54
Down Quarters (NGA1)	1	1	2	3	2	6
Awe (NGA2)	0	0	1	1	1	2
Ekpoma (NGA3)	6	8	9	11	12	19
Batu (ETH2)	17	12	16	11	21	31
Moyale (ETH3)	17	17	15	22	13	28
Erigavo (SOM1)	13	21	20	20	12	29
Baidoa (SOM2)	10	12	15	11	11	25
Enfidha (TUN1)	4	4	10	14	20	30
Redeyef (TUN2)	8	16	24	31	51	56
Hopa (TUR1)	0	0	0	0	0	1
Yenice (TUR2)	0	0	0	0	0	0
Kilis (TUR3)	3	5	6	4	5	8
Shahrake Jabrael (AFG1)	27	22	27	30	60	59
Behsud (AFG2)	67	55	75	71	83	77
Shahrake Mahdia (AFG3)	24	26	29	32	56	61
Chot Dheeran (PAK1)	14	15	16	11	10	21
Youhanabad (PAK2)	1	2	1	1	1	3
Keti Bandar (PAK3)	2	2	2	2	1	4
Total	12	13	15	16	21	27
Minimum	0	0	0	0	0	0
Maximum	67	55	75	71	83	77
N	12,790	12,775	12,746	12,744	12,772	12,973

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Specifications: mxs-desc-d061-jorgen-v1-2023-09-16.do.

There is a high level of variation of awareness of migration failures, both across different types of failures and between different research areas (Table 23). Young adults were most likely to know someone who had been deported (21% of the overall sample) and least likely to know someone who was injured on route (12%) or died on route (13%). Awareness of migration failures is across the board. In Behsud (AFG2), where 83% know someone who was deported, 75% know someone who was detained on the way to another country and more than half (55%) know someone who died on their way to another country. Meanwhile, in two research areas in Turkey (Hopa (TUR1) and Yenice (TUR2) almost none of the young adults know anyone who experienced failed migration. In other research areas awareness of failed migration is also low. Overall, awareness of failed migration lies at 27% across the sample and is highest for Behsud (AFG2) at 77% and lowest for Yenice (TUR2) at 0%.

Transnational networks

A well-established tenet of migration theory is that migration fosters more migration (Massey et al. 1993). In any study of the determinants of migration, or migration aspirations, it is therefore necessary to consider the influences of past migration. There are potentially several mechanisms at work. We include three in our analyses and account for them in turn.

Is aware of migrants

Being exposed to migration as a possible course of action can affect migration aspirations regardless of personal relationships with migrants. This effect can come from knowing former migrants (returnees) as well as current migrants. We expect that people who are aware of current or former migrants are more likely to have migration aspirations, to encourage others to migrate, and to make preparations for migration. But, depending on the experiences of other migrants and how they communicate them, the effects of exposure can potentially also be negative.

We capture exposure to migration with the variable 'Is aware of current, recent or former international migrant' which is constructed from three survey questions:

- F1: Do you have any family members, relatives or friends who live in another country?
- F4: Do you have other family members, relatives or friends who left [this country], lived abroad for at least one year and later moved back to [this country]?
- G3: Do you know anyone who used to live here in [this research area] who has moved to another country during the past five years?

If the answer to any of the three questions is 'yes' the variable 'Is aware of migrant' is coded as 'yes'. The proportion by research area is shown in the first column of Table 24. It ranges from 100% in Boa Vista (CPV2) to 4% in Keti Bandar (PAK3). But overall, the levels are high. Apart from Boa Vista, there are five research areas where the proportion is above 90%.

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Table 23. Transnational networks and remittance receipt (%)

		Has family members, relatives or friends who live abroad…			
			In a high-income country		
	Is aware of a recent, current or former migrant	**In any country**	**Total (has had contact or not)**	**Has had contact**	**House-hold has received remittances (past year)**
São Nicolau (CPV1)	99	98	98	89	59
Boa Vista (CPV2)	100	100	99	90	46
Boffa (GIN1)	80	75	58	42	30
Dialakoro (GIN2)	51	45	19	10	9
Gbane (GHA1)	34	27	13	7	8
Golf City (GHA2)	81	74	64	50	32
New Takoradi (GHA3)	90	82	74	57	43
Down Quarters (NGA1)	38	29	21	14	10
Awe (NGA2)	11	6	4	2	2
Ekpoma (NGA3)	70	65	53	37	28
Batu (ETH2)	64	51	44	30	15
Moyale (ETH3)	38	32	15	8	10
Erigavo (SOM1)	64	54	51	35	26
Baidoa (SOM2)	48	33	20	18	19
Enfidha (TUN1)	94	87	86	74	41
Redeyef (TUN2)	92	78	78	62	28
Hopa (TUR1)	63	58	51	40	8
Yenice (TUR2)	55	51	48	34	5
Kilis (TUR3)	46	43	35	21	4
Shahrake Jabrael (AFG1)	82	72	33	27	19
Behsud (AFG2)	83	70	51	35	10
Shahrake Mahdia (AFG3)	91	84	52	38	14
Chot Dheeran (PAK1)	42	37	35	20	14
Youhanabad (PAK2)	16	14	13	9	5
Keti Bandar (PAK3)	4	4	3	1	0
Total	62	55	45	34	19
Minimum	4	4	3	1	0
Maximum	100	100	99	90	59
N	12,809	12,959	12,973	12,969	12,919

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Specifications: mxs-desc-d061-jorgen-v1-2023-09-16.do.

Has ties to a high-income country

The second mechanism relates to migrants as potential bridgeheads at the destination. Having someone abroad generally makes it more feasible to migrate. Whether it is by providing information, helping to obtain papers, paying for migration costs, helping to find a job, or providing initial accommodation, people at the destination can be invaluable.

This is particularly the case for high-income countries, given that migration to such countries can be more difficult and costly, hence we restrict our analysis to high-income countries. For the purpose of our analyses, we

construct the variable 'Has ties to high income country'. It is based on the following three survey questions:

- F1: Do you have any family members, relatives or friends who live in another country?
- F2: In which countries?
- F7: Have you seen, talked with, or exchanged messages with any of your family members, relatives or friends abroad during the past year?

From responses to question F2 we identified those respondents who have family members, relatives or friends who live in a high-income country, according to the World Bank's income classification. Columns 3–5 in Table 24 show the frequencies by research area. Overall, more than 80% of the people who have family members, relatives or friends abroad has at least one of them living in a high-income country. Only in Gbane (GHA1), Moyale (ETH3), Shahrake Jabrael (AFG1), Dialakoro (GIN2) do the majority of people with contacts abroad have them only in low- and middle-income countries. Both Moyale and Dialakoro are situated next to an international border, and many know someone who lives on the other side.

In order to identify *active* ties, we combined the variable 'Has family members, relatives or friends in a high-income country' with responses to question F7 about contact during the past year. This is an approximation, since question F7 does not differentiate between people in different countries. For instance, if a respondent in Afghanistan has one brother in Iran and one in Australia, and we cannot say whether an answer of 'yes' to question F7 refers to the one in Iran, the one in Australia, or both.

Of the 45% of respondents in the overall sample who have family members, relatives or friends in high-income country, 34% have had contact with people abroad during the past year. The proportion ranges from 1% in Keti Bandar (PAK3) to 90% in Boa Vista.

Has received remittances

A third mechanism by which migration networks can affect migration is via remittances. Existing research shows that people who receive remittances are more likely to have migration aspirations (Aslany et al. 2021). A possible reason is that remittances are tangible proof of opportunities at the destination. Remittances could, in theory, also have the opposite effect: people who receive remittances could be more attracted to staying precisely because they have a source of income. However, this effect would presumably only be relevant when remittances are a main source of income.

We measure remittance receipt on the basis of survey question F09 'Has anyone who lives abroad sent money to you or anyone in your household during the past year?'. For the sample overall, 19% of respondents have received remittances. For the vast majority of these respondents, remittances are not their household's most important source of income[9]. The proportion

[9] This assertion is based on another survey item, not shown in the table. Overall, 2% say that remittances are their household's most important source of income and another 2% say that it is the second-most important source of income.

of respondent households that receive remittances peaks at 59% in São Vicente (CPV1) and is above 40% in another three research areas: Boa Vista (CPV2), New Takoradi (GHA3), and Enfidha (TUN1).

Culture of migration

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). Many subsequent studies have engaged with the 'culture of migration' concept. However, definitions are vague and varied, and the concept has rarely been measured in comparative ways, particularly with quantitative data.

Drawing on the literature, we have identified four measurable criteria for the presence of a culture of migration:

1. Out-migration must be an established phenomenon,
2. Out-migration must continue to be relatively widespread,
3. Out-migration must be seen as a normal part of a life course,
4. Out-migration must be viewed positively.

In the following section, we discuss each criterion in greater detail and account for its operationalisation. We then construct a summary measure of whether a research area is characterised by a culture of migration. In conjunction with presenting the summary measure we also display the values for each component by research area.

First, however, it is necessary to address the challenges of using 'culture of migration' as an independent variable in the explanation of migration outcomes. The prevalence of migration aspirations is a key outcome, yet it can also be seen as an element of a culture of migration. This reflects reality, in the sense that the social dynamics at work tend to render migration its own cause and effect. Individual migration can both *result from*, and *contribute to*, a culture of migration. (See discussion in the section Methodology). However, the empirical analysis must keep causes and effects distinct. In measuring the presence of a culture of migration, we therefore leave out variables that are directly related to migration aspirations. Instead, we seek to capture the relevant cultural traits in terms of the normalisation and generally positive perceptions of migration.

1. Out-migration must be an established phenomenon

This criterion means that there must be a *tradition* of migration that is transmitted across subsequent cohorts or generations of migrants. A sudden exodus that then subsides does not create a culture of migration. Our data does not track migration over time, so we need to assess the temporal profile in other ways. We measure the element of tradition by calculating the proportion of respondents who have family members, relatives or friends who are currently living abroad, or who have left the research area, lived abroad, and then returned. The rationale for including returnees is that, whether migration is an established phenomenon depends on the scale of past out-migration, not on whether past migrants have returned or still

remain abroad. To estimate the proportion of respondents with family members, relatives or friends who are current or former migrants we draw from the following two survey items:

- F1: Do you have any family members, relatives or friends who live in another country?
- F4: Do you have other family members, relatives or friends who left [this country], lived abroad for at least one year and later moved back to [this country]?

The proportion of respondents with family members, relatives or friends who are current or former migrants is on average 55% ranges from 4% in Keti Bandar (PAK3) to 100% in São Nicolau (CPV1) (Table 24).

2. Out-migration must continue to be relatively widespread

If large transnational networks result primarily from past migration, and few people have migrated recently, the culture of migration might be fading. A culture of migration could persist at the same time as migration is increasingly constrained by restrictive policy, for instance. However, a minimum level of recent departures is required to sustain a culture of migration.

To construct a measure that captures whether out-migration continues to be relatively widespread, we draw from the two following survey items:

- G3: Do you know anyone who used to live here in [RESEARCH AREA] who has moved to another country during the past five years?
- G5: Would you say that you know more than ten people who have moved to another country during the past five years?

Survey respondents were asked whether or not they know anyone who has moved from the research area to another country during the past five years. Responses ranged from 1% Keti Bandar (PAK3) to 71% in Redeyef (TUN2). The proportion exceeded 60% also in São Nicolau (CPV1), Boa Vista (CPV2), New Takoradi (GHA3), Enfidha (TUN1), Behsud (AFG2). Those respondents who knew at least one migrant were subsequently asked whether they would say that they know more than ten. These two questions are used to calculate our measure of whether migration continues to be widespread. They are mathematically combined in such a way that a maximum value is reached if *everyone* knows at least one international migrant and *one third* knows ten or more migrants[10]. The highest value is for Redeyef (TUN2), with 91% of the potential maximum, while the lowest value is for Keti Bandar (PAK3), with 0%.

3. Out-migration must be seen as a normal part of a life course

The normalcy of migration is a core aspect of a culture of migration, different from the actual number of departures. In a culture of migration,

[10] This choice reflects the distribution of the data and results in a good spread across the scale. The score is calculated as 1.5 times the average of the two proportions. Consequently, 100% can also be reached with other combinations, such as 66.7% knowing at least one migrant and all of them saying they know at least ten. In the case of Redeyef (TUN2), the score of 91% results from 71% knowing at least on migrant and 50% knowing ten or more.

going abroad is a *possibility* that is familiar to everyone, regardless of its feasibility. We assess this aspect of a culture of migration via questions that reflect whether migration is on people's minds and is an issue that is talked about. Specifically, based on four MIGNEX survey items we calculate the proportion of people who have:

- considered migrating during the past[11], *or*
- encouraged others to migrate[12], *or*
- been encouraged by others to migrate[13], *or*
- been offered help to migrate, whether for money or for free.[14]

All four criteria concern international migration. The first is based on a survey question that refers to living or working in another country and the remaining three are based on questions that refer to 'going to a richer country'.

Encouraging others to migrate is also a dependent variable in the analysis. However, this is not a concern since it is used here at the research-area level, together with other variables. It is one of the ways in which migration is 'normalised' in the community, which, in turn, could have a bearing on the likelihood that each respondent has encouraged someone to migrate.

The rationale behind the measure is that a culture of migration can be reflected in different ways in different individuals' behaviour or experiences. This variation can result from gendered patterns of social interaction, for instance, which should not sway our measure of the strength of a culture of migration. Hence, we do not differentiate between which, or how many of the four criteria is present, as long as one of them is[15]. The values for the four variables and the combined measure for each research area are displayed in Table 25.

On average, between 16%-32% responded yes to one of the four questions. The combined measure is on average 49% and ranges from 10% in Keti Bandar (PAK3) to 85% in Boa Vista (CPV2). In fact, Keti Bandar has the lowest value on all four variables. High values on the four values are spread across several research areas, including Boffa (GIN1) and Redeyef (TUN2).

[11] Survey item C06: During the past year, have you thought seriously about leaving [COUNTRY] to live or work in another country?

[12] Survey item C16: Have you ever encouraged anybody else in [RESEARCH AREA] to go to a richer country?

[13] Survey item C14: Has anybody ever encouraged you to go to a richer country?

[14] Survey item C15: Has anybody ever offered to help you to go to a richer country, either for free or for money?

[15] Using the average of the four criteria would have yielded a very similar ranking of the research areas. This is because the four criteria are quite highly correlated, with coefficients ranging from 0.29 to 0.46.

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Table 24. Variables of migration being seen as a normal part of a life course (%)

Research area	*Individual variables*				Combined measure (Has an affirmative reply on at least one variable)
	Has considered migrating during the past year	Has encouraged others to migrate	Has been encouraged by others to migrate	Has been offered help to migrate	
São Nicolau (CPV1)	37	43	57	34	74
Boa Vista (CPV2)	36	43	70	45	85
Boffa (GIN1)	53	43	44	19	74
Dialakoro (GIN2)	28	14	20	8	42
Gbane (GHA1)	34	11	20	6	43
Golf City (GHA2)	43	30	57	35	72
New Takoradi (GHA3)	46	40	52	24	73
Down Quarters (NGA1)	35	34	38	15	54
Awe (NGA2)	10	9	12	2	20
Ekpoma (NGA3)	51	39	38	17	66
Batu (ETH2)	26	22	35	17	51
Moyale (ETH3)	14	9	17	10	30
Erigavo (SOM1)	21	11	17	17	36
Baidoa (SOM2)	11	4	8	4	17
Enfidha (TUN1)	52	56	58	34	80
Redeyef (TUN2)	38	62	55	37	83
Hopa (TUR1)	34	18	32	10	51
Yenice (TUR2)	22	12	15	7	33
Kilis (TUR3)	20	6	14	3	28
Shahrake Jabrael (AFG1)	31	22	40	12	57
Behsud (AFG2)	30	17	43	11	56
Shahrake Mahdia (AFG3)	27	26	41	12	60
Chot Dheeran (PAK1)	8	11	11	2	19
Youhanabad (PAK2)	8	5	8	3	14
Keti Bandar (PAK3)	6	3	5	1	10
Total	29	24	32	16	49
Minimum	6	3	5	1	10
Maximum	53	62	70	45	85
N	12,939	12,954	12,961	12,955	12,973

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. Specifications: mxs-desc-d061 do.

4. Out-migration must be viewed positively

A culture of migration is typically founded, at least in part, on perceived limitations in the local society or economy. In other words, there can be an element of necessity or compulsion to migrate. Still, a culture of migration tends to value migration as something positive. People might acknowledge that migration creates challenges such as shortages of skills or labour, but even so, a culture of migration implies that migration is seen as mainly beneficial for individuals and families. To construct a measure on views of migration, we draw from the respondent's level of agreement the following four survey items:

When people leave [RESEARCH AREA] and move to a richer country…

- C17: It makes life harder for those who stay behind.
- C19: They support family members in [this country].
- C20: They often regret that they left.

For each statement, respondents were asked whether they '*agree*', '*neither agree nor disagree*', or '*disagree*', and assigned the values '1', '2' and '3', respectively. Scores for the second statement are reversed, so that higher values consistently indicate a stronger culture of migration.

The first two statements concern consequences for the community of origin, while the last one concerns consequences for migrants. Therefore, the first two are given half as much weight, so that both perspectives have the same influence on the combined measure. The weighted average of the three variables is then transformed to a continuous 1–4 scale. The result is a variable describing individual perceptions of the consequences of migration. A value of 2.5 is neutral while lower values reflect a mostly negative view and higher values reflect a mostly positive view.[16]

The combined measure that describes individual perceptions of the consequences of migration ranges from 2.0 in Keti Bandar (PAK3) to 3.5 in Ekpoma (NGA3). Only in Keti Bandar and Chot Dheeran (PAK1) is the value below 2.5, meaning that perceptions are primarily negative. In another four areas – Behsud (AFG2), Youhanabad (PAK2), Kilis (TUR3) and Shahrake Jabrael (AFG1) – the value is below 2.6, or near an overall view that migration is neither positive nor negative. The remaining 19 research areas differ in terms of *how positively* migration is seen.

Summary measure of culture of migration

We have now accounted for how the four components of a culture of migration are measured. Table 26 presents an overview of the operationalisations and input variables.

The four components are distinct from each other and are therefore measured separately. However, this does not mean that they should have the same influence on the summary measure. The first two – *1. Out-migration must be an established phenomenon*, and *2. Out-migration must continue to be relatively widespread* – largely reflect migration *patterns* and could in principle also be assessed with migration statistics.[17]

[16] The measure excludes respondents' level of agreement with two other statements in the same section of the questionnaire, also referring to people who move to a richer country. The first is 'they still contribute to [this country]'. This was dropped from consideration because of the emphasis on the national level. Cultures of migration can be localised, and a country-level contribution is not a meaningful requirement. Moreover, respondents and research areas differ in terms of how they identify with national agendas and objectives more generally, and this should not affect our measurement of a culture of migration. The second statement that was dropped is 'they get rich'. This was dropped because of the variable interpretation of 'rich' and because it is unclear whether this belief rather reflects a disconnection with migration experiences. In fact, this variable was inversely related with other indicators of a culture of migration: the lower the proportion of people in a research area who know of international migrants, the higher the proportion who believe that migrants get rich.

[17] The components 'largely' and not exclusively reflect migration patterns, since they are also affected by the nature of social interaction. In general, the more people every individual knows of, the more likely it is that they will know of a migrant.

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Table 25. Components of a culture of migration

Criteria	Operationalisation	Input variables
1. Out-migration must be an established phenomenon	Proportion of individuals who have family members, relatives or friends who currently live abroad, or are return migrants from the research area.	• Has migrant family, relatives or friends living abroad. (f01ffabroad_d) • Has returnee migrant family, relatives or friends. (f04ffreturn_d)
2. Out-migration must continue to be relatively widespread	Proportion of individuals who know of people who have migrated internationally from the research area during the past five years.	• Knows of international migrant from research area (past 5 years). (g03intmig_d) • Knows of over 10 international migrants from research area. (past 5 years) (g05intmig10_d)
3. Out-migration must be seen as a normal part of a life course	Proportion of individuals who have seriously considered migration, encouraged others to migrate, been encouraged to migrate, or been offered help to migrate.	• Has seriously considered international migration (past year). (c06conleavecntry_d) • Has been encouraged to migrate to richer country. (c14sbencourage_d) • Has been offered help to migrate (for free or for money). (c15sbhelp_c3) • Has encouraged someone else in research area to migrate. (c16encouragesb_d)
4. Out-migration must be viewed positively	Proportion who thinks migration benefits migrants' families and that migrants rarely regret having left.	• Agrees that when people migrate, it makes life harder for those who stay behind. (c17migattharder_c3) • Agrees that when people migrate, they support family members in country. (c19migattsupport_c3) • Agrees that when people migrate, they often regret that they left. (c20migattregret_c3)

If all four components are given equal weight, it would mean that *half* of the summary measure of a culture of migration is essentially a demographic indicator. This seems disproportionate in light of how the concept is understood. A culture of migration does not automatically result from large-scale out-migration, but also depends on how this out-migration is manifested in behaviour and attitudes. We therefore assign a weight of 0.5 to each of the first two components, so that the summary measure has three equal contributors:

- Migration patterns (component 1 and 2);
- Migration awareness and communication (component 3);
- Migration attitudes (component 4).

For the calculation of the summary measure, the values for each component are transformed to a continuous 1–4 scale. The weighted average of the four is the summary measure of a culture of migration. This is what we use in the regression analyses, as a variable at the research-area level.

Figure 10 displays the strength of a culture of migration by research area, including both the summary measure and the four components. The

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research areas are sorted by the summary measure. We see that values for each component are generally higher towards the top of the figure, but that there is a great spread for many research areas. For instance, Down Quarters (NGA1) is near the middle in terms of the summary measure, but has the second-most positive views on migration, counterbalanced by low levels of out-migration. As previously mentioned, views on migration are primarily negative in only two research areas. Consequently, the markers for this component are distributed mainly on the right-hand side of the figure, while the markers for the three other components range from very low to very high.

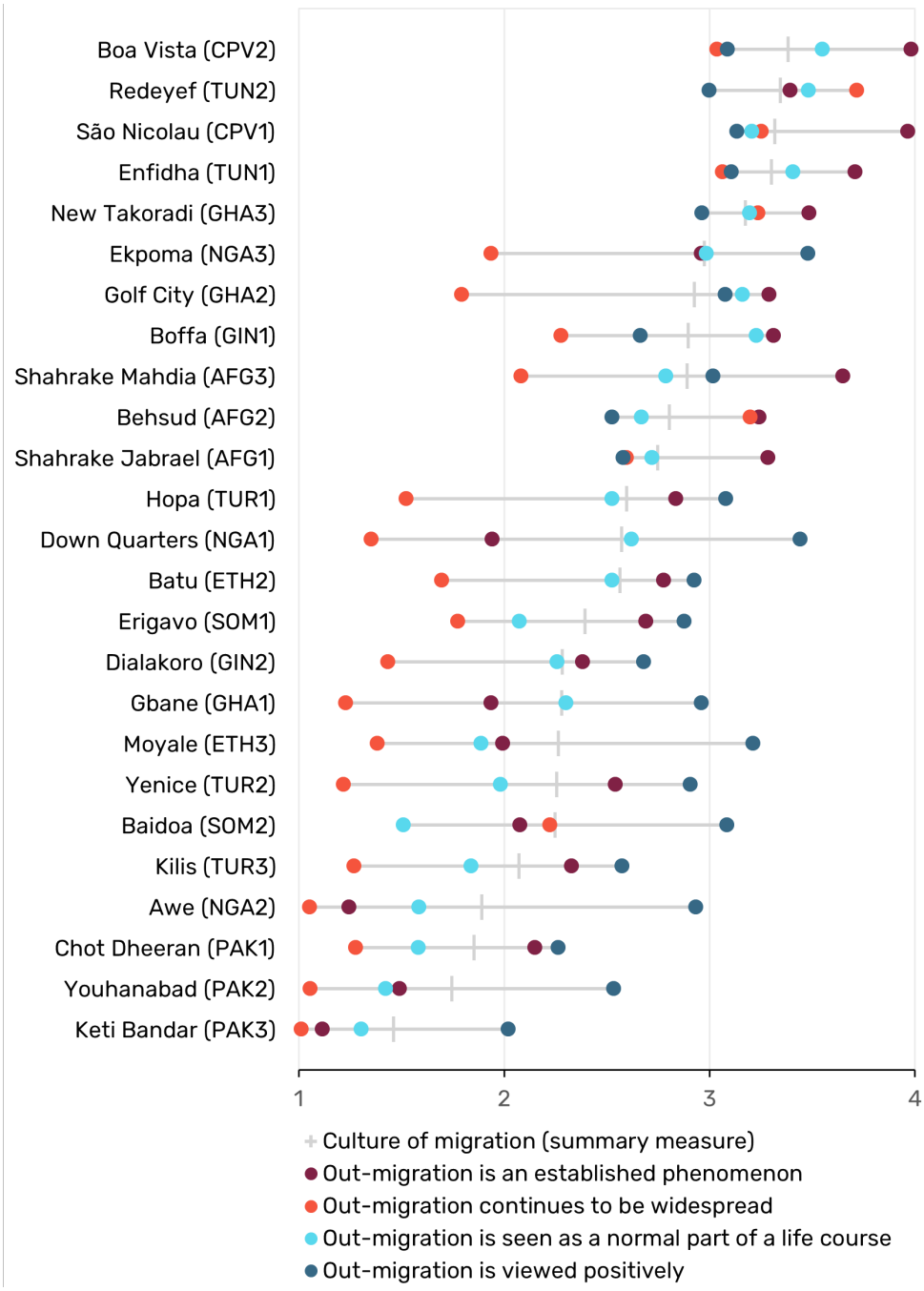

Figure 10. The strength of a culture of migration, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). See text for details.

At the top of the figure, we see that five research areas – the ones in Cabo Verde and Tunisia, plus New Takoradi (GHA3) – stand out with high values on every component. These are areas where a culture of migration is clearly present. In the other research areas it is a question of degree. Perhaps it is only in Keti Bandar (PAK3) that there is *clearly not* a culture of migration. Even in other research areas with low scores, such as Chot Dheeran (PAK1), our qualitative data indicate that elements of a culture of migration are present (Erdal et al. 2022).

Other individual characteristics

In addition to the potential drivers of migration described in previous sections, there are other factors at the individual level which can also be critical determinants of migration. In this section, we describe these other drivers of migration at the individual level and how they might influence aspirations, decisions and preparations to migrate. For clarity, we divide these factors into four broad categories, namely: demographic characteristics and family status, well-being and life satisfaction, negative shocks and protection, and personality traits. In the following subsections, we briefly discuss how these individual characteristics could potentially influence respondents' migration aspirations and preparations. We detail the survey item each variable relates to, discuss its operationalisation (when applicable) and describe summary statistics within and across research areas.

In this analysis we include the following characteristics as variables of analytical interest instead of as a controls, as frequently done.

Demographic characteristics and family status

We include six measures that capture our sample's demographic characteristics and general family status:

- Gender
- Age
- Cohabitational status
- Linguistic minority status
- Parenthood status
- Whether respondent grew up in research area

Table 27 presents descriptive statistics for these six individual-level characteristics, including the mean value by research area, and the mean, minimum, and maximum values across the 25 research areas of analysis.

Gender – Is female

The literature shows that men are more likely to aspire to migrate compared to women (Aslany et al., 2021).. However, the gender component of migration aspirations and migration outcomes varies greatly across and within countries. This depends on a wide variety of factors; ranging from the distinct work opportunities in different places for men and women, to migration representing an escape from social restrictions and domestic violence for women (Nieri et al., 2012). As such, the influence of gender on migration aspirations and outcomes is multi-layered and a critical factor for consideration.

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Table 26. Summary statistics of individual-level factors: demographic characteristics and family status (%)

Research area	Gender (female)	Age	Married or cohabiting	Linguistic minority	Is a parent	Grew up in research area
	(%)	(years)	(%)	(%)	(%)	(%)
São Nicolau (CPV1)	55	28	31	2	54	91
Boa Vista (CPV2)	60	29	49	14	74	31
Boffa (GIN1)	43	26	49	37	49	74
Dialakoro (GIN2)	38	28	90	9	97	80
Gbane (GHA1)	58	26	75	36	70	66
Golf City (GHA2)	42	28	34	71	36	24
New Takoradi (GHA3)	59	27	32	36	44	70
Down Quarters (NGA1)	45	27	34	58	37	65
Awe (NGA2)	54	28	65	34	58	80
Ekpoma (NGA3)	56	25	24	58	22	37
Batu (ETH2)	43	27	64	53	57	63
Moyale (ETH3)	63	27	73	50	71	80
Erigavo (SOM1)	73	25	46	3	44	95
Baidoa (SOM2)	63	28	70	4	67	88
Enfidha (TUN1)	48	26	25	2	24	91
Redeyef (TUN2)	49	28	24	0	26	95
Hopa (TUR1)	48	27	34	22	23	72
Yenice (TUR2)	53	28	51	1	44	78
Kilis (TUR3)	54	28	64	49	52	44
Shahrake Jabrael (AFG1)	64	27	70	5	70	29
Behsud (AFG2)	41	26	53	39	62	51
Shahrake Mahdia (AFG3)	57	27	59	0	62	25
Chot Dheeran (PAK1)	77	28	63	9	50	61
Youhanabad (PAK2)	42	27	58	35	49	80
Keti Bandar (PAK3)	34	29	72	2	54	96
Total	53	27	52	25	52	67
Minimum	34	25	24	0	22	24
Maximum	77	29	90	71	97	96
N	12,973	12,970	12,953	12,972	12,973	12,959

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,961 (12,813 for 'Has lived in a high-income country'). Data are weighted to reflect the survey design. Specifications: mxs-gen-other-individual-characteristics-v1p-2023-07-28.do

As Table 27 shows, across our 25 research areas of study, 52% of respondents are female, but this proportion varies by research area. For instance, in Keti Bandar (PAK3), only 34% of respondents are women, while in Chot Dheeran (PAK1), 76% are female respondents. These two extremes happen to represent the minimum and maximum proportions of female young adults across all research areas. In other research areas such as Gbane in Ghana, Awe and Ekpoma in Nigeria, Redeyef in Tunisia, Yenice and Kilis in Turkey, the sample has a greater gender balance with half of respondents of each gender.

Age

Age is a key determinant of migration aspirations, preparations, and outcomes. The literature consistently shows that younger individuals are

more likely to aspire to migrate internationally (Aslany etal., 2021; Nieri et al., 2012). Age influences migration aspirations not only through its biological component but it also captures various characteristics that shape these including propensity to take risks, ability to migrate, work opportunities abroad, cultural and social constructs around adulthood, to mention a few.

Our survey focuses on young adults between the ages of 18 to 39, to shed light on the dynamics and processes shaping migration aspirations among the group most likely to have migration aspirations and effectively migrate. The restriction of our sample to a specific age range comes with the potential limitation that we do not observe much variation in its effect, given this range is when migration aspirations tend to be highest. Age is captured in survey item A1 'How old are you?' and is recorded as a continuous variable that ranges from 18 to 39.

In our analysis, we employ age directly as a continuous variable and add its square form. By also including the square value of age, we can more accurately model the effect of age on our dependent variable of interest, which may not have a linear relationship. For instance, age could have a positive effect on our dependent variable until a specific age threshold. This relationship can become negative thereafter. Given the restricted age range of our respondents, it is possible that the squared form will not show significant effects, it is still important to account for the presence of non-linearities. Age is a mandatory survey item, hence there are no missing values for this variable.

Table 27 shows that respondents across our 25 research areas are on average 27 years old. There is very little age variation by research area, where the average age of respondents ranges from 25 years old in Erigavo (SOM1) to 29 years old in Boa Vista (CPV2) and Keti Bandar (PAK3).

Is married/cohabiting

Marital and cohabitational status can influence an individual's decision to migrate in varying ways. Having a partner can hinder or drive someone's decision to migrate depending on the partner's own settlement preferences and desires, job opportunities abroad, length of migration, cultural differences (Aslany et al., 2021). In turn, the effect of marital or co-habitational status on migration aspirations and preparations depends largely on the context and it can lead to mixed effects.

The operationalisation of marital status varies substantially across studies (Aslany et al., 2021). In this analysis we create a binary measure, where we compare being married or cohabiting to being single, divorced or widowed. A combination of three survey items allows us to construct this composite binary measure. The relevant survey items are:

- A2 - 'Are you married, or living together with a partner as if married?'
- A3 - 'Have you ever been married?'
- A4 - 'Does your spouse/partner live in the same household as you?'

The first two survey items have dichotomous responses of 'Yes' and 'No', while the third item includes four type of responses: 1. 'Yes'; 2. 'No, elsewhere in research areas'; 3. 'No, elsewhere in country'; 4. 'No, abroad';

which allows us to identify where the partner lives. We use different combinations of these three survey items to construct the binary measure of marital/cohabitational status which equals '1' if the respondent is married or cohabiting, with a partner living in household, elsewhere in research area, elsewhere in the country or abroad; and '0' if the respondent is single and was never married or is single due to being divorced or a widow/widower.[18]

Across all 25 research areas, around half of respondents (52%) are married or cohabiting, while the rest are single (either never married or divorced, widow/widower), as shown in Table 27. There is quite some variation in marital/cohabitational status by research area. In around six research areas, between 70-90% of respondents are married or c-habiting, these include Dialakoro (GIN2), Gbane (GHA1), Moyale (ETH3), Baidoa (SOM2), Shahrake Jabrael (AFG1) and Keti Bandar (PAK3). Conversely, the lowest proportions, 35% or less, of respondents who are married, or cohabiting can be found in Ekpoma (NGA3), Enfidha (TUN1), Redeyef (TUN2), Sao Nicolau (CPV1), Golf City (GHA2), New Takoradi (GHA3), Down Quarters (NGA1), and Hopa (TUR1). These differences in proportions of marital status across research area could lead to differing effects on migration aspirations, which will be more easily observed at the research area-specific analysis.

Is a parent

The literature evidence that being a parent, particularly among young adults, has a large effect on shaping migration aspirations and it can do so in varying ways (Aslany et al., 2021). On one hand, the responsibility of having children represents a motivation to not migrate and to stay in order to provide protection, guidance and support to children. Conversely, parent migration can increase financial resources through remittances and give access to a wider set of opportunities to children who stay back. The research also suggests that the effect of parenthood on migration aspirations can depend on the level of income, where parenthood decreases migration aspirations in high-income countries and it increases them in low- to middle-income countries (Aslany et al., 2021). In turn, the overall effect of parenthood on migration aspirations is still undetermined.

We create a binary measure capturing whether the respondent is a parent or not by relying on the two following survey items:

- A25 - 'Thinking about all the children in the household now – so everyone who is aged 17 years or younger – how many of them are your own children?'
- A27 - 'Do you have any children aged 17 years old or younger who do not live in the same household as you?'

Our dichotomous variable takes the value of '1' if the respondent is a parent which happens in two cases: 1) if respondents indicate to have one or more

[18] The MIGNEX survey did not collect information on whether the respondent was divorced or a widow/widower due to the sensitivity of eliciting such personal information and as it was not required for the analysis. Instead we are able to construct this category based on the combination of responding 'No' to being currently married but indicating 'Yes' to having been married before, which leads to the category of being single due to divorce or death of partner, which are the logical alternatives; or responding 'No' to being currently married and 'No' to be married before, which lead to the alternative of being single, never married.

children aged 17 years or younger in the household who are their own or 2) if they responded 'Yes' to having any children aged 17 or younger who do not live in the same household. The variable takes the value of 0 when the respondent indicates to have no children living in the same household or outside the household. Table 27 shows that on average, around half of respondents across the 25 research areas have children either in or outside the household. There is a high variation in parenthood status by research area. Dialokoro (GIN2) exhibits the highest parenthood proportion with 97% of respondents indicating that they have children in or outside the household, whereas only 21% of respondents in Ekpoma (NGA3) have children. Interestingly, the proportion of respondents who have children and who are married or cohabiting are generally quite similar by research area, but there are some cases such as Boa Vista (CPV2) and Boa Vista (CPV2), where the proportion of those who have children is substantially larger than those who are married or cohabiting.

Grew up in research area

Having grown up in a specific research area can influence someone's aspirations to migrate in multiple ways from having experienced different levels of development, violence and insecurity, and governance to valuing social cohesion and feeling attached to a specific area (Aslany et al., 2021). Moreover, accounting for whether respondents grew up in research area or somewhere else in the country or abroad, allows us to account for their migration history and propensity to migrate again given previous migration behaviour and outcomes.

We measure respondent's place of growing up by creating a binary variable based on survey item H1 part of the 'Personal migration history' module which inquires 'Did you grow up…' and the options are '1' if the answer is 'Here in [research area]', '2' for 'Elsewhere in [country]' and '3' for 'In another country?'

Our binary measure takes the value of '1' if the respondent indicates to grow up in research areas and '0' if she grew up elsewhere in the country or in another country. There are a few cases where respondents indicated 'Don't know' or 'Refuse to answer' but these were only 11 and 3 cases, respectively.

As Table 27 displays, nearly two thirds of respondents across research areas grew up in the research area, with a smaller proportion growing up elsewhere in the country or abroad. In Keti Bandar (PAK3), Enfidha (TUN1), Redeyef (TUN2), Erigavo (SOM1) and Sao Nicolau (CPV1) over 90% of respondents have grown up in the research area. On the other hand, in Golf City (GHA2), Shahrake Jabrael (AFG1) and Shahrake Mahdia (AFG3) less than 30% grew up in the research area. In the case of Golf City (GHA2), in-migration for agricultural and business opportunities is quite common (Godin et al., 2022). In Shahrake Jabrael (AFG1), over half of young adults are internal migrants with most residents having moved to this area after the collapse of the Taliban in 2001 (Alizada and Murray, 2022). Shahrake Mahdia meanwhile is an unplanned neighbourhood of Kabul built 16 years ago by internally displaced persons from central Afghanistan (Majidi et al., 2022).

Linguistic minority status

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. These identities can be self-ascribed or ascribed by others, and particularly in the case of the latter, they can determine basis for discrimination and in turn aspirations to migrate (Aslany et al., 2021). In our analysis, we measure the degree of belonging to a minority group by constructing a measure of linguistic minority status for each respondent and evaluate how it influences migration aspirations and preparations.

In order to measure minority group identification between individuals within each research area, we create a composite measure of linguistic minority status at the individual level, by research area. We construct this measure based on the following survey item: 'When you were a child, what language did you speak at home with your parents?'. Respondents could provide multiple responses and were prompted to choose from a pre-selected list of languages relevant for each research area. For instance, in the case of the three research areas in Afghanistan, the options provided are Dari and Pashto, whereas in the three research areas in Ghana there were 19 options provided[19].

The original variable was automatically generated as a 'string' variable with multiple codes to capture the different responses of languages spoken as a child. In the process of operationalising this survey item, we created a dichotomous variable for each language spoken as a child which equals '1' if respondent spoke any given language and '0' if the respondent did not speak the language in that specific research area or if that language was not applicable for that specific research areas. In the case of 'Don't know', 'Refuse to answer' and 'Other language', we record these responses under separate dummy variables, whereas the number of missing values is negligible, accounting for less than five observations.

In total, we have 72 dummy variables representing all languages spoken as a child across the 25 research areas. The maximum number of languages spoken on average in each research area by respondents ranges from two languages in Dialakoro (GIN2) to five languages in Hopa (TUR1) and Golf City (GHA2).

The linguistic minority status measure is estimated by first obtaining the average of the shares of all languages spoken as a child by each respondent, within each research area. The higher the average of shares of languages spoken, the higher the likelihood that a respondent spoke the mostly widely spoken language in the research area, and in turn belongs to a linguistic majority group. We then subtract this average from 1 to obtain the degree to which a respondent does not speak the most widely spoken languages in the research area and is in turn part of a linguistic minority.

[19] A key objective of the MIGNEX survey is to ensure comparability across research areas and countries, but tailoring some questions was necessary. This survey item is one of the eight items that were tailored for each research area (Hagen-Zanker et al., 2023).

The linguistic minority status aims to capture the breadth of languages that respondents speak within each research area to measure the degree to which they are part of a linguistic minority group. More specifically, the higher the *Linguistic minority status*, the more languages a respondent spoke as a child and in turn the more likely they are part of a linguistic minority group.

The linguistic minority status is a continuous variable that ranges from 0.002 to 1 and shows whether respondents are part of a linguistic minority given the research area's level of language heterogeneity. Table 27 shows that on average, a quarter of respondents across the 25 research areas of analysis belong to a linguistic minority group. When we zoom in to specific research areas, we observe the highest linguistic minority status indices in Golf City (GHA2) where 71.4% of respondents exhibit a linguistic minority status. Followed by Down Quarters (NGA1), Ekpoma (NGA3), Batu (ETH2) and Moyale (ETH3) where between 50-60% of respondents have a linguistic minority status. Conversely, nine research areas exhibit average linguistic minority status indices lower than five percent, including Sao Nicolau (CPV1), Erigavo (SOM1), Baidoa (SOM2), Enfidha (TUN1), Redeyef (TUN2), Yenice (TUR2), Shahrake Jabrael (AFG1), Shahrake Mahdia (AFG3) and Keti Bandar (PAK3). This reflects high homogeneity in terms of languages spoken in those research areas.

Socio-economic status and life satisfaction

We include six measures that capture the sample's socio-economic status and life satisfaction:

- Household wealth,
- Labour force participation,
- Educational attainment (years of completed formal education),
- Perceived relative wealth,
- Experiencing hunger,
- Life satisfaction.

Table 28 presents descriptive statistics for these six individual-level characteristics, including the mean value by research area, and the mean, minimum, and maximum values across the 25 research areas of analysis.

Household wealth

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 socio-economic 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). At the aggregate level, these counteracting forces can be explained by the migration transition theory which explains that migration is part of economic and social changes and can be linked to a country's level of development (Zelinsky, 1971). The literature shows that higher levels of development, measured by GDP per capita and the human development index (HDI), are associated with higher levels of out-migration, and with greater development, and out-migration decreases after a specific

wealth threshold (Clemens, 2014; de Haas and Fransen, 2018). In turn, the theoretical and empirical evidence shows that the direction of the effect is mixed. And while *Household Wealth* could be related to *Poverty*, conceptually they are different concepts as *Household Wealth* constitutes the accumulation of assets in time at the household level, while our *Poverty* measure refers more to shorter-run households' financial situation and food security.

We include a measure of household wealth to capture the effect of economic well-being on migration aspirations. The MIGNEX survey includes a module on 'Poverty and wealth' which collects information on various objective and subjective measures of economic well-being ranging from sources of income, asset and land ownership to experiencing hunger. We construct a household wealth index following the methodology employed by Smits and Steendijk (2015) for estimating the International Wealth Index (IWI). This index allows us to identify households' material well-being or economic status by showing the extent to which households possess a basic set of assets and facilities. This measure has been shown to be highly correlated with human development, life expectancy, national income, and poverty measures; in turn representing a useful benchmark to rank the economic well-being of households within geographic areas (Smits and Steendijk, 2015).

We include measures of wealth and asset ownership across six dimensions:

- Ten binary measures of whether respondents own ten different types of assents including: television, refrigerator, car, bicycle, chair, radio, washing machine, moped/motorcycle, air conditioning and computer.
- Quality of water source available between low, medium and high quality.
- Quality of toilet facility available between low, medium and high quality.
- Floor material between low, medium and high quality.
- Number of rooms in the house.
- Binary measure of access to electricity at home.

Based on these 15 characteristics, we employ PPCA from which we extract the first component and obtain a wealth score. We later rescale this score from 0 – 100. The wealth score used in this analysis is based on the distribution of scores across the 25 research areas, not within each research area, and in turn we are able to compare household wealth across research areas. The wealth index has an intuitive interpretation; as the index approaches 100, the higher economic well-being of households. For further detail on the estimation of the wealth index, refer to section 10.11.5 of MIGNEX Handbook Chapter 10 on Survey data collection (Hagen-Zanker et al., 2023). We also include the squared value of the household wealth index to account and model for non-linearities in the relationship between household wealth and migration aspirations.

As shown on Table 30, research areas exhibit on average a household wealth index (HWI) close to the midpoint of 50. There is quite some variation across research areas, where Keti Bandar (PAK3) shows the lowest HWI of 15.2,

while Enfidha (TUN1) exhibits the highest ranking at 81.9. Within countries, there are research areas that are more homogeneous in terms of economic wealth index, such as the two research areas in Tunisia showing indices between 77 to 82 and the three research areas in Turkey with indices between 64 and 77. Conversely, there are research areas within countries that are quite heterogenous. For instance, in Ghana, Gbane (GHA1) presents one of the lowest HWI of 26.1 points whereas Golf City's (GHA2) HWI is more than double that with 59. Thus, respondents across our 25 research areas of analysis exhibit different levels of economic well-being, which will likely lead to diverse impacts on migration aspirations.

Employment and workforce participation

Employment status is a clear determinant of migration aspirations as people are more likely to look for work alternatives elsewhere when faced with limited work opportunities where they reside. A systematic review of the literature on determinants of migration aspirations shows that unemployment is one of the key drivers of migration aspirations and desires - where being (un)employed (increases) decreases the likelihood for migration aspirations (Aslany et al., 2021). In addition, it is not only the binary outcome of being employed or unemployed that can influence migration aspirations, but other aspects of the broader economic environment, including: labour market status, potential for upward mobility, and quality of jobs. In addition to these individual-level variables, we also include the *Livelihoods hardships* root cause as they are measuring different concepts. On the one hand, employment and workforce participation measures the *actual* participation in the labour market from the respondent. On the other hand, the *Livelihoods hardships* variable measures *perception* of feasibility of finding a good job and meeting basic needs. As such, both variables measure two different things: an actual employment status and a perception of the quality of the current job market in the research area.

In this analysis, instead of including a binary measure of unemployment status, which would exclude those out of the workforce from our sample, we disaggregate workforce participation into working, unemployed and actively seeking work and being out of the workforce in order to capture a broader measure of the labour market situation and its link with migration aspirations.

We construct a measure of workforce participation to directly evaluate the effects of employment and workforce status on migration aspirations. In order to do so, we classify respondents under one of the following three categories where '1' is those 'In the workforce and working' and '2' is those 'In the workforce but unemployed' while '3' is those 'Not in the workforce'.

In order to construct this categorical variable, we employ combinations of the following two survey items that are part of the livelihoods module:

- B2 'What is your own current work situation? Are you…', where the response options are:

    1. Employed and receive a salary
    2. Farming fishing rearing animals
    3. Working on your own account running a business

4. Studying
5. Unemployed
6. Not working because of long-term sickness disability
7. Unpaid housework looking after children other persons
8. Casual work
9. (Other) Volunteer
10. (Other) Apprenticeship

- B4 'Are you actively looking for new work? (Actively means asking around for work, looking online or in newspapers, applying for work)'

1. Yes
2. No

We first create binary variables capturing those who are in the workforce, those who are working and those who are unemployed as detailed in Table 28.

Table 27. Workforce participation relevant variables

Variable	What is your own current work situation? Are you…	Are you actively looking for new work?
Working	1) Employed and receive a salary 2) Farming fishing rearing animals 3) Working on your own account running a business 8) Casual work.	NA
Unemployed	5) Unemployed	Yes
Not in the workforce	4) Studying; 6) Not working because of long-term sickness disability; 7) Unpaid housework looking after children other persons; 8) Casual work; 9) (Other) Volunteer; 10) (Other) Apprenticeship and 5) Unemployed and not actively looking for new work	No
In the workforce	Working or Unemployed, as defined above	Yes

Lastly, we create our categorical variable by combining these different groups into: '1' which is 'In the workforce and working'; '2', which is 'In the workforce but unemployed' and '3' which is 'Not in the workforce'.

Table 30 displays the proportion of respondents who fall within each of these three categories. Over half of young adults across the 25 research areas are in the workforce and working, one third are not in the workforce and 15% are unemployed. There is high variation in the percentage of young adults who fall within each category by research area, where in some cases most respondents do not fall within the working category, but under the other two. For instance, in Chot Dheeran (PAK1), 28% of young adults are working, 3% are unemployed and 69% are not in the workforce. In the case of Erigavo (SOM1), the majority are either unemployed (33%) or not in the workforce (39%), while 28% are working. Conversely, there are a few research areas where around three quarters of young adults are in the workforce and

working including Dialakoro (GIN2), Awe (NGA2) and Keti Bandar (PAK3), and there is a low proportion of young adults who are unemployed.

Years of completed formal education

A person's education level can influence migration aspirations in many ways. On one hand, more educated individuals can experience better work opportunities abroad, higher skill premiums and it can even be easier to obtain worker visas (Aslany et al., 2021). Conversely, higher education can also lead to better employment opportunities at home, including better paid jobs and opportunities for upward mobility, which reduce the need and incentive to migrate. In some cases, higher education can reduce migration aspirations for specific professions, when skills are not transferable abroad (Aslany et al., 2021). In turn, the effect of educational attainment on migration aspirations is ambiguous and depends on the specific context. Most of the literature incorporates educational attainment into the analysis by including the number of years of education or categories of the highest educational attainment, we follow the former approach.

We include a measure of years of completed formal education. This measure is based on the survey item 'What is the highest level of formal education you have completed?'. The response options for this survey item are the following:

- 0 Quranic Recitation
- 1 None/no formal education
- 2 Religious schooling only
- 3 Primary school (started without completing)
- 4 Primary school (completed)
- 5 Lower/junior secondary
- 6 Upper/senior secondary
- 7 Tertiary (Bachelors)
- 8 Tertiary (Masters)
- 9 Tertiary (PhD)
- 10 (Other) Vocational school
- 11 (Other) Polytechnic
- 12 (Other) 14th class degree
- 999 Other

Based on each of the ten country's education systems, we determine the number of years each level of education corresponds to. For all research areas within each country, we specify the number of years per education level as shown by Table 29.

As shown in Table 30, across the 25 research areas, respondents have on average 8.7 years of completed formal education out of the maximum number of 23 years. When zooming into each research area, there is some variation in average years of formal education, but the overall number is still low. The research areas with the lowest number of years of education include Dialakoro (GIN2) and Keti Bandar (PAK3) where respondents exhibit on average 2.4 and 4.3 years of completed formal education, respectively. On the other end of the spectrum, for several other research areas including Enfidha (TUN1), Redeyef (TUN2), Hopa (TUR1), Yenice (TUR2), Ekpoma (NGA3), Golf City (GHA2) and Down Quarters (NGA1), where the average number of years of education is around 12-13 years.

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Table 28. Number of years per education level by country

Country	Incomplete primary	Primary	Lower secondary	Upper secondary	Bachelor or other basic tertiary	Masters	PhD
Turkey[20]	2	4	4	4	4	2	4
Ethiopia[21]	3	6	2	4	3	2	4
Somalia[22]	3	6	2	4	4	2	4
Afghanistan[23]	3	6	3	3	4	2	4
Cape Verde[24]	3	6	3	3	4	2	4
Ghana[25]	3	6	3	3	4	2	4
Nigeria[26]	3	6	3	3	4	2	4
Tunisia[27]	3	6	3	4	3	2	4
Guinea[28]	3	6	4	3	4	2	4
Pakistan[29]	4	8	4	2	4	2	4

Perceived relative wealth

Perceived inequalities or relative deprivation compared to others can also drive migration aspirations and migration outcomes in diverse ways. The literature evidences in several instances that feelings of exclusion and perceived inequalities can lead to greater migration aspirations. For instance, in a study on North African youths, Vacchiano (2018) finds that feelings of marginalisation and exclusion from lifestyles associated with a certain status and respectability are connected to mobility aspirations (Vacchiano, 2018). Meanwhile, Ķešāne (2019) finds that when facing different

[20] European Commission, *Türkiye National Education Systems overview* [website], https://eurydice.eacea.ec.europa.eu/national-education-systems/turkiye/overview (accessed 18 August 2023).

[21] Nuffic, *Primary and secondary education in Ethiopia* [website], https://www.nuffic.nl/en/education-systems/ethiopia/primary-and-secondary-education-secondary-education-before-2021 (accessed 18 August 2023).

[22] National Policy and Data Center, *Somalia National Education Profile 2018 Update* https://www.epdc.org/sites/default/files/documents/EPDC_NEP_2018_Somalia.pdf (accessed 18 August 2023).

[23] https://www.epdc.org/ (accessed 18 August 2023)

[24] https://www.epdc.org/ (accessed 18 August 2023)

[25] Nuffic, *Education System Ghana,* 2015. https://www.nuffic.nl/sites/default/files/2020-08/education-system-ghana.pdf (accessed 18 August 2023).

[26] Sharda University '*Let's Take a Look at How Nigerian Education System Works*' [web blog], https://nigeria.shardauniversity.org/lets-take-a-look-at-how-nigerian-education-system-works (accessed XX).

[27] Tunisia Education, *Education System of Tunisia,* [website] https://www.tunisiaeducation.info/education-system, (accessed 18 August 2023).

[28] UNESCO Institute for Statistics, *Guinea Education and Literacy* [website], https://uis.unesco.org/en/country/gn (accessed 18 August 2023).

[29] Nuffic, Primary and secondary education in Pakistan [website], https://www.nuffic.nl/en/education-systems/pakistan/primary-and-secondary-education (accessed 18 August 2023).

forms of inequalities, Latvians felt emotionally disempowered, inferior, and deprived, which significantly influenced their migration decisions. Feeling poorer (richer) than others can persuade someone to migrate (stay) to achieve (maintain) a certain level of socio-economic status and comfort. Depending on where one stands in the socio-economic scale compared to others, migration can become a more or less attractive alternative.

We employ self-perceived relative living standards as a measure of perceived inequalities at the individual level. We use a more subjective measure of economic well-being of perceived relative living standards, which allow us to compare and contrast how objective versus subjective economic factors and perceptions may influence migration aspirations. The exact survey item is 'I3. Think about the difference between rich and poor households in [RESEARCH AREA]. Imagine that on this card, 1 represents the very poorest households and 10 represents the very richest households in [RESEARCH AREA]. Where would you place your own household?' Interviewees are then asked to select from a grid between 1 to 10. A few respondents indicate 'Don't know' or 'Refuse to answer' but these consist of 37 respondents in the entire sample. In addition, for consistency with the other indices included in the analysis, we rescaled the perceived relative living standard from 1-10 to 1-4, where '1' represents those that see themselves as the poorest and '4' represents the those that see themselves as the richest.

The summary statistics shown in Table 30 reveal that, on average, respondents across all 25 research areas perceive themselves as being at the middle of the scale, hence neither too poor nor too rich compared to other households in their research area. There is not much variation by research area, but for a few research areas including Dialakoro (GIN2), Gbane (GHA1), Down Quarters (NGA1), Awe (NGA2), Moyale (ETH3), and Chot Dheeran (PAK1), respondents tend to place themselves closer to feeling 'poorer' than other households. Conversely, the research areas where the index is higher include Erigavo (SOM1) and Hopa (TUR1), where the index is on average 2.6, signalling that respondents feel somewhat richer than other households, on average. Contrasting the perceived relative living standard indices against the respective wealth indices, we see that perceptions and measured wealth do not always coincide. For instance, young adults in Erigavo perceive themselves as richer than other households in the research area but their household wealth index is below the average level.

Experiencing hunger

'Having experienced hunger' captures several dimensions of well-being including food insecurity, extreme poverty and malnourishment. The relationship between the experience of hunger and migration can be linked to the literature on food insecurity and migration aspirations, desires, and planning, which is still largely understudied in the migration literature. A recent study on the role of food insecurity in migration decision-making in Africa finds that having severe or moderate food insecurity increases the likelihood of desiring to migrate against those who are mildly or are not food insecure (Sadiddin et al, 2019). Another study that focuses on environmentally induced migration in Bangladesh shows that food insecurity emerging from rainfall variability can result in seasonal or temporary labour migration to cope with these crises particularly for social groups that are in the middle of the socio-economic spectrum (Etzold et al., 2014).

Table 29. Summary statistics of individual-level factors: well-being and life satisfaction

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Research area	Household wealth	In the workforce and working	In the workforce but unemployed	Is not in the workforce	Years of completed formal education	Perceived relative wealth	Has experienced hunger	Life satisfaction
	Mean	%	%	%	Mean	Mean	%	Mean
São Nicolau (CPV1)	58	56	28	16	8.9	2.1	11	2.5
Boa Vista (CPV2)	57	58	28	15	9.3	2.0	16	2.5
Boffa (GIN1)	35	61	6	33	5.8	2.1	24	2.0
Dialakoro (GIN2)	28	82	4	14	2.4	1.8	12	1.6
Gbane (GHA1)	26	57	19	24	5.9	1.9	40	2.0
Golf City (GHA2)	59	67	11	22	11.9	2.4	16	2.3
New Takoradi (GHA3)	49	55	18	27	10.9	2.4	13	2.4
Down Quarters (NGA1)	49	67	15	18	12.5	1.8	55	1.8
Awe (NGA2)	34	73	8	18	9.0	1.9	57	2.0
Ekpoma (NGA3)	51	46	10	44	12.8	2.0	55	1.8
Batu (ETH2)	47	66	11	24	9.7	2.2	21	2.2
Moyale (ETH3)	34	44	20	36	5.2	1.9	59	2.0
Erigavo (SOM1)	48	28	33	39	9.2	2.6	23	2.9
Baidoa (SOM2)	40	40	27	33	5.3	2.2	32	2.2
Enfidha (TUN1)	82	39	17	44	12.7	2.5	12	2.3
Redeyef (TUN2)	78	36	22	42	12.7	2.5	8	2.4
Hopa (TUR1)	77	52	10	38	12.6	2.6	2	2.5
Yenice (TUR2)	76	61	5	34	11.6	2.5	3	2.7
Kilis (TUR3)	65	43	13	44	8.8	2.1	12	2.3
Shahrake Jabrael (AFG1)	53	35	28	37	7.7	2.0	20	2.4
Behsud (AFG2)	34	45	18	37	6.2	2.0	44	2.5
Shahrake Mahdia (AFG3)	44	38	13	50	7.4	2.0	25	2.3
Chot Dheeran (PAK1)	44	26	3	70	6.5	1.8	18	2.6
Youhanabad (PAK2)	58	51	1	48	9.6	2.2	9	2.5
Keti Bandar (PAK3)	15	80	2	18	4.3	2.1	45	2.6
Total	50	52	15	33	8.7	2.1	25	2.3
Minimum	15	26	1	14	2	2	2	2
Maximum	82	82	33	70	13	3	59	3
N	12,873	12,957	12,957	12,957	12,967	12,936	12,916	12,943

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,961 (12,813 for 'Has lived in a high-income country'). Data are weighted to reflect the survey design. Specifications: mxs-gen-other-individual-characteristics-v1p-2023-07-28.do

These findings suggest that food insecurity is an important migration determinant which leads to greater desire to migrate internationally to seek better economic opportunities. Meanwhile, the literature suggests that there is no clear relationship between food insecurity and migration planning as

the latter involves concrete action, where many other factors come into play (Sadiddin et al, 2019).

Under the 'Poverty and wealth' module, survey item 'I8' inquires about the frequency at which the respondent or any member of the household have experienced hunger. More specifically, the survey item asks: 'Over the past month, how many times have you or anyone in your household gone to sleep without having had enough food to eat that day?' The response options are 'a) Never', 'b) Sometimes', 'c) Often', and 'd) Always'. In our analysis, we operationalize this survey item by creating a binary measure that equals '1' if the respondent or any household member have experienced hunger 'sometimes', 'often' or 'always' and '0' if they have 'never' experienced hunger. With this binary measure, we aim to capture whether the respondent has experienced hunger or not, regardless of the frequency of the occurrence.

On average, only a quarter of respondents across the 25 research areas have experienced hunger to some degree, as depicted in Table 30, while the large majority have never experienced it. This proportion varies when looking at research area-specific averages, where for most research areas, the percentage of respondents experiencing hunger is lower than 30%. The research areas with over 50% of respondents having experienced hunger are Moyale (ETH3), Down Quarters (NGA1), Awe (NGA2), and Ekpoma (NGA3). Meanwhile Hopa (TUR1), Yenice (TUR2), Redeyef (TUN2), and Youhanabad (PAK2) are among the research areas with the lowest proportions of respondents having experienced hunger. There are some concurring patterns between household wealth index and having experienced hunger, where research areas with the highest wealth indices also exhibit the lowest proportion of respondents having experienced hunger, such as in the Tunisia and Turkey research areas. In the case of research areas with a lower wealth index, these patterns are not as consistent.

Life satisfaction

The last measure of well-being we capture under this category is life satisfaction, which can be driven by both tangible factors, such as: income and economic well-being and subjective factors such as relationships with family and friends, having a fulfilling job, level of safety. The research shows that in general, people who are more satisfied or happier with life are less prone to migrating (Aslany et al., 2021). In this systematic review, the authors also find that the relationship between life satisfaction and migration aspirations may differ across income and educational gradients, where those with higher education may feel more dissatisfied with local opportunities and aspire to migrate. Hence, to degree to which subjective well-being influences migration aspirations depends on its interaction with several economic, cultural and political dimensions. Life satisfaction includes factors specific to the individual and environment in which they live and in turn captures a wide range of both subjective and objective factors. Studies employ different measures of subjective well-being including levels of happiness, presence of suicidal thoughts and levels of life satisfaction. In this study, we employ the latter.

We measure overall life satisfaction by employing the survey item, 'B17. All things considered, how satisfied are you with your life as a whole these

days? Using this card on which 1 means you are 'completely dissatisfied' and 10 means you are 'completely satisfied' where would you put your satisfaction with life as a whole?' We operationalize this variable by rescaling it from 1-10 to 1-4, where '1' represents 'completely dissatisfied' and '4' refers to 'completely satisfied'.

Respondents across the 25 research areas exhibit on average a 2.3 level of life satisfaction, as shown in Table 30. There is little variation in averages by research area, where for most research areas, respondents indicate to have a level of satisfaction that is at the midpoint (2) or slightly higher, suggesting that most respondents are neither completely dissatisfied nor satisfied with life. The research area with the highest level of life satisfaction on average is Erigavo (SOM1) with close to 3 points, whereas the research area with the lowest level of satisfaction is Dialakoro (GIN2) with 1.6 points.

Negative household shocks and protection

We include four measures that capture young adults' negative household shocks and protection:

- Negatively affected by Covid-19;
- Experience of physical violence;
- Negatively affected by environmental problem;
- Social protection support reception.

Table 31 presents descriptive statistics for these four individual-level characteristics, including the mean value by research area, and the mean, minimum, and maximum values across the 25 research areas of analysis.

Was negatively affected by Covid-19

Migration is one coping strategy in response to varying negative household shocks. A study by the IOM (Koser, 2012) evaluates the effect of five financial crises of the twentieth century on migration and shows that financial crises affected international migration in diverse ways, leading both to an increase and decline of out-migration. On one hand, out-migration can be resilient to financial crises due destination countries' dependencies on migrant workers, but they can also reduce the financial capacity of people to pay for migration costs.

The Covid-19 pandemic has been an unprecedented shock to households all over the world, given its far-reaching impact on multiple dimensions simultaneously including health, financial well-being, mobility, mental well-being and others. The Covid-19 pandemic negatively impacted households in different ways and in turn their coping strategies can vary substantially across households and contexts. Covid-19 could have impacted individuals' aspirations to migrate through different channels including travel restrictions and borders closures, lower ability to cover migration costs and higher exposure to illness. Using data from six cities (Accra, Amsterdam, Brussels, Dhaka, Maputo and Worcester), a recent study finds that the Covid-19 pandemic outbreak resulted in respondents perceiving increased risks associated with migration, which negatively affected their migration aspirations and ability to migrate (Jolivet et al., 2023).

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Table 30. Summary statistics of individual-level factors: negative households shocks and protection (%)

Research area	Was negatively affected by Covid-19	Has experienced violence	Affected by environ-mental problem	Has received social protection support
São Nicolau (CPV1)	3	2	68	32
Boa Vista (CPV2)	4	9	58	18
Boffa (GIN1)	63	14	74	27
Dialakoro (GIN2)	33	18	68	13
Gbane (GHA1)	1	14	94	84
Golf City (GHA2)	1	6	54	77
New Takoradi (GHA3)	1	9	24	78
Down Quarters (NGA1)	33	19	26	14
Awe (NGA2)	43	13	46	47
Ekpoma (NGA3)	40	18	26	5
Batu (ETH2)	33	10	30	52
Moyale (ETH3)	66	11	66	32
Erigavo (SOM1)	24	10	46	7
Baidoa (SOM2)	35	6	62	9
Enfidha (TUN1)	37	11	21	35
Redeyef (TUN2)	35	9	62	11
Hopa (TUR1)	52	5	63	17
Yenice (TUR2)	38	2	32	21
Kilis (TUR3)	57	4	16	50
Shahrake Jabrael (AFG1)	84	15	67	6
Behsud (AFG2)	89	26	54	12
Shahrake Mahdia (AFG3)	88	19	85	1
Chot Dheeran (PAK1)	31	2	13	15
Youhanabad (PAK2)	30	2	6	20
Keti Bandar (PAK3)	26	3	81	57
Total	38	10	50	30
Minimum	1	2	6	1
Maximum	89	26	94	84
N	12,939	12,966	12,973	12,973

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,961 (12,813 for 'Has lived in a high-income country'). Data are weighted to reflect the survey design. Specifications: mxs-gen-other-individual-characteristics-v1p-2023-07-28.do

The MIGNEX survey incorporates five items to capture the impact of Covid-19 including experiencing serious illness due to the virus and experiencing restrictions imposed by governments. We operationalise the effect of Covid-19 on migration aspirations by constructing a dichotomous variable that focuses on ill-health and severe hardships experienced within households due to Covid-19.

We rely on two survey items to construct our measure. Survey item D11 asks those respondents who were aware of Covid-19 'Have you or others in your household been seriously ill from the virus?', where the response options are 'Yes' and 'No'. The second survey item 'D12' further asks those who were aware of the virus and experienced some form of government restrictions 'How would you say that these measures affected you and your household? Did they…'; where the response options are 'a. Cause severe hardship', 'b. Cause some difficulties' , or 'c. Not make much difference?'

Our measure of Covid-19 impacts captures whether a household was severely affected by the virus and it equals '1' in two cases:

1. if the interviewee responded 'Yes' to 'D11', so they or someone in the household has been seriously ill from the virus;
2. if the respondent indicated 'Cause severe hardship' to 'D12'.

The rest of respondents are classified under the category '0' referring to those whose household was not negatively affected by Covid-19, including those that were not aware of the virus or government restrictions. In cases where respondents indicated 'Don't know' or 'Refuse to answer' to one or both survey items, these cases where coded as missing values. The number of missing values was low at 34 cases across the entire sample.

The proportion of households who were severely affected by Covid-19 varies substantially across research areas, as shown in Table 31. On average, nearly 40% of young adults across all research areas were negatively impacted by Covid-19, but this proportion ranges from 0.7% in Golf City (GHA2) to 89% in Behsud. Interestingly, in most cases, the percentage of households that were negatively affected by Covid-19 are very similar for all research areas within most countries including Cabo Verde, Ghana, Nigeria, Somalia, Tunisia, Afghanistan, and Pakistan. This likely reflects restrictions implemented at the national level to contain the virus and its incidence impacting most areas in a similar way. Contrary, research areas in Turkey, Ethiopia, and Guinea exhibit very different levels of severe Covid-19 impact.

Physical violence experience

Physical violence can take different forms including domestic violence, sexual assault, violence perceived during conflict/war, gang-related violence, and others. The specific form of violence experienced along with its duration and intensity can influence mobility strategies. For instance, Clemens (2017) shows that a recent surge in child migration to the United States from Central America is caused by the high rates of gang-related homicides in this subregion (Clemens, 2017). Other existing literature shows a linear relationship between conflict and mobility, with more threats or violence experienced resulting in greater mobility (Adhikari, 2013; Davenport et al., 2003; Lubkemann, 2005). In turn, experiencing violence first-hand or by someone close can lead to a continuum of mobility strategies where migration is only one alternative.

In addition to root causes measures of security and violence, we also evaluate the influence of individual and household experiences of physical violence on migration aspirations in these 25 very diverse contexts. In order to evaluate the effect of having experienced physical violence on migration aspirations, we rely on the following survey item: 'K4. In the past five years, have you or anyone in your household experienced assault or physical violence?' Respondents indicate 'Yes', 'No', 'Don't know, 'Refuse to answer'. The original variable is a dichotomous measure, and no further operationalisation is needed. It is relevant to note that assault or physical violence could capture a wide range of experiences including domestic violence, homicides, or other types of assault experienced by the respondent or other household members.

On average, around one in ten young adults either experienced some form of physical violence personally or someone else in their household did, in the last five years across all research areas, as depicted in Table 31. The proportion of young adults with personal/ household experience of violence is below 10% for most research areas, with a few exceptions. On one hand, around 1.8% of respondents reported personal/ household experience of violence in Chot Dheeran (PAK1) and Yenice (TUR2), while the highest levels of experience of violence are reported in Behsud (AFG2) (25.6%), Shahrake Mahdia (AFG3) (18.9%), Down Quarters (NGA1) (18.9%) and Dialakoro (GIN2) (18.5%). In general, all research areas located in countries that have experienced protracted conflict and violence show the highest levels of experience of violence, as it is the case of the three research areas in Afghanistan and Nigeria and the two research areas in Guinea, while the higher levels in Gbane (GHA1) are more unexpected.

Environmental problems

Human mobility due to climate change threats are increasingly becoming a concern. Tens of millions of people have been displaced in recent years as a consequence of natural disasters, including those resulting from environmental changes, and it is estimated that nearly 1 billion people could be uprooted in the next years due to climate change (Schewel, 2023). International migration can be the response to negative shocks resulting from climate change, but this is not always the case. Existing literature finds that international migration is the response to climate change shocks if three scenarios apply: a) if people cannot access other mitigation strategies, b) if they are forced to mobilise because of the shock, and c) if they can afford migration costs (Brzoska, 2016). Hence, the relationship between climate change and migration aspirations is complex and nuanced.

We assess whether exposure to environmental problems impacts migration aspirations in the 25 research areas, where some have experienced recent severe environmental problems. The 'Environmental issues' module of the MIGNEX survey includes a set of items that elicit information on experiencing different environmental problems and their impact on household's livelihoods and income. We construct a binary variable that captures different forms of environmental problems the respondent's household may have experienced in the last five years. We employ the following four survey items:

- L1. In the last five years, has your household been affected by droughts?
- L2. Has it been affected by floods?
- L3. Has it been affected by soil degradation?
- L4. And has it been affected by crop or livestock disease?

The response options are 'Yes' or 'No' for each of these four survey items. We then construct a measure of environmental problem at the household level, which equals '1' if the respondent has been affected by at least one of these four problems (droughts, floods, degradation, or livestock disease), and '0' if otherwise.

As Table 31 shows, nearly half of respondents' households have experienced some form of environmental problem and there is a large variation between research areas. Strikingly, in Gbane (GHA1), the large majority of young

adults, 94%, reported having experienced some form of environmental problem. In Gbane, severe environmental degradation, including frequent droughts and water pollution are having an increasing negative impact on agricultural production and livelihoods (Godin et al., 2022). In other research areas including Shahrake Mahdia (AFG1), Keti Bandar (PAK3) and Boffa (GIN1), the proportion of respondents reporting environmental problems is at similarly high levels, between 70-85%. These high levels of environmental problems are evident for instance in Keti Bandar, where problems of land erosion, rising sea levels and severe lack of water for agriculture have been impacting this research area (Erdal et al., 2022. On the other hand, less than 20% of young adults in Youhanabad (PAK3), Chot Dheeran (PAK1) and Kilis (TUR3) reported having experienced environmental problems.

Social protection support

Access to social protection can affect the decision to migrate by partially addressing some of the drivers of migration in the first place. As discussed, the decision to migrate is multilayered and context specific, and can be driven by a wide range of circumstances and factors including livelihoods and socioeconomic conditions, insecurity, conflict, political instability, and others. In situations of risks and vulnerabilities, social protection programmes can play a key role in managing risks and vulnerabilities and consequently influence migration aspirations (Himmelstine et al., 2023). A review of the literature on the links between social protection and migration shows that there are no clear trends for whether and how having access to social protection affects the likelihood of migrating; while a similar number of studies showed an increase and decrease in migration, almost half of the studies showed either mixed findings or no impact (Himmelstine et al., 2023). The impact of social protection is context-specific and varies from programme to programme, in terms of conditions, coverage, mechanisms, and other design and implementation factors, so does the extent to which they reduce household risks and influence migration decisions (Hagen-Zanker and Himmelstine, 2013; Himmelstine et al., 2023).

We account for whether respondents receive access to social protection by creating a composite measure including all social protection programmes in a country. More specifically, we employ the following survey item: ‘Has anyone in your household received any of the following support from the authorities or other organisations in the past year?’. This survey item is tailored for each country and includes the most relevant social protection programmes for each, which can range from two programmes in Guinea, Afghanistan and Pakistan to a maximum of six programmes listed in the case of Turkey. Respondents then select between two responses ‘Yes’ or ‘No’. Table 32 details the social protection programmes included by country. We then construct a dichotomous variable that equals ‘1’ if the respondent or anyone in the household has received at least one of the programmes that are relevant for that specific country, and ‘0’ otherwise.

Social protection coverage is relatively low across all research areas, with only 30% of respondents indicating that someone within their household receives some social protection programme. However, access varies substantially by research area and within countries, as shown in Table 31.

Table 31. Social protection programmes by country

Country	Social protection programme
Afghanistan	• Government Pension Scheme • Martyrs and Disabled Pension Programme
Cabo Verde	• Compulsory social protection • Social Pension • Social Inclusion Income
Ethiopia	• Idir • Ekub • Salaq • Community based health
Ghana	• National Health Insurance Scheme (NHIS) • Livelihood Empowerment Against Poverty (LEAP) • School Feeding Programme • Social Security and National Insurance Trust (SSNIT)
Guinea	• Cantines Scolaires • CNSS
Nigeria	• Home Grown School Feeding Programme • National Cash Transfer Programme • Government Enterprise and Empowerment • N-POWER Programme
Pakistan	• BISP (Benazir Income Support Programme) • Ehsaas Emergency Cash Transfer/Kafaalat
Somalia	• Shock-Responsive Safety Net for Human Capital
Tunisia	• CNAM (National Health Insurance Fund) • PNAFN (Assistance Program for needy families, elderly and disabled) • CNSS (National Social Security Fund) • CNRPS (National Pension and Social Insurance Fund)
Turkey	• Needs-based aid (pension for the disabled, orphan, widow, and elderly) • ISKUR Short Term Employment Allowance / Unemployment Benefit • Housing-Food aid (housing, coal, electricity, food, soup kitchen) • Conditional cash transfer for education • Red Crescent Card (ESSN) • UNICEF Education Aid

The research area with the highest social protection coverage is Gbane (GHA1) at 84%; whereas Shahrake Mahdia (AFG3) has the lowest coverage at 1.1%. Some research areas located in the same country exhibit similar coverage rates as it is the case for the three research areas in Ghana, all exhibiting rates between 77% and 84%. These rates look high for a lower-income country, but are likely the result of increasing coverage of the National Health Insurance Scheme (Ly et al., 2022) and the School Feeding Programme (Bedasso and Nagesh, 2022). However, in other instances, other research areas located in the same country exhibit very different coverage rates such is the case of Nigeria where coverage rates vary from 4.6% in Ekpoma (NGA3) to 47.4% in Awe (NGA2), with the latter research area being included in a national cash transfer programme that is rolled out progressively (Genyi et al., 2022). Hence, there is a lot of heterogeneity in terms of social protection coverage across research areas and within countries.

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Personal traits

We include three measures of personal traits of respondents in the analysis:

- Acceptance of uncertainty,
- Trust in other people in research area,
- Conservative gender norms.

Table 33 presents descriptive statistics for these three individual-level characteristics, including the mean value by research area, and the mean, minimum, and maximum values across the 25 research areas of analysis.

Acceptance of uncertainty

The willingness to accept uncertainty and to take risks is a key personal trait that shapes migration aspirations. The migration decision involves numerous financial, emotional and physical costs and risks; from visas and transportation costs to the emotional burden of separation from loved ones and the risk of losing one's life on risky migration journeys, to mention a few. Even after having considered all possible risks, there is always an uncertain component of the migration outcome that migrants are willing to accept, compared to those who stay. A number of studies find that individuals who are more willing to take risks, also exhibit a higher probability to aspire to migrate (Aslany et al., 2021). Further evidence is needed around the relationship between attitudes toward risk and migration aspirations, largely limited by data and methodological challenges in measuring risk and uncertainty.

Using a unique set of survey items, we create a composite measure that captures the level of uncertainty respondents are willing to take based on the following three survey items:

1. Imagine that a kind man came to give you a gift. He said that 'you can choose between either receiving [AMOUNT AND CURRENCY] right now or playing a game of tossing a coin. If we play and it's heads, you receive nothing. But if we play and it's tails, you receive [3 x AMOUNT AND CURRENCY].' Would you play the game or take the [AMOUNT AND CURRENCY]?

2. Now imagine that he gave you a different choice. He said that 'either you can receive [AMOUNT AND CURRENCY] right now, or you can receive [3 x AMOUNT AND CURRENCY] in one year.' What would you choose?

3. Finally, imagine a different type of choice. He said that 'you can choose between either receiving [AMOUNT AND CURRENCY] right now or playing a game of tossing a coin. If we play and it's heads, you receive nothing. But if we play and it's tails, you receive [6 x AMOUNT AND CURRENCY] in one year.' Would you play the game or take the [AMOUNT AND CURRENCY]?

The response options are: 'a) Take the certain amount', '(b) Play the game'. These survey items are measured as binary responses where playing the game corresponds to '1' and taking the certain amount corresponds to '0'. It is important to note that each survey item measures different dimensions of uncertainty. In our analysis here we do not seek to capture the type of uncertainty the respondent is willing to accept, i.e., present value vs. future

value or level of magnitude of loss. Instead, we capture the number of instances the respondent would be willing to accept an uncertain outcome when confronted with different scenarios.

We create a measure of uncertainty by adding up the responses to these three survey items. As a result of this summation of values, our measure ranges from 0, when the respondent is not willing to play any of the three risk games, to 3, when the respondent is willing to play the three risk games. We rescale this measure to 1-4 so that it is consistent with other indices and to aid interpretation. Each category has the following values: '1) Would never accept uncertainty'; '2) Would sometimes accept uncertainty'; '3) Would often accept uncertainty'; and '4) Would always accept uncertainty'. This variable can be utilized either as an ordinal variable where the higher the value, the higher the level of uncertainty respondents are willing to accept, or as a categorical variable. We choose to use the former for simplicity of interpretation.

As shown on Table 33, on a scale from 1 to 4, respondents are willing to accept on average a level of uncertainty of 1.8. This shows that across all research areas, respondents are more inclined toward 'never' or 'sometimes' accepting uncertainty. There is little variation in terms of level of uncertainty acceptance when we look at averages by research area, when the majority are around the entire sample average. The lowest levels are observed in Boffa (GIN1) and Awe (NGA2) at 1.2. Meanwhile in other research areas, such as Keti Bandar (PAK3) and Shahrake Jabrael (AFG1), young adults are willing to accept slightly higher levels of uncertainty, at 2.3.

Thinks most people can be trusted

Social cohesion and attachment to the place where people reside can influence one's desire to migrate or to stay. The literature shows the effect of a wide range of measures of social cohesion on migration aspirations, including national pride or attachment, local community satisfaction or attachment, interpersonal trust, absence of discrimination and measures of social capital (Aslany et al., 2021). The research finds that when people feel more attached to their communities, they are less likely to leave (Aslany et al., 2021).

We focus on evaluating the relationship between interpersonal trust and migration aspirations, accounting for one aspect of social cohesion. We employ survey item E11 which asks: 'Would you say that… '0 Most people in [RESEARCH AREA] can be trusted, or that' '1 You can't rely on anybody?'.

We construct a new binary variable measuring 'Most people in research area can be trusted' as follows. The survey item is framed around mistrust or not relying in anybody, so we first create a new binary variable that equals '1' or 'Yes' if respondents indicated that 'Most people in research area can be trusted' and '0' or 'No' if they responded 'You can't rely on anybody'. In addition, we code responses indicating 'Don't know', which corresponds to 426 observations, or nearly 3.4% of the entire sample, under the 'No' category. The reasoning behind this choice is that those who responded 'Don't know' are uncertain about whether most people in the research area can be trusted and can thus be grouped under the 'No' category.

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Table 32. Summary statistics of individual-level factors: personality traits

Research area	Acceptance of uncertainty	Thinks most people can be trusted (%)	Conservative gender norms
São Nicolau (CPV1)	1.8	44	1.3
Boa Vista (CPV2)	1.6	27	1.4
Boffa (GIN1)	1.2	58	2.3
Dialakoro (GIN2)	1.5	69	2.3
Gbane (GHA1)	1.5	35	1.6
Golf City (GHA2)	1.7	23	1.4
New Takoradi (GHA3)	1.5	30	1.3
Down Quarters (NGA1)	1.4	15	1.4
Awe (NGA2)	1.2	40	1.9
Ekpoma (NGA3)	1.5	11	1.2
Batu (ETH2)	1.9	31	1.4
Moyale (ETH3)	1.5	16	2.0
Erigavo (SOM1)	2.2	57	2.3
Baidoa (SOM2)	1.9	53	2.1
Enfidha (TUN1)	1.7	24	2.3
Redeyef (TUN2)	1.6	34	2.3
Hopa (TUR1)	2.1	56	1.4
Yenice (TUR2)	2.2	72	1.7
Kilis (TUR3)	1.6	37	2.0
Shahrake Jabrael (AFG1)	2.3	55	2.1
Behsud (AFG2)	1.4	56	2.5
Shahrake Mahdia (AFG3)	2.0	39	2.0
Chot Dheeran (PAK1)	1.8	64	2.1
Youhanabad (PAK2)	2.1	33	2.3
Keti Bandar (PAK3)	2.3	66	2.9
Total	1.7	42	1.9
Minimum	1.2	10.7	1.2
Maximum	2.3	72.3	2.9
N	12,657	12,942	12,973

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,961 (12,813 for 'Has lived in a high-income country'). Data are weighted to reflect the survey design. Specifications: mxs-gen-other-individual-characteristics-v1p-2023-07-28.do

On average, across all research areas, nearly 42% of respondents indicate that people in their research area can be trusted, as shown in Table 33. There is quite some variation in level of trust by research area, but in most cases, these proportion is lower than 50%. The highest levels of trust are found in Yenice (TUR2) (73.8%), Dialakoro (GIN2) (69.5%) and Keti Bandar (PAK3) (67.1%). Meanwhile, the lowest levels of trust in people from the research area are found in Ekpoma (NGA3) (10.2%), Moyale (ETH3) (16%) and Enfidha (TUN1) (24.5%).

Conservative gender norms

Conservative gender norms can influence migrations aspirations in very different ways (Hagen-Zanker and Hennessey, 2021). In some contexts, the migration of unmarried women is disapproved of; this does not necessarily eliminate women's migration aspirations but instead shapes the channels through which they migrate (Aslany et al., 2021). In other contexts, men as the breadwinner are expected to migrate whereas women are expected to stay behind and take care of the family. The effect of different types of norms and values on migration aspirations is quite mixed and context specific (Hagen-Zanker and Hennessey, 2021).

We construct a Conservative gender norms index that measures respondents' perceptions and opinions around women's opportunities, participation and role. We rely on four survey items, statements that the respondents were asked whether they 'mostly agree with, or not':

- A36. In [RESEARCH AREA] women have the same opportunities as men.
- A37. Only men should be responsible for providing income.
- A38. When a mother works for pay, the children suffer.
- A39. Only women should take responsibility for the household.

We construct the index by adding up the responses to these four survey items. As a result of this summation of values, we obtain a measure that ranges from 0 to 4. We rescale this measure from 1-4 so that it is consistent with the other indices included in the analysis. In turn, we have a gender norms index that ranges from '1' when the respondent has the least conservative gender values to '4' when the respondent has the most conservative gender values.

Table 33 shows that on average, young adults across all research areas exhibit a gender norms index of 1.9. The research areas with the lowest indices or least conservative gender values include Ekpoma (NGA3) with 1.2, Sao Nicolau (CPV1) with 1.3, and New Takoradi (GHA3) with 1.3. Meanwhile the research areas with the highest indices or most conservative gender values include Keti Bandar (PAK3) with 2.9 and Behsud (AFG2) with 2.5. Within countries, research areas exhibit similar gender norms values except for Ethiopia, Pakistan, and Turkey where there is more variation across research areas.

Other research area characteristics

There are also other characteristics specific to the research area – besides root causes –that may influence migration outcomes. In this analysis, we include three other factors at the research area level:

- Measure of inequality,
- Linguistic fractionalization,
- Presence of international actors.

Table 34 presents descriptive statistics for these three research area level characteristics, including the mean value by research area, and the mean, minimum, and maximum values across the 25 research areas of analysis.

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Table 33. Summary statistics of research area-level characteristics

Research area	Gini index	Linguistic fractionalisation	Presence of international actors
São Nicolau (CPV1)	0.22	15	2.0
Boa Vista (CPV2)	0.17	34	3.3
Boffa (GIN1)	0.31	71	2.7
Dialakoro (GIN2)	0.23	29	1.7
Gbane (GHA1)	0.41	59	2.3
Golf City (GHA2)	0.21	100	2.0
New Takoradi (GHA3)	0.34	53	1.3
Down Quarters (NGA1)	0.30	74	1.3
Awe (NGA2)	0.39	50	1.3
Ekpoma (NGA3)	0.38	62	2.0
Batu (ETH2)	0.27	84	3.3
Moyale (ETH3)	0.29	68	2.3
Erigavo (SOM1)	0.28	13	1.7
Baidoa (SOM2)	0.36	16	2.0
Enfidha (TUN1)	0.20	15	2.0
Redeyef (TUN2)	0.18	14	1.3
Hopa (TUR1)	0.34	0	1.3
Yenice (TUR2)	0.21	14	1.3
Kilis (TUR3)	0.21	79	2.0
Shahrake Jabrael (AFG1)	0.29	21	1.7
Behsud (AFG2)	0.36	62	3.0
Shahrake Mahdia (AFG3)	0.29	14	1.7
Chot Dheeran (PAK1)	0.31	23	1.3
Youhanabad (PAK2)	0.16	35	1.7
Keti Bandar (PAK3)	0.57	17	1.7
Total	0.29	41	1.9
Minimum	0.16	0	1.3
Maximum	0.57	100	3.3
N	12,973	12,973	12,973

Data source: MIGNEX survey dataset (restricted variant, v1). N=12,961 (12,813 for 'Has lived in a high-income country'). Data are weighted to reflect the survey design. Specifications: mxs-gen-other-researcharea-characteristics-v1p-2023-07-28.do

Inequality – Gini index

Vertical, within-country income inequality has long been seen as a driver of migration (Massey et al. 1993). In 1991 with the introduction of the New Economics of Labor Migration, Oded Stark postulated that both absolute and relative income can be drivers of migration, with migration aspirations being stronger in places with a more unequal income distribution (Stark, 1991). However, more recently, empirical findings about the relation between inequality or notions of individual relative deprivation and migration have been inconsistent with studies suggesting that the relationship can be positive (Stark et al., 2009), negative (Czaika & de Haas, 2012), or even follow an inverse U-shape (Péridy, 2006). Although we cannot predict what effect inequality will have, we include a research-area level measure of vertical inequality.

We operationalise income inequality by estimating the Gini index of each research area based on the household's wealth index (as explained above

and in Hagen-Zanker et al., 2023), with wealth being a proxy for income which we did not measure. We estimate each research area Gini index using the `ineqdeco` command in Stata developed by Stephen P. Jenkins. The resulting Gini index is a statistical measure that ranges between 0 and 1, where: 0 represents perfect equality, which indicates that all households in the research area have the same wealth and 1 represents perfect inequality, which suggests that one household owns all the wealth in the research area.

As Table 34 shows, inequality varies greatly between research areas. While in some places like Boa Vista (CPV2) or Chot Dheeran (PAK1) research area inequality is as low as 0.16, it can also be quite high like in Keti Bandar (PAK 3) where it reaches a value of 0.57. To put this number in perspective, a Gini index of 0.57 would be a relatively high level of inequality, comparable to the most recent Gini estimation for Namibia (2015) of 0.59 that ranks as the second most unequal country in the world.[30]

Linguistic fractionalisation

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). Social identifies of neighbourhoods or larger geographic areas can also shape migration aspirations and decisions through the internal dynamics that occur across more homogenous or heterogeneous groups. A high level of heterogeneity in terms of social identities, i.e. religion, ethnicity, caste, can potentially create friction across groups and reduce social cohesion within certain geographic areas. The literature on the links between conflict and migration suggest that the decision to 'stay' or 'leave' is quite nuanced and there is a broad spectrum of factors that influence the decision to stay or migrate in specific contexts (Erdal, 2023). We employ linguistic fractionalisation as a proxy for ethnic fractionalisation and evaluate its influence on migration aspirations.

We create a measure of linguistic fractionalisation as a proxy for ethnic fractionalisation within each research area following the methodology employed by Easterly and Levine (1997) and Alesina et al. (2003). Using the 1964 Atlas Narodov Mira dataset (Bruk and Apenchenko, 1964), Easterly and Levine (1997) create a measure of Ethno-Linguistic Fractionalisation (ELF) which is measured as 1 minus the Herfindahl concentration index of ethnolinguistic group shares. The Herfindahl concentration index is a measure of market concentration estimated by summing the squares of the market shares in any given industry (Herfindahl, 1950). Alesina et al. (2003) take this methodology a step forward by distinguishing between ethnic, linguistic and religious diversity and creating separate indices for each. The ELF constructed by these studies takes the following form:

$$ELF = 1 - \sum_i s_i^2$$

where s_i is the share of group i over the total population.

[30] World Bank, Poverty and Inequality Platform, *Gini index*, https://data.worldbank.org/indicator/SI.POV.GINI, (accessed 5 September 2023).

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The MIGNEX survey data does not include information on ethnic background, so we construct a measure that focuses on linguistic fractionalisation and use it as a proxy of ethnic fractionalisation. More specifically, our index of linguistic fractionalisation measures the probability that two randomly selected people from a research area belong to different linguistic groups. The higher the index, the more linguistically heterogeneous or fractionalised any given research area is.

We construct the index based on the following survey item: 'A5. When you were a child, what language did you speak at home with your parents?'. As mentioned previously, the languages spoken as children are tailored for each country and we end up with 72 dichotomous variables representing all languages spoken across the 25 research areas. For further details on the operationalization of this survey item from a string variable to dichotomous variables for each language spoken, refer to the 'Linguistic minority status' discussion above.

The linguistic fractionalisation index at the research area level is estimated in four steps:

1. By research area, we estimate the number of respondents speaking each language as a child.
2. We then estimate the probability of speaking each language (s_i), or language share within the research area, by dividing the total number of respondents who speak each language (1) by the total number of respondents of that research area (2).
3. We estimate the square of all language shares.
4. Finally, we compute the linguistic fractionalisation index (LF) as:

$$LF = 1 - \sum_i s_i^2$$

In some cases, respondents spoke more than one language as a child and this results in the sum of shares squared being greater than 1. Once subtracted from 1, this can lead to a negative value. For greater analytical interpretation and consistency with other indices, we rescale the fractalisation index so that it ranges from 0.01 to 1 or 1 to 100% once converted to percentages. The higher the index, the more linguistically diverse are young adults residing within each research area and the more linguistically fractionalised any given research area is.

As shown in Table 34, on average, the linguistic fractionalisation index shows that the probability that two randomly selected people from a research area belong to different linguistic groups is 40.9%. The index value varies substantially by research area. For instance, Hopa (TUR1) exhibits an index of 0%, meaning that all young adults in this research area are linguistically homogenous and speak the same language. Erigavo (SOM1), Enfidha (TUN1), Redeyef (TUN2), Yenice (TUR2) and Shahrake Mahdia (AFG3) also exhibit low linguistic fractionalisation indices below 15%. Conversely, Golf City (GHA2) shows the exact opposite trend as Hopa (TUR1) with an index of 100%, showing that there is high linguistic heterogeneity in the research area and the probability of selecting two individuals who speak a

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different language is technically 100%. Other areas with high linguistic fractionalization indices include Batu (ETH2), Kilis (TU3), and Boffa (GIN1) which exhibit indices higher than 70%.

Presence of international actors

Research areas differ in how they are connected with the outside world. Migration-related connections are captured by variables that have been described in earlier sections. Beyond migration, however, there are other ways in which other parts of the world might have a local presence. Chief among them are international tourism, international aid, and international investment. While these three are clearly different phenomena, they have two things in common: They are typically visible in the form of foreign faces, names, logos, and the like, and they are reminder of resources being more plentiful elsewhere. Given these similarities and the small number of research areas that we compare, we use the general variable 'presence of international actors' in the analysis.

International actors could potentially have disparate effects on migration aspirations, encouragement, and preparation. On the one hand, since their presence typically reflects disparities in wealth, it could signal the potential gains from migrating. On the other hand, the resources that accompany them could strengthen the belief in local futures and the possibilities for benefitting from the wealth of other places without leaving.

For measuring the presence of international actors, we rely on the MIGNEX qualitative data, which consists of focus groups transcripts and Research Area Interim Reports (RAIRs), which are internal reports for each research area based on the qualitative data collection (Erdal and Carling, 2020). Based on the latter, 19 coding scales were created for each research area[31]. The topics covered by the RAIR coding scale are quite diverse including major infrastructure improvement, mobile phone networks, vulnerability to natural disasters, to mention a few. Each scale has four possible scores ranging from 0 to 4.

In order to measure the presence of international actors, we employ the following three RAIR coding scales:

- Prominence of international tourism (Coding scale C): '0' means that 'there are apparently no tourists and no infrastructure for international tourism', and '4' refers to 'Tourists and the tourism industry are a prominent and visible feature of the area'.
- Prominence of micro-level international aid (Coding scale D): '0' means that 'there are no signs of any international development aid directly targeting households and/or community institutions', while '4' shows that 'international development aid directly targeting households and/or community institutions is prominent in the area and in people's awareness'.

[31] For further detail on the Research Area Interim Report and coding scales see MIGNEX Handbook Chapter 8 on Qualitative Data collection (Erdal and Carling, 2020).

- Prominence of international investment (Coding scale E): '0' means that 'there are no signs of any foreign investment in the area', and '4' means that 'large-scale foreign investment is highly prominent in the area'.

In order to operationalise the presence of international actors, we obtain the average value of these three RAIR coding scales. The higher the value, the higher presence of international actors in any given research area. The effect of this variable could go in both directions depending on the specific context.

As Table 34 shows, there is high variation in terms of presence of international actors across research areas. In Boa Vista (CPV2), Batu (ETH2), and Behsud (AFG2), the presence of international actors ranges between 3 and 3.3, among the highest across all research areas. On the contrary, several research areas exhibit low presence of international actors at 1.3 points including New Takoradi (GHA3), Down Quarters (NGA1), Awe (NGA2), Redeyef (TUN2), Hopa (TUR1) and Yenice (TUR2).

The multi-level determination of migration processes

As previously presented, we have identified a set of 41 variables that could potentially influence someone's desire and preparations to leave. In the following section we present the results of our multivariate regression analyses on the relation between these 41 variables and migration aspirations, preparations, and encouragement.

The rest of this section is structured as follows: we start by explaining how to read the results from our condensed table. Our condensed table presents the results of more than 2,000 coefficients resulting from the seven regressions on the nine measures of aspirations, preparations and encouragement. We then share reflections on the statistical significance of the variables that we have chosen as determinants and their explanatory capacity of migration processes. Afterwards, we present reflections on the relevance of each level of analysis (individual and research area) and then continue with the interpretation of the results of each independent variable on the different measures of migratory aspirations. More details about the methodology and the types of regression that were used to obtain these results are available in the section Methodology.

Main regression results

For interpretation of the significance of the 41 independent variables across seven model specifications for our nine dependent variables – resulting in 2,709 coefficients – Table 35 summarises these results. The components of this table are:

- **Domain**: the domain to which the independent variable belongs. These include root causes, migration experience and networks or other individual or research area level characteristics.
- **Level**: whether the variable is an individual level (IND) variable or a research area level variable (RA).

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Table 34. Overview of regression results

Determinants	Level	Scale	Comparability correction factor	Migration aspirations					
				Migration aspirations (average)		**Resolute migration aspirations**		**No migration aspirations**	
				CES	SS	CES	SS	CES	SS
Root causes									
Livelihoods hardships	IND	1-4	3	0.09	H	0.09	H	-0.09	H
Poverty	RA	1-4	3	-0.84	H	-0.48	H	0.84	H
Discontent with public services	IND	1-4	3	0.11	M	0.09	H	-0.07	-
Distrust in institutions	IND	1-4	3	0.09	H	0.07	H	-0.09	H
Disapproval of government	IND	1-4	3	0.05	-	0.01	-	-0.07	H
Corruption experience (%)	RA	0-1	1	0.67	H	0.36	H	-0.67	H
Perception of insecurity	IND	1/4	3	-0.02	-	-0.01	-	0.01	-
Violence and crime	RA	1-4	3	0.02	-	-0.10	-	-0.07	-
Environmental hazards and stresses	RA	1-4	3	0.15	-	0.09	-	-0.27	H
Migration-related factors									
Has lived in high-income country	IND	0/1	1	0.08	-	0.09	L	-0.01	-
Knows of failed migration	IND	0/1	1	0.05	L	0.04	H	-0.05	H
Is aware of migrants	IND	0/1	1	0.09	H	0.08	H	-0.09	H
Has ties to high-income country	IND	0/1	1	0.05	H	0.06	H	-0.04	H
Has received remittances	IND	0/1	1	0.05	-	0.06	H	-0.02	-
Culture of migration	RA	1-4	3	0.24	M	0.21	H	-0.24	M
Other characteristics									
Is female	IND	0/1	1	-0.08	H	-0.07	H	0.07	H
Age	IND	num	21	0.06	-	0.18	-	0.10	-
Age (squared)	IND	num	-	-	-	-	-	-	-
Is married/cohabiting	IND	0/1	1	-0.05	H	-0.03	H	0.05	H
Is a parent	IND	0/1	1	-0.02	-	-0.02	M	0.02	-
Grew up in research area	IND	0/1	1	-0.01	-	-0.01	-	0.01	-
Linguistic minority status	IND	0/1	1	0.04	-	0.06	H	0.00	-
Household Wealth	IND	num	100	0.35	-	0.02	-	-0.50	H
Household Wealth (squared)	IND	num	-	-	-	-	-	-	H
Is unemployed	IND	0/1	1	0.04	M	0.03	L	-0.04	M
Is not in the workforce	IND	0/1	1	0.01	H	-0.03	M	-0.03	H
Years of completed education	IND	num	23	0.22	M	0.15	L	-0.18	M
Years of completed education (squared)	IND	num	-	-	-	-	-	-	-
Perceived relative wealth	IND	1-4	3	-0.01	-	0.01	-	0.00	-
Has experienced hunger	IND	0/1	1	0.02	-	0.01	-	-0.03	L
Life satisfaction	IND	1-4	3	-0.13	H	-0.13	H	0.11	H
Was negatively affected by Covid-19	IND	0/1	1	0.02	-	0.02	L	-0.04	M
Has experienced violence	IND	0/1	1	0.05	H	0.03	M	-0.05	H
Affected by environmental problem	IND	0/1	1	0.00	-	0.00	-	0.00	-
Has received social protection support	IND	0/1	1	0.01	-	0.01	-	-0.02	-
Acceptance of uncertainty	IND	1-4	3	0.06	H	0.05	H	-0.05	H
Thinks most people can be trusted	IND	0/1	1	-0.01	-	-0.01	-	0.00	-
Conservative gender norms	IND	1-4	3	-0.02	-	-0.01	-	0.02	-
Gini index	RA	0-1	1	0.18	-	0.13	-	-0.06	-
Linguistic fractionalisation	RA	0-1	1	0.12	L	0.10	M	-0.15	H
Presence of international actors	RA	0-1	1	-0.07	H	-0.05	H	0.07	H

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. *Levels:* RA: research area; IND: individual. *Statistical significance (SS):* H: $p<0.025$, M: $p<0.05$, L: $p<0.1$. *Comparable effect sizes (CES):* darker red: greater negative effect; darker blue: greater positive effect. See full tables in appendix.

Table 35. *Continued*

		Migration preparations							
		Encouragement of migration		**Has prepared but was unable to migrate (past 5 years)**		**Has passport and would migrate to richer country if given papers**		**Has applied for visa and would migrate to richer country if given papers**	
Determinants	Level	CES	SS	CES	SS	CES	SS	CES	SS
Root causes									
Livelihoods hardships	IND	0.04	L	0.06	H	0.03	L	0.02	M
Poverty	RA	0.35	L	0.15	-	-0.11	-	0.00	-
Discontent with public services	IND	0.07	H	0.03	-	0.00	-	-0.01	-
Distrust in institutions	IND	0.04	L	0.07	H	0.01	-	0.02	L
Disapproval of government	IND	0.05	L	0.00	-	0.00	-	0.00	-
Corruption experience (%)	RA	0.41	H	0.00	-	-0.03	-	-0.06	-
Perception of insecurity	IND	0.00	-	-0.01	-	-0.01	-	-0.01	M
Violence and crime	RA	-0.37	H	0.30	H	0.05	-	0.06	M
Environmental hazards and stresses	RA	0.01	-	-0.11	H	0.04	-	-0.02	-
Migration-related factors									
Has lived in high-income country	IND	0.19	H	0.13	H	0.12	H	0.07	H
Knows of failed migration	IND	0.06	H	0.07	H	0.00	-	0.01	L
Is aware of migrants	IND	0.09	H	0.06	H	0.02	-	0.01	-
Has ties to high-income country	IND	0.06	H	0.06	H	0.04	H	0.01	M
Has received remittances	IND	0.05	H	0.06	H	0.07	H	0.03	H
Culture of migration	RA	0.53	H	0.12	L	0.07	-	0.02	-
Other characteristics									
Is female	IND	-0.07	H	-0.06	H	-0.02	H	-0.01	L
Age	IND	0.29	L	0.35	H	0.25	H	0.00	-
Age (squared)	IND	-	L	-	H	-	M	-	-
Is married/cohabiting	IND	-0.03	H	0.01	-	-0.02	H	0.00	-
Is a parent	IND	0.00	-	-0.02	L	-0.02	H	-0.01	-
Grew up in research area	IND	0.02	-	-0.01	-	-0.01	L	-0.01	-
Linguistic minority status	IND	0.02	-	0.06	H	0.03	L	0.02	L
Household Wealth	IND	0.02	-	-0.16	-	0.03	-	-0.10	-
Household Wealth (squared)	IND	-	-	-	-	-	-	-	H
Is unemployed	IND	0.01	-	0.01	-	-0.01	-	-0.01	-
Is not in the workforce	IND	0.00	-	-0.05	H	-0.01	-	-0.02	H
Years of completed education	IND	0.16	-	0.19	H	-0.05	-	0.03	-
Years of completed education (squared)	IND	-	-	-	M	-	M	-	-
Perceived relative wealth	IND	-0.03	-	0.03	-	-0.01	-	0.01	-
Has experienced hunger	IND	0.02	L	0.04	H	-0.01	L	0.00	-
Life satisfaction	IND	-0.02	-	-0.04	M	-0.01	-	-0.01	-
Was negatively affected by Covid-19	IND	0.01	-	0.01	-	0.02	M	0.00	-
Has experienced violence	IND	0.06	H	0.04	H	0.03	H	0.01	H
Affected by environmental problem	IND	0.01	-	0.01	-	0.00	-	0.00	-
Has received social protection support	IND	0.05	H	0.01	-	0.01	-	0.00	-
Acceptance of uncertainty	IND	0.04	H	0.03	M	0.01	-	0.01	M
Thinks most people can be trusted	IND	0.01	-	-0.01	-	0.01	-	-0.01	-
Conservative gender norms	IND	-0.02	-	0.03	L	0.01	-	0.00	-
Gini index	RA	-0.28	M	-0.10	-	0.04	-	0.03	-
Linguistic fractionalisation	RA	-0.04	-	-0.13	H	-0.06	-	-0.01	-
Presence of international actors	RA	-0.02	H	-0.01	H	0.02	H	0.01	H

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. *Levels:* RA: research area; IND: individual. *Statistical significance (SS):* H: $p<0.025$, M: $p<0.05$, L: $p<0.1$. *Comparable effect sizes (CES):* darker red: greater negative effect; darker blue: greater positive effect. See full tables in appendix.

- **Scale**: the scale of the variable. This can be binary (0 or 1), a percentage (0 to 100%), a 3 points scale from 1 to 4, or a numerical variable.
- **Comparability correction factor (CCF):** since the scales of the independent variables are different, we compute a correction factor that expresses the value of the estimated coefficient into a standardised scale. That scale represents a change in the independent variable from its minimum value to its largest value. Binary variables and variables expressed in percentages (rate of corruption for example) are not subject to an additional correction factor as a one-unit increase already represents going from the minimum to the maximum value.
- **Comparable effect size (CES):** this is the multiplication of the average coefficient size by the comparable correction factor. The average coefficient size is the average between the coefficients from the LPM, LPM-FE, Mixed and the marginal effects from the Logit, Logit-FE and Melogit regressions of each independent variable at the individual level. The average coefficient size for each research-area level variable is the average between the coefficients from LPM and Mixed regressions and the marginal effects from the Logit and Melogit regressions. While we estimate each comparable effect size for each one of the nine dependent variables separately, we group the comparable effect sizes of three of the aspirations variables (*preference, consideration and readiness*) under the category 'migration aspirations'. Therefore, the value of the comparable effect size in this case is the average CES for *preference, consideration, and readiness*. For example, if the average coefficient for the Livelihoods hardships on the migration aspirations variables is 0.027, we multiply this value for a correction factor of 3, to denote a change on this variable from its minimum (1) to its maximum value (4). The result is 0.03x3=0.09. This means that an increase from the bottom (1) to the top of the livelihood hardships (4), indicating greater hardships in individual-level livelihoods, results in an 9% increase in migration aspirations.
- **Average statistical significance (SS):** this is the average statistical significance of the independent variable across the model specifications: LPM, LPM-FE, Logit, Logit-FE, Mixed and Melogit. In the case of the migration aspirations group of variables this is the average of the three variables: *preference, consideration*, and *readiness*. We define three levels of significance - High, Medium and Low - based on the average p-value for each independent variable. The legend of the levels of significance is displayed below the table.

Assessing the significance of determinants

While results across dependent variables vary, our selection of multi-level determinants of migration aspirations shows consistent signs, magnitudes and significance across most specifications.

The level of significance is highest across our independent variables when they are used to explain migration aspirations (in contrast to preparations or encouragement). Statistical significance is slightly lower on the

encouragement to leave and the lowest for the group of variables that measure migration preparations.

However, and regardless of the group of dependent variables, all specifications more than half of the independent variables are statistically significant and often the root causes domains stand out as having the highest relevance. The variables used for root causes are almost all statistically significant when explaining migration aspirations. The individual level 'perception of insecurity' is the only exception.

To compare the level of significance of our 41 variables across the different groups we looked at the ratio of significant variables per group. This ratio is the number of independent variables that, 'on average' are statistically significant at least at the 10% level (*p-value* lower than 0.1) divided by the total number of independent variables which is 41. These ratios ranged between 39% and 63% for the different dependent variables indicating that on average, more than half of our selected independent variables were significant explanatory variables of migration processes.

Different effects at different levels

A key aim of our analyses is to differentiate between individual-and research-area level effects on migration processes. And while it is of interest to compare both levels and how they contribute to the formation of migration processes we opt to use both sources of information as complementary rather than comparatively. As we present later, both sources of information contribute to the formation of migration processes and their effects should be interpreted simultaneously.

As Table 35 shows, while the comparable effect sizes vary greatly between variables it is worth noting that, on average, the effect of research-area level measures is higher than the one of individual-level measures. This is expected as research area measures represent changes on widely experienced situations, therefore they represent changes for large groups of people within a research area.

For instance, the highest coefficient in Table 35 is the one associated with the corruption experience (%). The corruption experience (%) is the proportion of people from the research area that have declared that they have been expected to pay a bribe in the past year. If this variable increases by one point, moving from zero (0) to one (1) this is associated with a 63% higher likelihood of having migration aspirations. This effect becomes relatively high as it encompasses an increase on a hardship both at the individual level and at the research area level simultaneously. While having been expected to pay a bribe might not trigger or increase individuals' migration aspirations directly, if everyone has experienced this level of corruption then the general environment of corruption might affect individuals' perceptions differently and therefore increase their migration aspirations as a response.

Out of the 41 independent variables included in our analysis, 33 capture individual-level information and nine capture research area-level information. On the whole, we find that:

- On average, 24 out of 33 of the individual-level variables (73%) have a statistically significant coefficient.
- Eight out of nine of our research area variables have a statistically significant coefficient (90%) and often their magnitude is high.
- When holding all other variables at their mean values, the average effect of the research area-level variables going from its minimum value to its maximum value is 34%. The same metric for the individual-level variables is 7%.
- Research area effects are thus on average around five times larger than individual level effects.

However, while the proportion of statistically significant variables at the research area level is larger than at the individual level, the actual contribution of the research area level variables to the model is rather small. We can get a sense of this by looking at the Intraclass Correlation Coefficient (ICC) after the multi-level regressions.

In a multi-level model, the ICC is the proportion of the total variance that occurs at the cluster level. It is also the correlation between two individuals within the same research area. The more variability between research areas, the less variability within research areas is expected and we can expect a higher correlation between individuals. In our case, the ICC of our multilevel models is about 2%. This value is quite low meaning that overall, only 2% of the variability comes from the research-area level variables. However, this is due to the nature of the data which group more than 12,000+ people in only 25 groups.

Although it makes sense to compare the levels of contribution of both levels (individual and research area) to the formation of migration aspirations and preparations, it is best to look at both sources of information as complementary rather than as substitutes. The regression results show that they clearly both contribute to the formation of migration aspirations and preparations. In the following section, we discuss the regressions findings, first looking at the findings for different aspects of migration aspirations and encouragement and then those considering migration preparations.

Migration aspirations

Individual migration aspirations

Within the individual migration aspirations category we included five dependent variables (see Table 7), four of which are variations of aspiration to leave and discussed here.[32] In Table 35 we provide an average comparable effect size of the results on *preference, consideration and readiness*. We do not include 'Resolute migration aspirations' in this calculation as it is based on the values for *preference, consideration and readiness*, instead we use it . as a consistency check. In the following section, we discuss the detailed regression findings, considering the significance and sign of the independent variables across different model specifications and magnitude in terms of the comparable effect size.

[32] 'No migration aspirations' is discussed in the next sub-section.

Root causes

The regression findings specified in Table 35 show that both variables specified in the **Livelihoods and poverty domain** are strong predictors of individual migration aspirations. Both variables are statistically significant in virtually every specification, indicating very robust results.

The Livelihoods hardships coefficient is positive for all four measures of migration aspirations, and across all model specifications, indicating that the harder the livelihoods conditions, the greater the aspirations to leave. This is consistent with the literature discussed above, which finds that poorer livelihoods opportunities are often an important motivation for wanting to leave. The size of the coefficient is fairly small, however, with an average comparable effect size of 0.09 for migration aspirations. This means that an increase from the bottom (1) to the top of the livelihood hardships (4), is associated with a 9% increase in migration aspirations.

The Poverty variable, on the other hand, is always negative, indicating that respondents in poorer research areas have *lower* migration aspirations. This means we cannot say that a greater hardship results in greater migration aspirations, yet this finding is very much in line with the existing literature. As discussed above, there are significant financial costs to migration and, as such, migration amongst poor people, and in poorer areas, tends to be lower. The size of the coefficient is much higher than for the Livelihoods hardships with a comparable effect size of -0.84, which makes it the variable with the greatest magnitude across the entire model. This means that a move from the bottom (1) to the top of the Poverty variable (4), is associated with an 84% decrease in migration aspirations.

While the Poverty variable compares research areas, Livelihoods hardships compares individuals. It can therefore be included in the separate analyses by research area, to see where it affects migration aspirations[33]. Figure 11 displays the result for one measure of migration aspirations: the likelihood on resolute migration aspirations.

We first explain how to read the figure, before addressing the substance of the results. Each circle in the figure represents one research area, and the colour indicates whether the estimated effect is positive or negative. The further a research area is placed *towards the top* of the figure (i.e. moving up on the Y-axis), the *greater is the estimated effect* of the Livelihoods hardships on the likelihood of resolute migration aspirations. The scale shows the maximum effect size, meaning the result of moving from the lowest to the highest value of the independent variable, and not the result of moving one step. Research areas where the effect is negligible (less than 1%) are not shown.

The further towards the right in the figure (i.e. moving right on the X-axis), the greater is the statistical confidence in the result.[34] The research areas

[33] For individual migration aspirations we provide a detailed research area level analysis showing statistical significance and magnitude of effect for all research areas for key variables. For other migration outcomes, we only provide a summary of effects at the research area level.

[34] Since the survey is based on a random sample, there is a quantifiable possibility that an apparent effect occurs by chance, and is unlikely to occur in another random sample. At confidence levels above 90% or 95% the result is said to be statistically significant. The figure does not distinguish between confidence levels beyond 99.999%.

that are *labelled* are those with a high level of confidence (at least 90%). The underlying statistical principles mean that larger effects tend to have a higher level of confidence, but this is only a general tendency. For instance, the effect of Livelihoods hardships is four times larger in Golf City (GHA2) than in Keti Bandar (PAK3) but the level of confidence is lower.

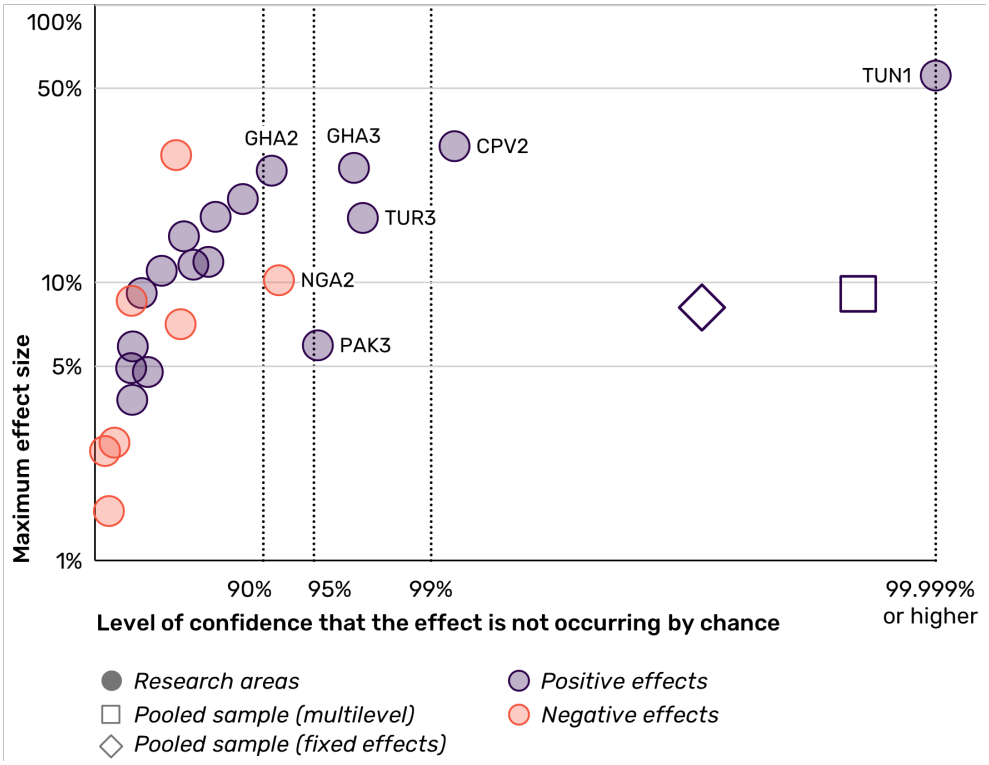

Figure 11 Effects of Livelihood hardships on resolute migration aspirations, by research area

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 in multivariate LPM regressions. 'Maximum effect size' refers to the predicted effect of a shift from the lowest to the highest value of the independent variable. Only research areas where the effect size is at least 1% are displayed; only research areas where the effect size is at least 5% and the confidence level is at least 90% are labelled.

The majority of effects in this figure are positive (purple colour), but four are negative (red colour). A negative effect indicates that the greater the respondent perceives the local livelihood challenges to be, the lower the chance that they have resolute migration aspirations. In one such case, Awe (NGA2), the confidence level is above 90%. This anomaly shows how determinants of migration aspirations can have opposite effects in different contexts.

The figure also displays the effect of *Livelihoods hardships* in the pooled sample, marked with a diamond for the fixed effects regression and a square for the multi-level regression. The pooled effect on resolute migration aspirations is positive and highly statistically significant, as discussed above.

Moving on to the *Governance and public services* domain; the regression findings specified in Table 35 show that, overall, this domain is an important predictor of migration aspirations. However, not all variables from this

domain have a consistent effect on migration aspirations. Three variables, *Discontent with public services, Distrust in institutions, and Corruption experience (%),* are statistically significant at the 1% or 5% level in almost every specification. The other remaining variable (*Disapproval of government* is only statistically significant in some specifications. The variables included in this domain have a positive coefficient, indicating that the worse the perceived governance, perceptions of government and provision of public services, the higher the migration aspirations.

Discontent with public services is statistically significant in almost all specifications, indicating that the worse the perceived provision of public services, the higher migration aspirations, consistent with the existing literature. The average comparable effect size is 0.11, indicating that moving from the bottom (1) to the top of *Discontent with public services* (4) is associated with a 11% increase in migration aspirations.

Distrust in institutions is also statistically significant, in almost all specifications. The positive sign of the coefficient – suggesting that the worse the perceived quality of governance, the higher the migration aspirations – is consistent with the existing literature discussed above. The magnitude of the effect is fairly small, with an average comparable effect size of 0.09. This means that a shift from the bottom (1) to the top of *Distrust in institutions* (4), is associated with a 9% increase in migration aspirations.

Corruption experience (%) at the research area level is also statistically significant, in almost every specification. The positive coefficient suggests that the higher the corruption rate in the research area, the higher migration aspirations. The magnitude of the effect is high, the average comparable effect size is 0.67 one of the highest for migration aspirations. This shows that a shift from no-one in the research area experiencing corruption (0%) to everyone experiencing corruption (100%) is associated with a 67% increase in migration aspirations. The existing literature also shows a link between corruption and migration aspiration, but finds that its effect is often indirect e.g. through corruption's effects on economic development (Carling et al., 2015). While our analysis cannot account for causal pathways, it does suggest that there is a strong, effect of corruption on migration aspirations, that alongside perceptions of other aspects of governance and public services that also influence the desire to leave. In research areas with extremely high corruption rates, it can be corruption that makes a decisive difference on individuals migration aspirations.

The other remaining variable in this domain, (*Disapproval of government)* is less consistent in terms of their significance. While the individual-level disapproval of government usually influences aspirations and is statistically significant in most specifications, it never is in the 'consideration to leave' and 'resolute migration aspirations' models. The average comparable effect size is 0.05, with a shift from the bottom (1) to the top of *Disapproval of government* (4), leading to a 5% increase in migration aspirations. The findings suggest that, broadly speaking, perceptions of the quality of governance, trust of its institutions and public services and actual experiences (for instance corruption) that determine migration aspirations - rather than general perceptions of government. This makes sense because the quality of services and experiences of governance is what affects quality of life and living

standards. Yet, people can have poor perceptions of a government that still provides good public services. This chimes with some of the existing literature, for instance de Haas (2011b) finds that outmigration from Gulf countries is low, despite political repression, in part because the political contract ensures citizens have access to well-paid jobs and generous benefits.

Coming to the research area level findings, we present the effect *Discontent with public services, Distrust in institutions and Disapproval of government* on the likelihood on resolute migration aspirations.[35] The effects shown in the following three figures show the pooled effect and for research areas (where the comparable effect size is at least 1%), in terms of maximum effect size and confidence level.

Figure 12 displays the results for *Discontent with public services*. The majority of effects in this figure are positive (purple colour), but four are negative (red colour). As such, in most research areas the worse public services hardships, the higher the likelihood they have resolute migration aspirations. For Shahrake Mahdia (AFG3) the effect is negative, with a fairly high maximum effect size, indicating that in this research area worse public services hardships are associated with lower migration aspirations.

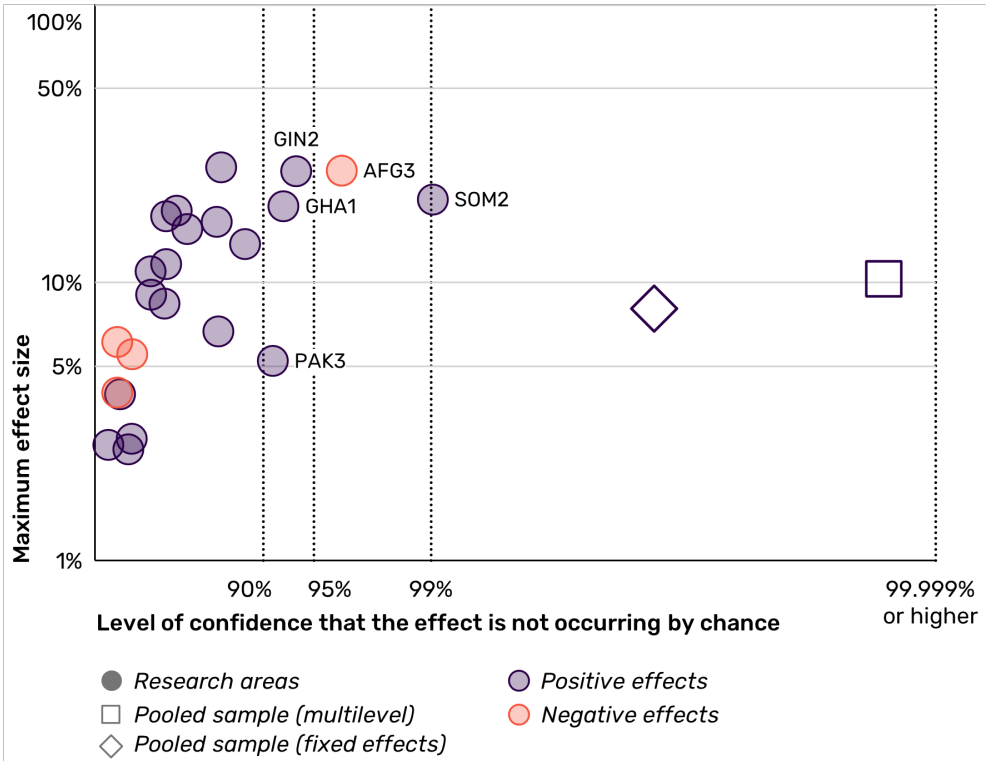

Figure 12. Effects of discontent with public services on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Discontent with public services' variable in multivariate LPM regressions. See Figure 11 for explanations.

[35] We do not have research area findings for the other two variables in this domain because they are not individual level variables, they are at the research area level.

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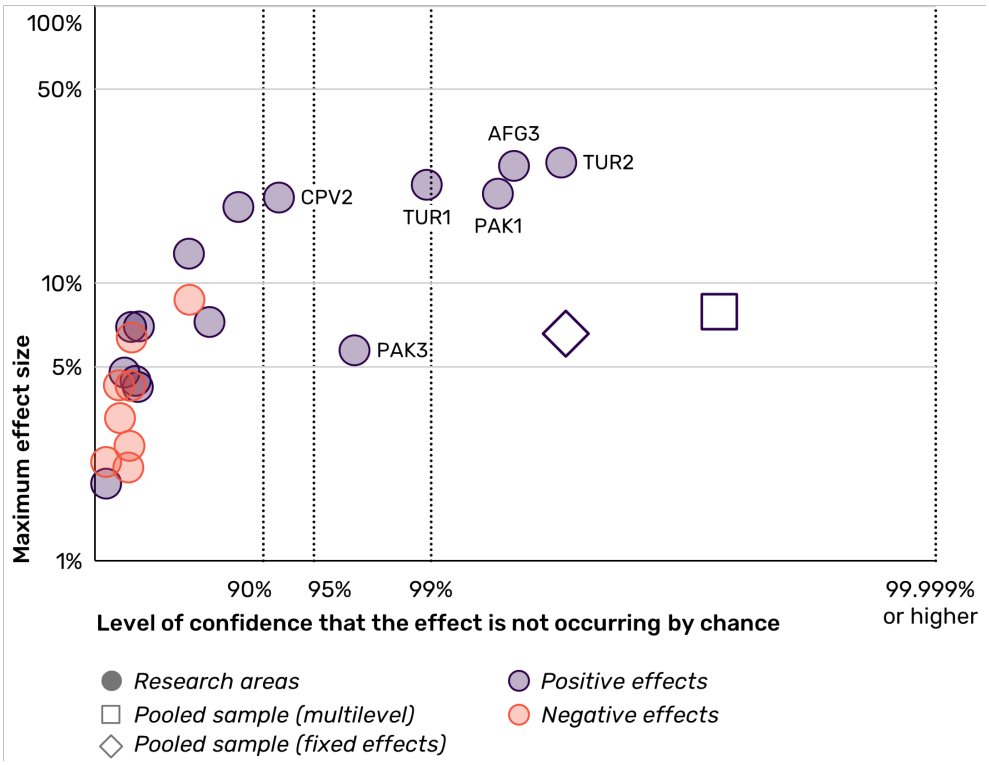

Figure 13. Effects of distrust in institutions on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Distrust in institutions' variable in multivariate LPM regressions. See Figure 11 for explanations.

For *Distrust in institutions*, there are eight research areas where the effect is negative, though none are statistically significant at the 10% level or higher (Figure 13). In the six research areas where the effect is statistically significant at least at the 10% level, the effect is positive. This suggests that the higher the governance hardships experienced, the higher the likelihood that respondents have resolute migration aspirations.

The disaggregated findings for *Disapproval of government* (Figure 14) paint a less straightforward picture. Only three research areas have an effect that is statistically significant at the 10%, and in two of them, the effect is negative. Meanwhile the pooled effect is positive, but barely statistically significant at the 10% level. This shows that at the local level, perceptions of government can have disparate effects on migration aspirations.

For the **security and conflict** domain the results are less consistent in statistical significance and sign of the coefficient. The research area level of *Violence and crime* is mostly positive and rarely statistically significant, the individual level variable based on perception of insecurity is consistently negative and its significance varies across specifications. The comparable effect sizes are also fairly small, suggesting that on the whole this domain has a relatively small effect on migration aspirations.

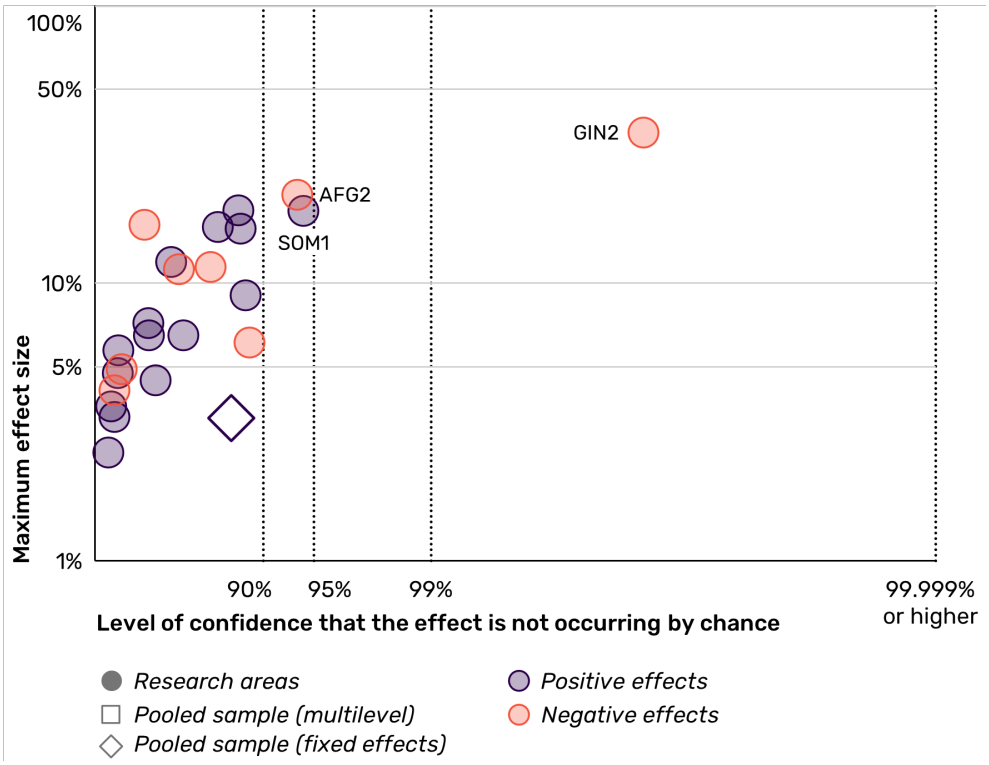

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Figure 14. Effects of disapproval of government on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Disapproval of government' variable in multivariate LPM regressions. See Figure 11 for explanations.

Perception of insecurity (based on assessments of the safety of walking the streets at night) has a negative relationship with migration aspirations. In other words, those who feel more insecure are, surprisingly, less likely to want to leave. However, the coefficient is not statistically significant in most of the specifications and the average comparable effect size is very small at -0.02. This counter-intuitive finding is generally not in line with the literature discussed above. One potential explanation is that those who have a more fearful 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 in determining migration aspirations, than general perceptions of security, as we also found in other MIGNEX analysis (Hagen-Zanker et al., under review).

Violence and crime at the research area level are not statistically significant in most specifications. The coefficient has the expected positive sign for migration preference and readiness, indicating that the greater the fear and experience of violence or crime in a research area, the higher the migration aspirations. However, for migration considerations, the coefficient is negative, although not always statistically significant. The magnitude of the effect is fairly small, with an average comparable effect size of 0.02. This means that a move from the bottom (1) to the top of *Violence and crime* (4), is associated with an 2% increase in migration aspirations.

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Coming to research area level findings, Figure 15 shows the effects of the *Perception of insecurity* on resolute migration aspirations. The maximum effect size is generally small at mostly 10%, and shows a mix of positive and negative effects. There are three negative effects and one positive effect statistically significant at the 10% level, indicating that the relationship between perception of insecurity and migration aspirations is not straightforward.

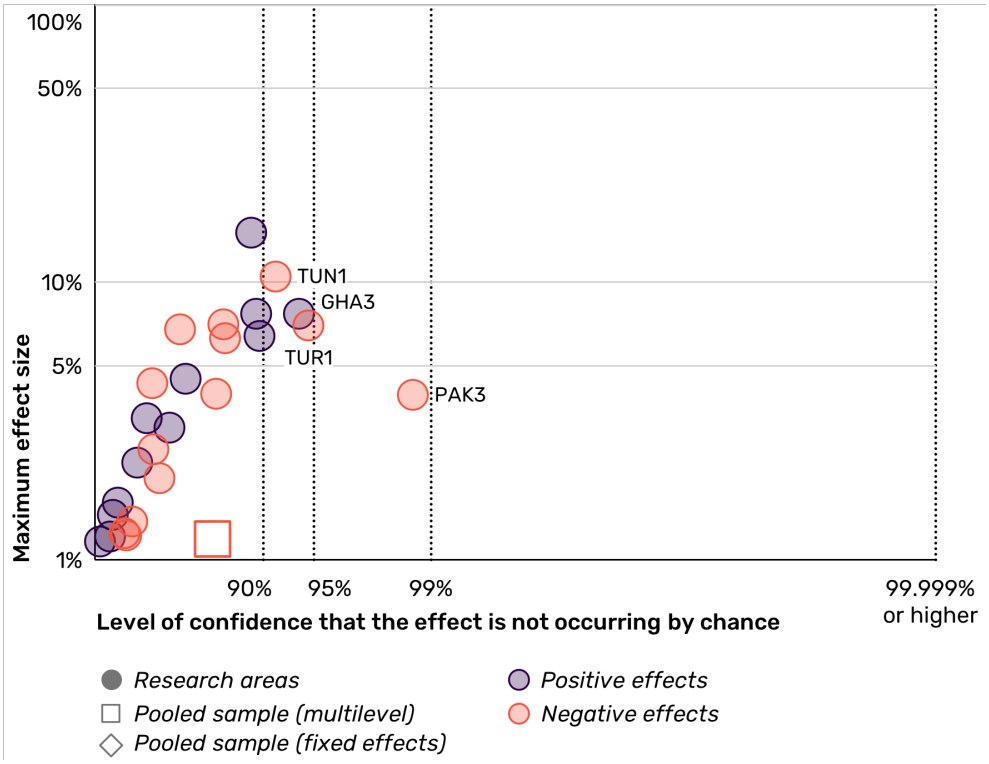

Figure 15. Effects of perception of insecurity on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Perception of insecurity' variable in multivariate LPM regressions. See Figure 11 for explanations.

Finally, the results for the **environmental hazards and stresses** domain indicate that this domain plays a role in shaping migration aspirations. The *Environmental hazard and stresses* variable at the research area level is statistically significant across most specifications, but in some instances, e.g. for *Prefers to leave the country in the next five years*, it is only weakly statistically significant. The sign of the coefficient is positive, as expected, indicating that greater hardship results in higher migration aspirations. The average comparable effect size of 0.15 is fairly sizeable, with a move from the bottom (1) to the top of *Environmental hazard and stresses* (4), i.e. overall greater experiences of hazards and degradation within a research area is associated with a 15% increase in migration aspirations. While it is not a small effect size, it is smaller than some of the other root causes.

There are no individual level variables measuring environmental hazards, therefore there is no research area specific analysis on the environmental hazards and stresses root cause domain.

Migration experiences and networks

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The variables included within migration experiences are generally highly significant and consistent in explaining migration aspirations. Where statistically significant, coefficients are positive, showing that greater experiences of migration and stronger migration networks are associated with higher migration aspirations. This is consistent with the existing literature.

The first two variables capture migration experiences. *Having lived in a high-income country* is statistically significant for all specifications of the has seriously considered international migration in the past year, but only intermittently statistically significant for the other outcomes. The average comparable effect size is fairly small at 0.08, indicating that those who lived in high-income country are 8% more likely to have migration aspirations compared to those who have not.

For specific research areas, *Having lived in a high-income country* is statistically significant at least at the 10% level for 12 research areas, with a positive effect for seven research areas and a negative one for the remaining five (Figure 16). The maximum effect size is larger for the positive effects, though to some extent this might be a result of the distribution of the data.

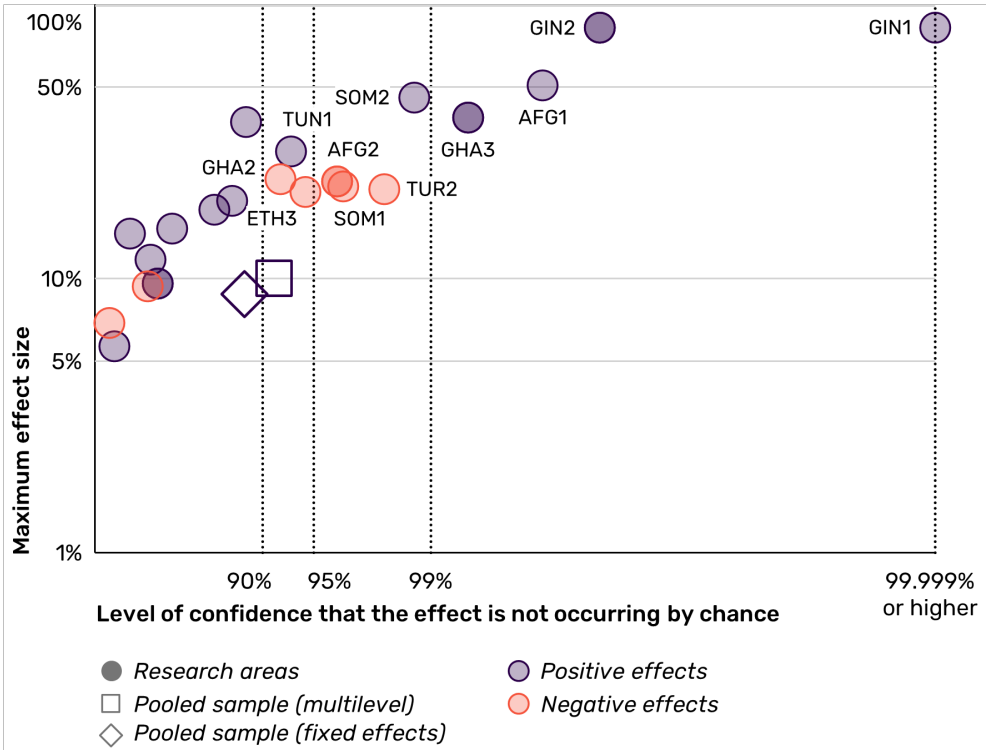

Figure 16. Effects of having lived in a high-income country on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Having lived in high-income country' variable in multivariate LPM regressions. See Figure 11 for explanations.

MIGNEX Background Paper

For instance, the two research areas in Guinea display a very high maximum effect size which is probably a result of the extremely low rates of having lived in a high-income country (less than 1% as indicated in Table 22). The research areas that show a negative association between having lived in a high-income country are Golf City (GHA2), Behsud (AFG2), Yenice (TUR2), Moyale (ETH3) and Erigavo (SOM1), which have no obvious similarities. This points to the need to dig deeper into such patterns to explore local migration dynamics.

Interestingly, awareness of someone else's failed migration attempt also has a positive coefficient; indicating that awareness of the 'risks of migration' does not act as a deterrence for migration aspirations - a finding with great policy relevance. This variable is highly statistically significant across almost all specifications, with the exception of a few specifications for 'prefers to leave the country in the next five years'. The magnitude of the coefficients tends to be very small, though with an average comparable effect size of 0.05. This means that those who know of someone's failed migration experiences are 5% more likely to have migration aspirations than those who do not.

Meanwhile, awareness of failed migration is statistically significant for eight research areas (Figure 17): two with a negative effect and six with a positive effect. On the whole, we see more positive effects than negative effects. The two research areas with a large negative maximum effect size, Awe (NGA2) and Hopa (TUR1) both have very few young adults knowing of others with a failed migration experience (less than 2%; see Table 23), with the size of the effect likely reflecting the distribution rather than a strong deterrence.

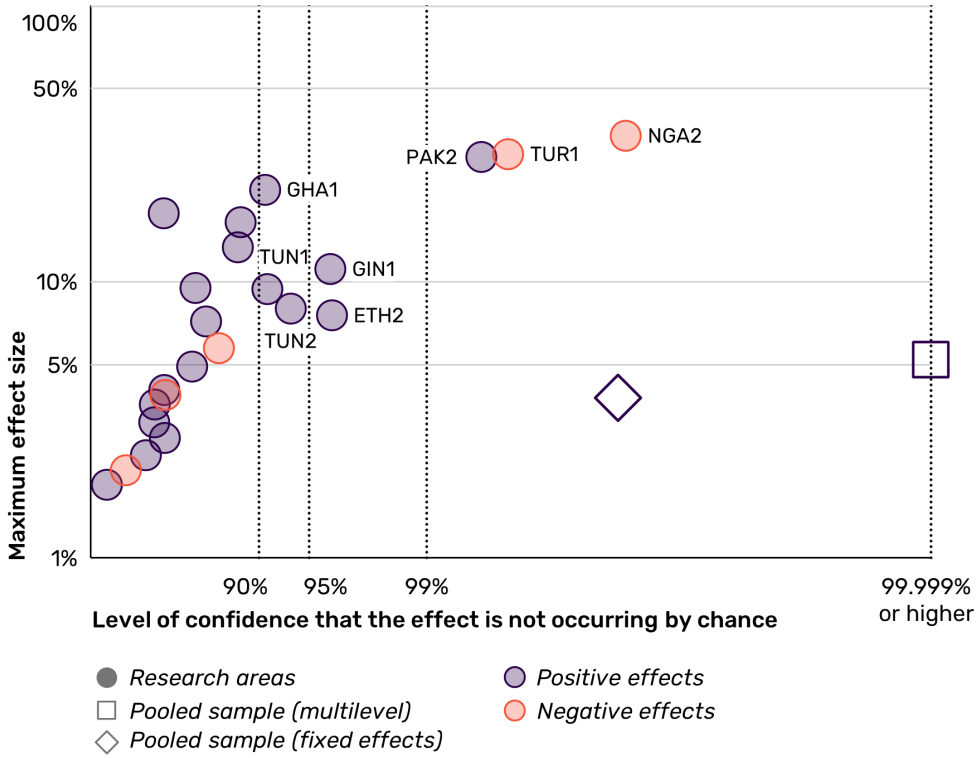

Figure 17. Effects of knowing of failed migration on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Knows of failed migration' variable in multivariate LPM regressions. See Figure 11 for explanations.

The next set of variables capture transnational migration networks. Being aware of a current, recent, or former international migrant is statistically significant at the 1% level, in every specification and for every dependent variable. The coefficient is positive, confirming the existing literature's finding that migrant networks shape migration aspirations. The average comparable effect size of 0.09 is fairly small, indicating that exposure to international migrants is associated with an 9% higher likelihood of having migration aspirations.

The variable *Has ties to high-income country is* a measure of stronger migration ties is also statistically significant across almost all specifications, in most cases at the 1% significance level. As expected, the coefficient is positive, with an average comparable effect size of 0.05. This small coefficient indicates that the existence of transnational ties is associated with a 5% higher likelihood of having migration aspirations. In other words, migrants can be potential bridgeheads for migration.

Remittance reception is another aspect of transnational networks. The variable *Has received remittances* is statistically significant at the 1% level for three of the dependent variables, but only weakly significant and not in all specifications for 'would go to richer countries if given papers'. The readiness to migrate dimension of migration aspirations captures whether people might be willing to migrate spontaneously, if given a rare opportunity. The magnitude of the coefficients tends to be small, though, with an average comparable effect size of 0.05. Respondents that live in households that received remittances over the past year are 5% more likely to have migration aspirations.

At the research area 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 (Figure 18). For the seven of eight research areas statistically significant (at least at the 10% level) the effect is positive; reinforcing the importance of migrants as role models in forming migration aspirations. The effect is also positive and statistically significant at least the 10% level for all three research areas in Nigeria. Keti Bandar (PAK3), where being aware of an international migrant is negative yet statistically significant at the 5% level probably reflects the low awareness levels within this research area (see Table 22 showing only 4% in Keti know a migrant).

Has ties to high-income country has a positive effect on resolute migration aspirations at the research area level, with the positive trend particularly pronounced where the effect is statistically significant at least at the 10% level (Figure 19). The effect is statistically significant for more research areas than for migrants as role models, discussed above, suggesting that migrants as bridgeheads play a particularly important role at the local level. Of the eight research areas, only one shows a negative effect, Shahrake Jabrael (AFG1).

Remittance receipt has a largely positive effect at the research area level, with only one of the effects that is statistically significant at least at the 5% level being negative, namely Kilis (TUR3) (Figure 20).

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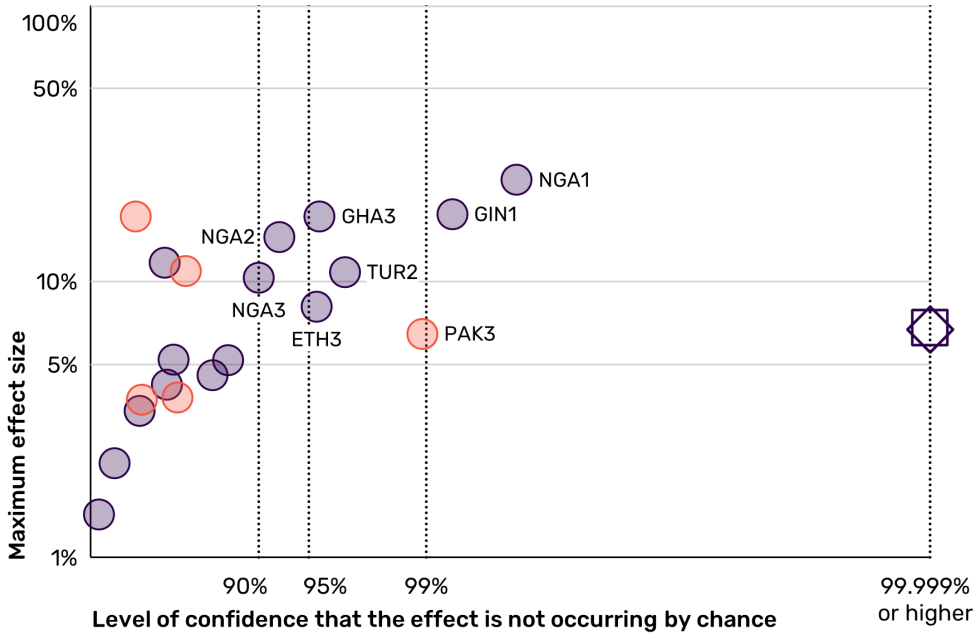

Figure 18. Effects of being aware of migrants on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Is aware of migrants' variable in multivariate LPM regressions. See Figure 11 for explanations.

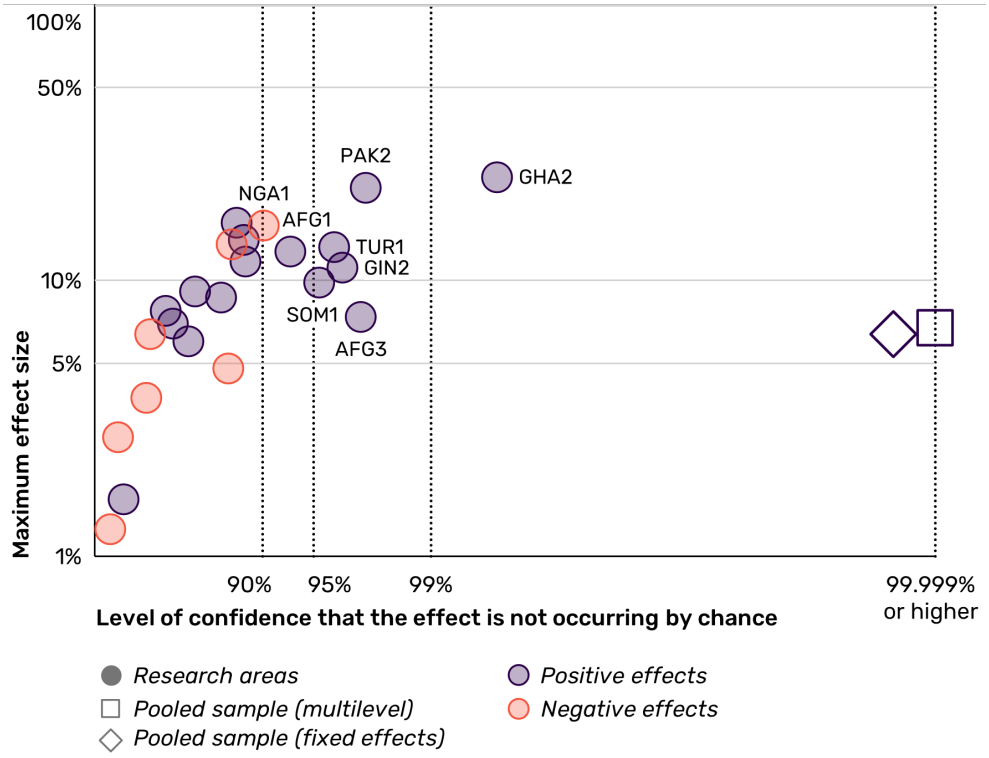

Figure 19 Effects of having ties to high-income country on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Has ties to high-income countries' variable in multivariate LPM regressions. See Figure 11 for explanations.

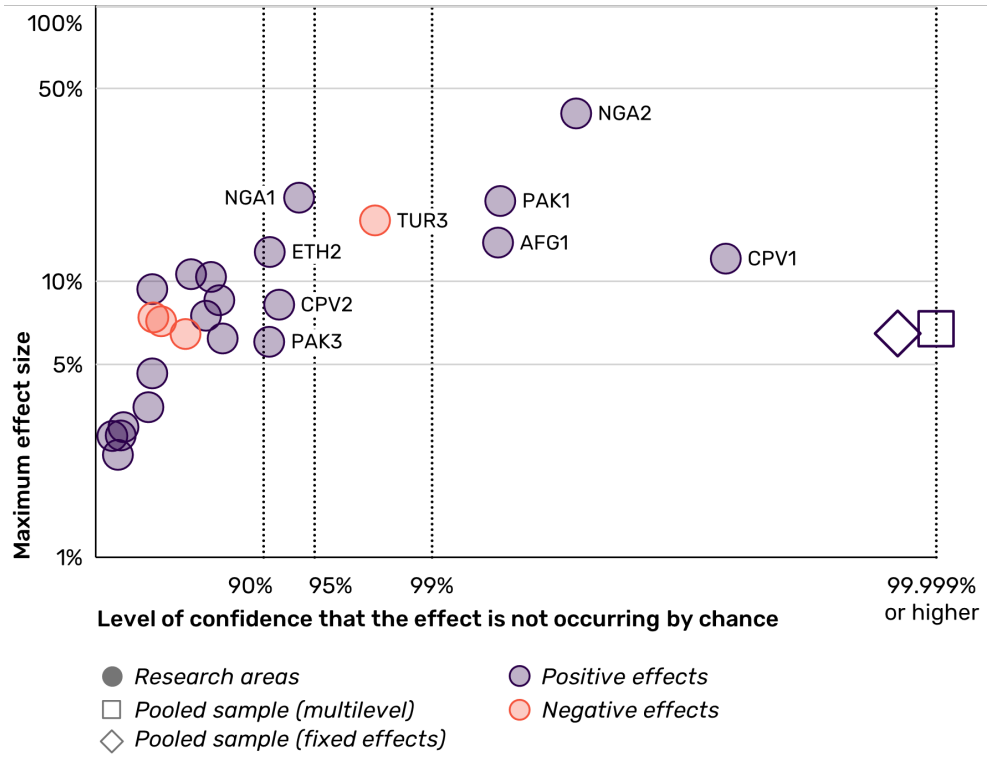

Figure 20 Effects of having received remittances on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Has received remittances' variable in multivariate LPM regressions. See Figure 11 for explanations.

The final variable captures the culture of migration at the research area level[36]. Consistent with the existing literature the coefficient is always positive, where statistically significant, indicating that a stronger culture of migration within the local area is associated with greater migration aspirations. It is statistically significant in the majority of specifications. 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 0.24, with a move from the bottom (1) to the top of *Culture of migration* (4), i.e. a stronger migration culture within the local area, is associated with a 24% increase of migration aspirations.

Other individual characteristics

Coming to other individual characteristics (Table 35). A finding consistent with the existing literature is that women are less likely to have migration aspirations. This finding is highly significant, across all specifications. Its average comparable effect size is -0.08, indicating that female respondents exhibit an 8% lower likelihood of having migration aspirations than their male counterpart.

[36] Because it is a variable that is fixed at the research area level, as for all variables at the research area level, we are unable to run a research area level regression with this variable included.

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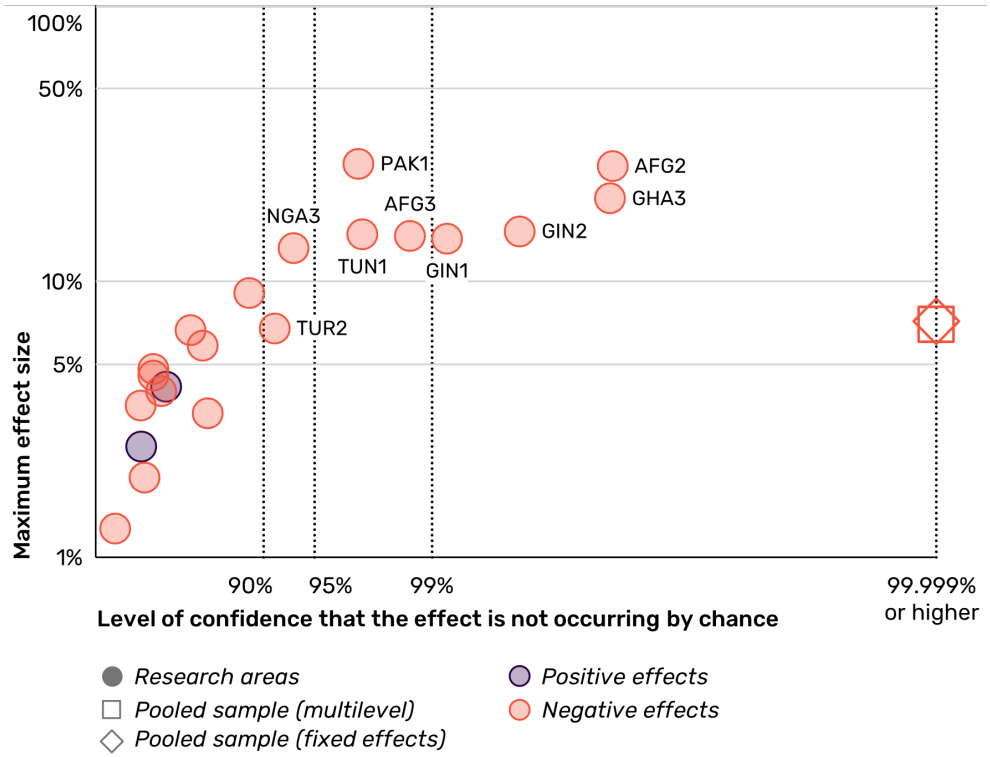

Figure 21. Effects of being female on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Is female' variable in multivariate LPM regressions. See Figure 11 for explanations.

At the research area level, the effect of being female is almost always negative and is negative for the nine research areas where the effect is statistically significant at least at the 10% level (Figure 21). This variable not being statistically significant in the majority of research areas and the variation in maximum effect size shows that the relevance and importance of gender in shaping resolute migration aspirations varies across research areas.

While age has consistently a positive effect on migration aspirations, it is not statistically significant at the 10% level or higher. Its squared value is also not statistically significant in most specifications, but it has a negative sign suggesting that the relationship between age and migration aspirations is not linear.

In terms of its effect, the average comparable effect size of age is 0.06, meaning that those in the oldest group (39 years) are 6% more likely to have migration aspirations, compared to those in the youngest group (18 years). However, is worth noting that due to the negative sign of the square term of age there is a levelling off effect for older respondents.[37]

The variable *Is married/cohabiting* that measures the marital/cohabitational status of the respondent is statistically significant in almost all specifications, for all individual migration aspiration variables. It is always negative,

[37] We are unable to provide summary graphs of research area specific effects for continuous variables.

presumably because married or cohabiting young adults have a strong personal reason to not move away. The average comparable effect size is small, however, at -0.05, indicating that married/cohabiting respondents are 5% less likely to have migration aspirations, compared to those not married/cohabiting.

At the research area level, being married/ cohabiting is consistently positive for the six areas where the effect is statistically significant at least at the 10% level (Figure 22). Overall, there are far more negative effects than positive effects. Nevertheless, for effects that have a maximum effect size of at least 1% we see five research areas where the effect is positive, indicating that those married/ cohabiting are more likely to have resolute migration aspirations. This is a reminder that the specific effect depends on the research area.

The variable *Is a parent* measures ties and obligations in the research area, similarly to marital/ cohabitational status. Its effect is also negative, though it is not statistically significant across all specifications, it is only statistically significant for 'Prefers to leave country'). Yet, its average comparable effect size is also very small at -0.02, indicating that being a parent reduces migration aspirations by 2%.

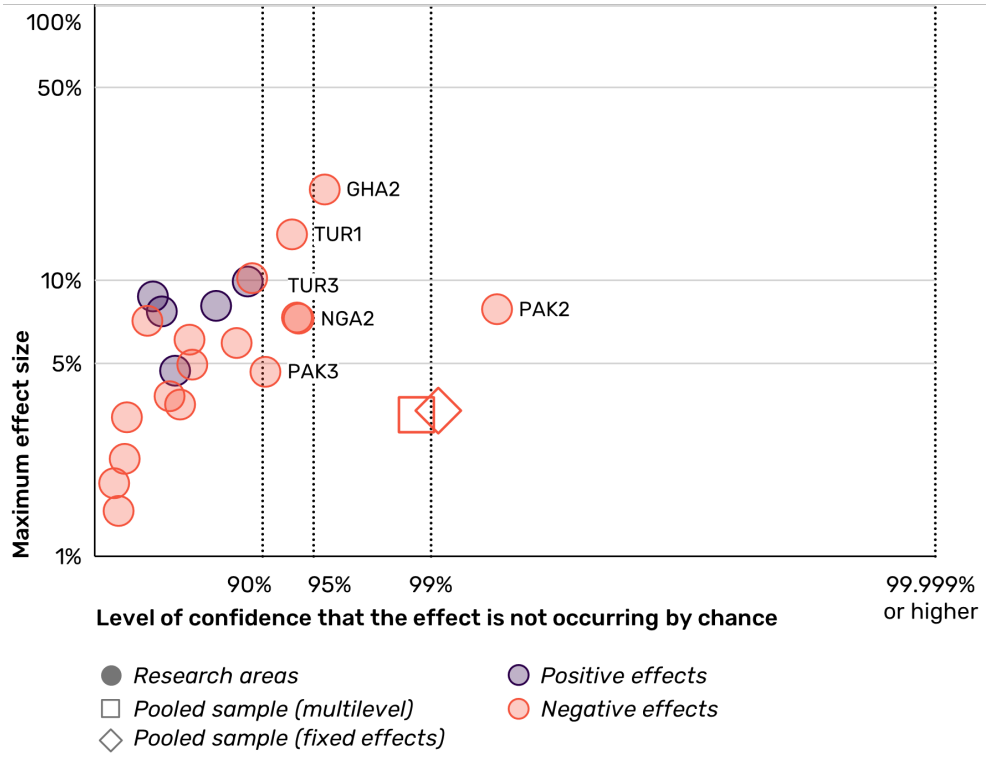

Figure 22. Effects of being married or cohabiting on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Is parent' variable in multivariate LPM regressions. See Figure 11 for explanations.

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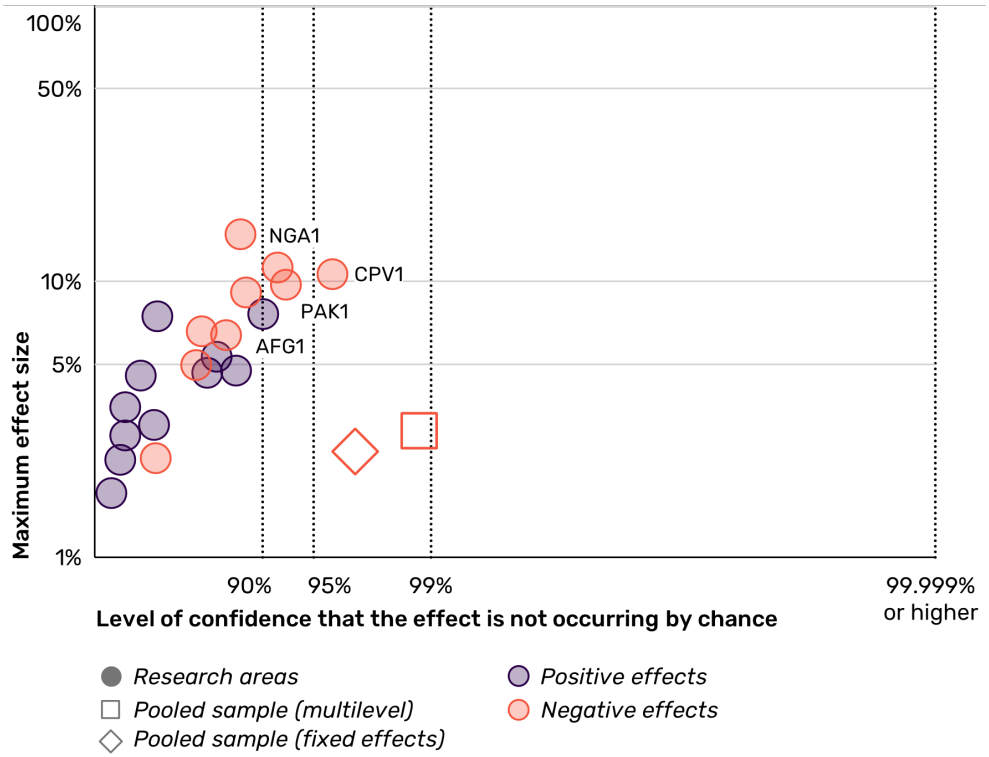

Figure 23. Effects of being a parent on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Is parent' variable in multivariate LPM regressions. See Figure 11 for explanations.

The respondent being a parent is only statistically significant (at least at the 10% level) for four research areas, with a negative effect for three of them (Figure 23). Nevertheless, for effects that have a maximum effect size of at least 1% we see a similar number of positive as negative effects, suggesting that the effect of being a parent can vary across research areas, with care obligations and emotional ties perhaps dominating in some, and pressure for financial support dominating in others.

The variable *Grew up in research area* is almost never statistically significant, it is only statistically significant for 'has seriously considered international migration (past year)' and has a very small average comparable effect size of -0.01. This suggests that overt ties to the local area do not seem particularly influential in shaping migration aspirations.

At the research area level, this variable has both negative and positive effects on resolute migration aspirations, with no overriding pattern (Figure 24). It is statistically significant in five research areas, where for three it has a positive effect and for two it has a negative effect. This shows that the aggregate effect is masking overall diversity in the responses to having grown up in the research area.

Being a linguistic minority is statistically significant for almost all specifications of 'has seriously considered international migration in the past year' and 'resolute migration aspirations', though not for the other dependent variables.

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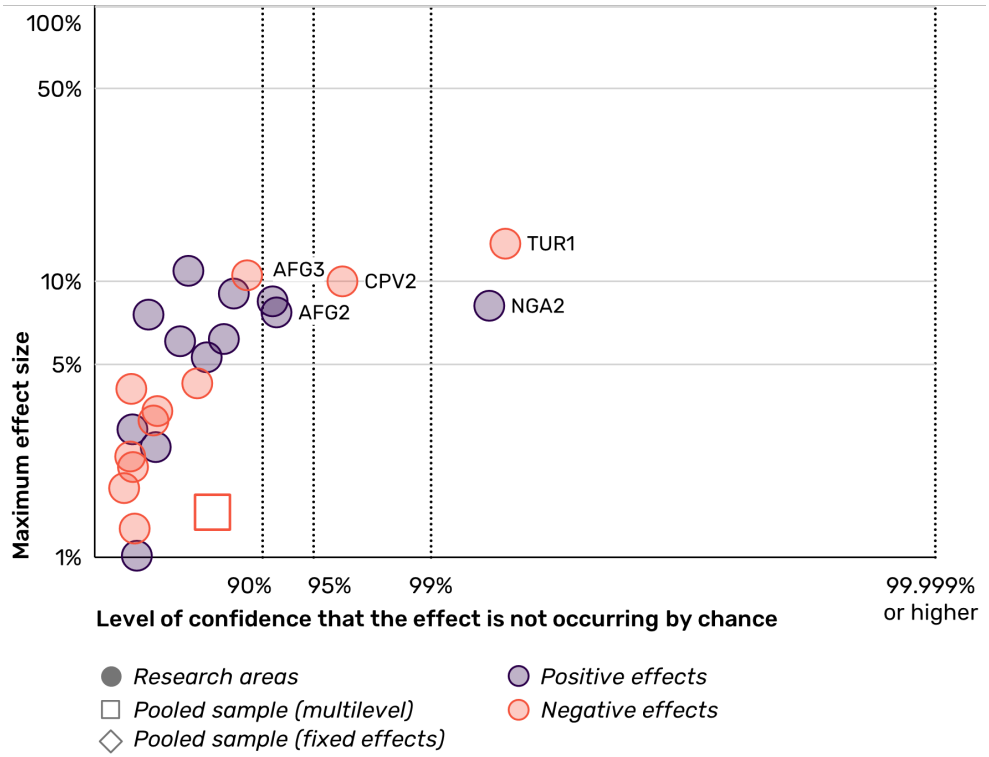

Figure 24. Effects of having grown up in the research area on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Grew up in research area' variable in multivariate LPM regressions. See Figure 11 for explanations.

Where statistically significant, the effect is positive - indicating that those who are linguistic minorities have stronger migration aspirations, though with a very small average comparable effect size of 0.04. This means that linguistic minorities are 4% more likely to have migration aspirations, compared to those who are not a linguistic minority.

At the research area level, we are seeing more of a mixed pattern as shown in Figure 25. While three of four research areas where the effect is statistically significant at least at the 10% level have a positive effect, one is negative. Roughly a third of all effects with a maximum effect size of at least 1% are indeed negative. As such, we can't conclude that being a linguistic minority always results in having resolute migration aspirations, in some areas it reduces the likelihood.

Household wealth (and its squared term) is statistically significant across all specifications for 'prefers to leave the country in the next five years' and 'would move to richer country if given papers'. However, it is not statistically significant for all specifications for 'has seriously considered international migration (past year)'. In all instances - for 'prefers to leave the country in the next five years' and 'would move to richer country if given papers' - statistically significant effects are positive for the household wealth and negative for its square term, indicating the relationship between household wealth and migration aspirations are not linear.

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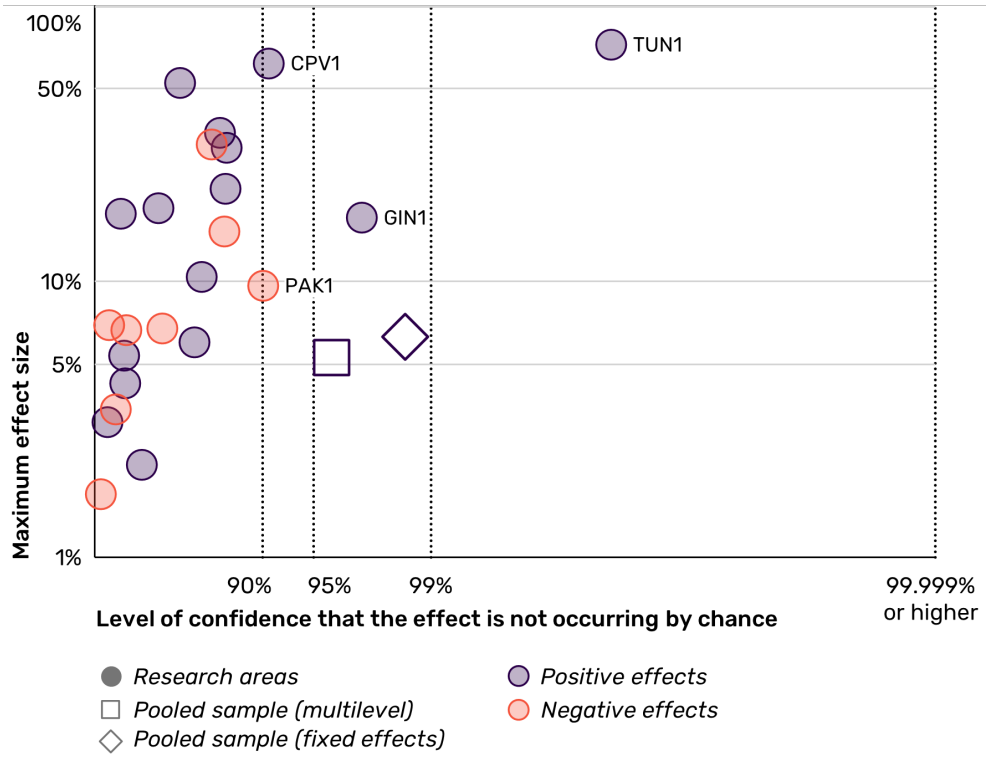

Figure 25. Effects of belonging to a linguistic minority on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Grew up in research area' variable in multivariate LPM regressions. See Figure 11 for explanations.

The average comparable effect size is one of the largest at 0.35. Thus, an individual with the highest level of wealth is 35% more likely to aspire to migrate, compared to the poorest respondent, though there is a levelling-off effect, evident in the negative square term. The finding that poorer people have lower aspirations to migrate is well documented in the literature.

In terms of employment status, we utilised two binary variables: *In the workforce*, but unemployed and *Not in the workforce* - with both compared to *working*. As to be expected, being *in the workforce, but unemployed* has a positive association with migration aspirations. It is statistically significant in almost every specification. Its average comparable effect size of 0.04 is very small, indicating that those who are unemployed are 4% more likely to have migration aspirations than those who are employed. While the effect is positive, it is surprising that the magnitude of the effect is not larger, given the strong relevance of employment factors shown in large body of existing literature. However, what the existing literature shows is that what is often most relevant, are unemployment rates across the entire household, something we do not capture here.

The research area level findings (Figure 26) throw further doubt on how straightforward the relationship between unemployment and migration aspirations is. The results show both positive and negative effects, with only four effects statistically significant (at least at the 10% levels), which are evenly split between positive and negative effects.

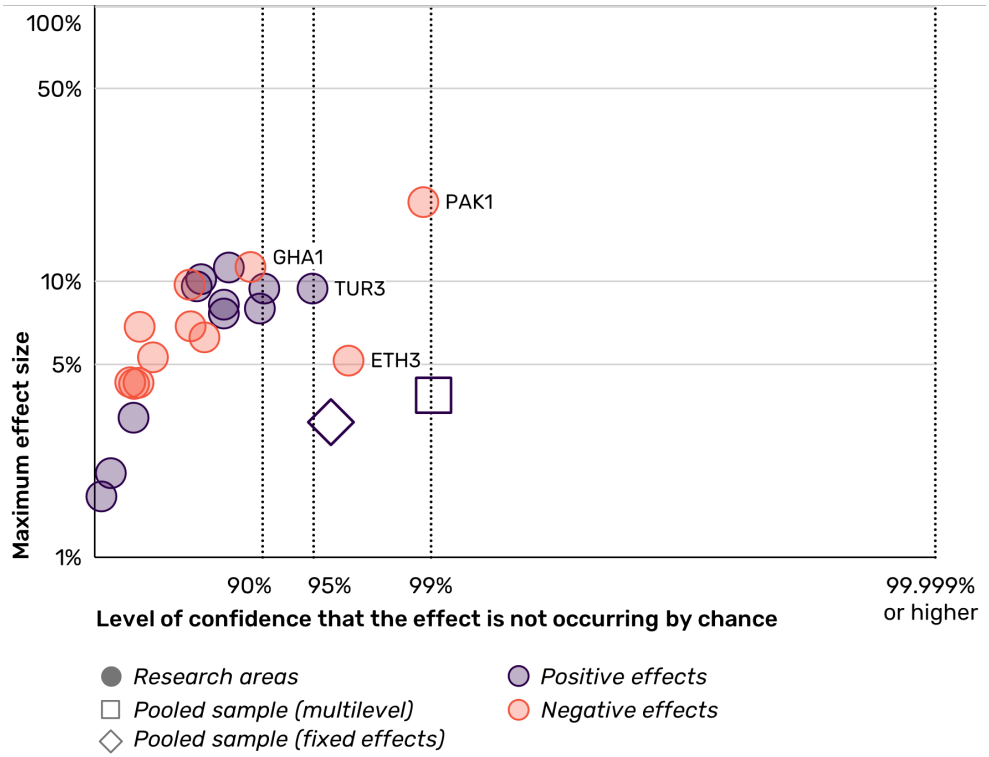

Figure 26. Effects of being unemployed on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Is unemployed' variable in multivariate LPM regressions. See Figure 11 for explanations.

It is important to note that the effect of unemployment is only statistically significant for four research areas. This is a contrast with how prominent this factor is in the existing literature and how much it is emphasized in policy interventions.

Respondent not in the workforce is also statistically significant in almost every specification, though with an inconsistent sign. It is negatively associated with 'has seriously considered international migration in the past year' and 'resolute migration aspirations', but positively associated with the other two, with very small effect sizes in all instances. Being not in the workforce captures a wide range of activities which could potentially all differently affect migration aspirations. For instance, those in education might be more keen to migrate in the future, whereas those caring for family, might feel like they cannot even consider migration. This could explain that we are seeing both positive and negative associations.

At the research area level, we find both negative and positive associations, though somewhat more negative effects (Figure 27). The four effects that are statistically significant at least at the 10% level are all negative. This suggests that in most research areas, being not in the workforce is associated with a lower chance of having resolute migration aspirations, though not in all.

Years of education is statistically significant in almost every specification and always positive. This indicates a positive association between educational attainment and migration aspirations, in line with the existing literature.

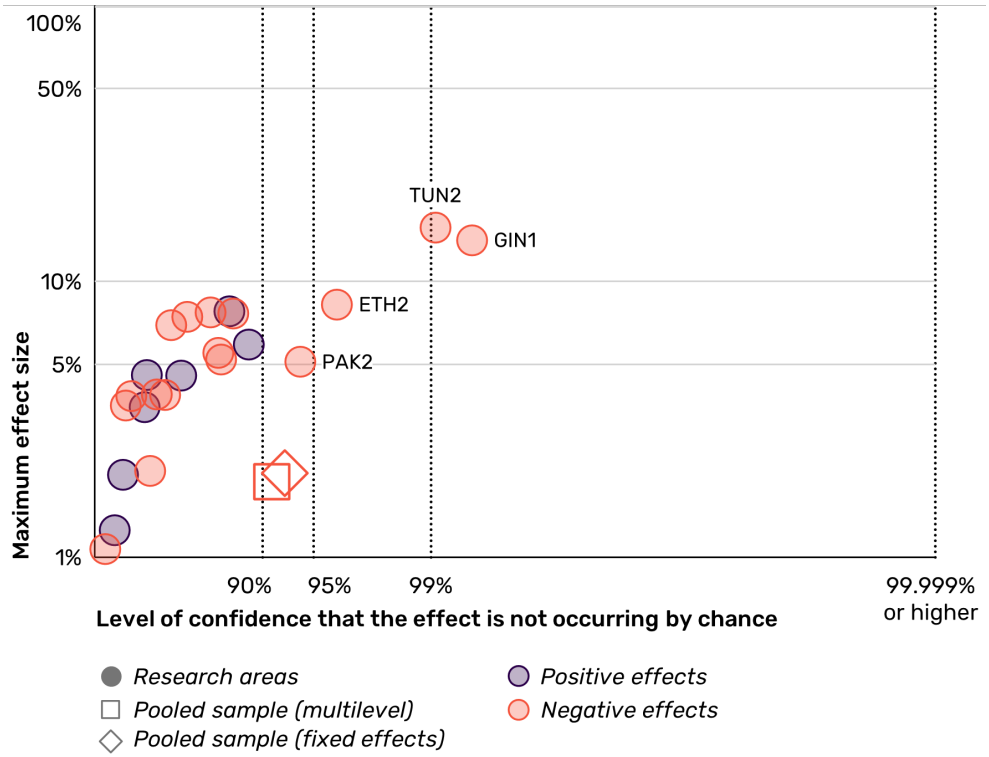

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Figure 27. Effects of not being in the workforce on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Is not in the workforce' variable in multivariate LPM regressions. See Figure 11 for explanations.

Its squared value is consistently negative across all measures of migration aspirations, and I i's statistically significant only for 'prefers to leave country'; suggesting that the relationship between education and migration aspirations is not linear. The average comparable effect size is sizeable at 0.22. This means that having a PhD increases migration aspirations by 22%, compared to those with no formal education. However, it is worth noting that due to the negative sign of the square term of age there is a levelling off effect for respondents with higher levels of education.

Perceived relative wealth measures how well-off respondents rate themselves compared to others. While some literature suggests that self-perceived relative deprivation can be a driver of migration aspirations, in our regressions the variable is not statistically significant.

Another measure of well-being is experience of hunger in the past month. The variable is not statistically significant for most measures of migration aspirations, with the exception of a few specifications for 'would migrate to richer country if given papers' , where the relationship is positive and weakly significant at the 10% level. In addition, it is statistically significant for four regressions at the research level (Figure 28). Here, in two research areas the household having experienced in the past month is associated with a higher chance of resolute migration aspirations, while in two research areas is associated with lower aspirations. This mixed pattern and general lack of statistical significance hints at that short-term wellbeing is not a key predictor of migration aspirations.

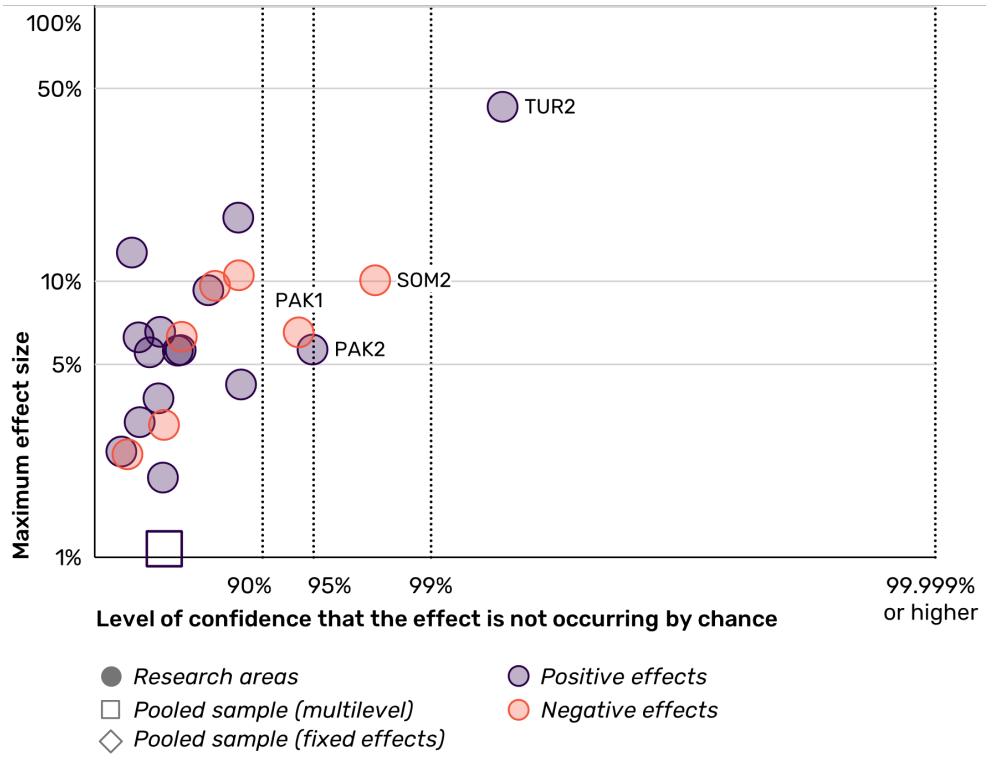

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Figure 28. Effects of experience of hunger in the past month on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Has experience hunger' variable in multivariate LPM regressions. See Figure 11 for explanations.

The final well-being measure of general life satisfaction is a strong predictor of migration aspirations. It is statistically significant in all specifications for all four dependent variables and is always negatively associated with aspirations. The effect is sizeable at -0.13, indicating that those completely satisfied (4) are 13% less likely to have migration aspirations than those completely dissatisfied (1). It is interesting that alongside financial and other material aspects of well-being, more subjective aspects of satisfaction also shape migration aspirations.

This finding is further reinforced by the research area level regressions, where we have a finding statistically significant at least at the 10% level for ten research areas (Figure 29). These coefficients are all negative, indicating that higher life satisfaction is associated with a lower likelihood of resolute migration aspirations. The maximum effect size is between 10-50% for all of these, pointing to a large effect, one of the strongest and most consistent findings at the research area level.

Other individual level variables measured negative household shocks and protection. Whether the household was negatively affected by Covid-19 often lacks statistical significance. It is most consistently statistically significant for 'resolute migration aspirations'. The effect is positive whenever it is statistically significant, however, suggesting that a Covid-19 shock – in terms of severe illness of a household member, or being severely affected by containment measures – is positively associated with migration aspirations.

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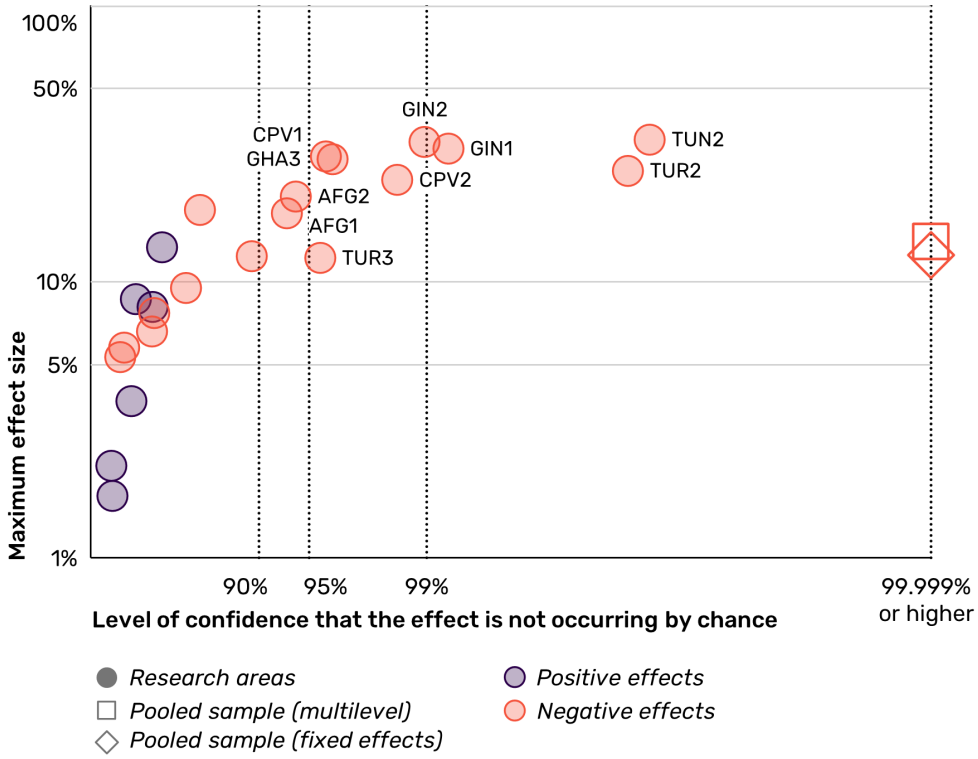

Figure 29. Effects of general life satisfaction on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Life satisfaction' variable in multivariate LPM regressions. See Figure 11 for explanations.

The average comparable effect size of 0.02 is very small though, showing that those negatively affected by Covid-19 are 2% more likely to aspire to migrate, compared to those who were not affected.

At the research area level, a somewhat clearer picture emerges, with mostly positive effects of having a Covid-19 shocks on resolute migration aspirations (Figure 30). Five of these are statistically significant at least at the 10% level, though the maximum effect size is small for all except for São Nicolau (CPV1).

The variable *Has experienced violence* in the past five years (respondent or a household member) is statistically significant for most specifications for all dependent variables. The sign is always positive, very much in line with the existing literature, suggesting that when someone in the household has experienced physical violence the association with migration aspirations is positive. The average comparable effect size is small at 0.05, which means that those respondents where someone in the household experienced violence are 5% more likely to have migration aspirations, than those where no one experienced violence.

At the research area level, this variable is only statistically significant at least at the 10% level for three research areas (Figure 31). For Chot Dheeran (PAK1), Dialokoro (GIN1) the effect is positive, as for the pooled sample, while for Erigavo (SOM1) the effect is positive.

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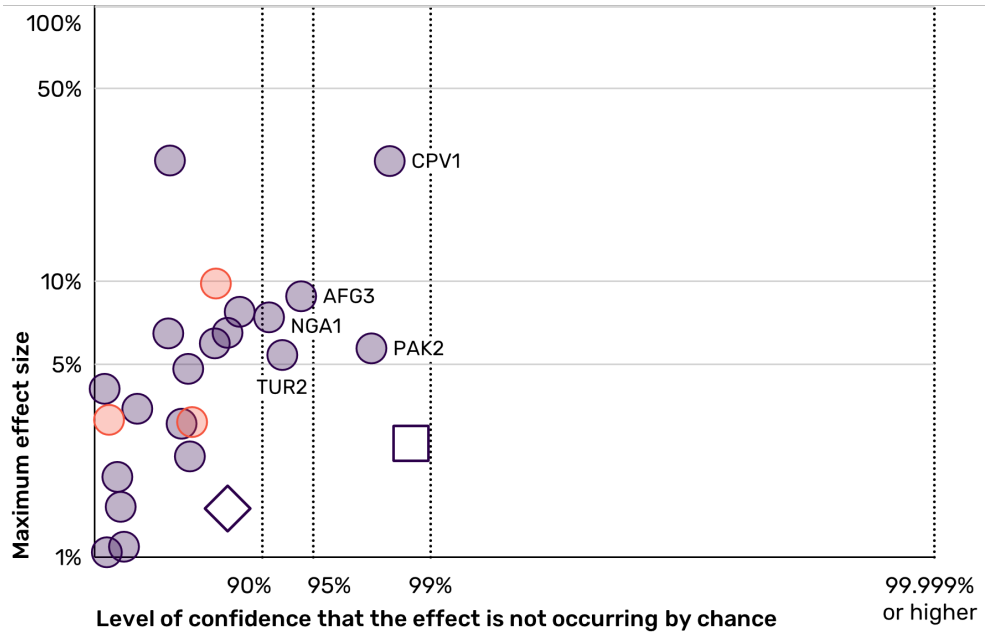

Figure 30. Effects of household being negatively affected by Covid-19 on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Was negatively affected by Covid-19' variable in multivariate LPM regressions. See Figure 11 for explanations.

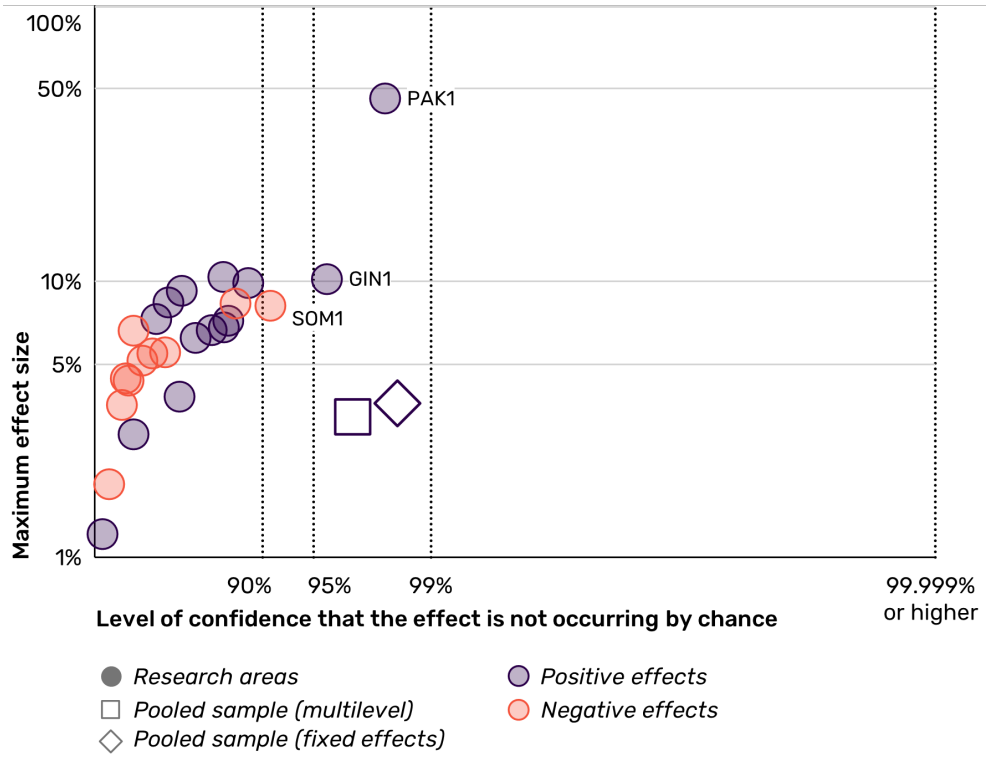

Figure 31. Effects of having experienced violence on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Was negatively affected by Covid-19' variable in multivariate LPM regressions. See Figure 11 for explanations.

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For the results with a maximum effect size of at least 10% we see both positive and negative effects, showing that experience of violence does not always result in having stronger resolute migration aspirations.

The variable *Affected by environmental problem* capturing environmental issues experienced by the household in the past five years, such as floods, is not statistically significant in any specification.

When looking at specific research areas, the variable is statistically significant at least at the 10% level for three research areas (Figure 32). For Enfidha (TUN1) and Shahrake Jabrael (AFG1) this effect is positive, indicating that being affected by an environmental problem is associated with stronger resolute migration aspirations. For Down Quarters (NGA1) the effect is negative, on the other hand.

The existing literature shows that receipt of social protection support may either increase or decrease migration aspirations (Himmelstine et al., 2023). In our regressions the variable is not statistically significant in any specification, and while the sign is positive, most coefficients are only marginally above zero and the average effect size is negligible at 0.01.

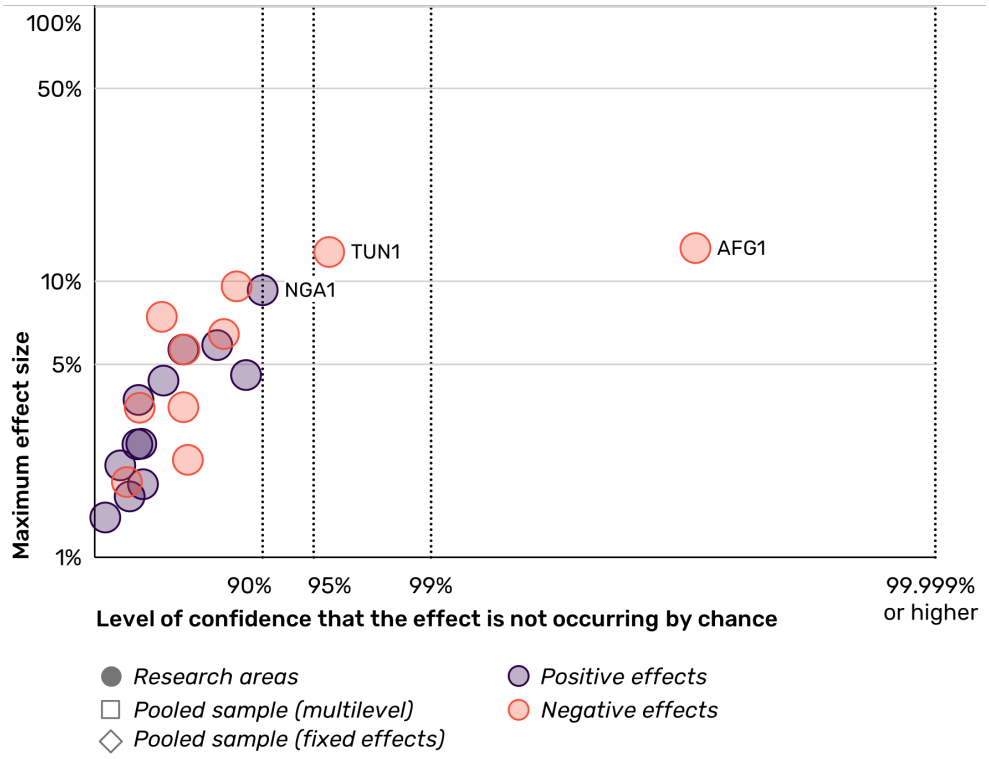

Figure 32. Effects of being affected by environmental problem on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Was negatively affected by Covid-19' variable in multivariate LPM regressions. See Figure 11 for explanations.

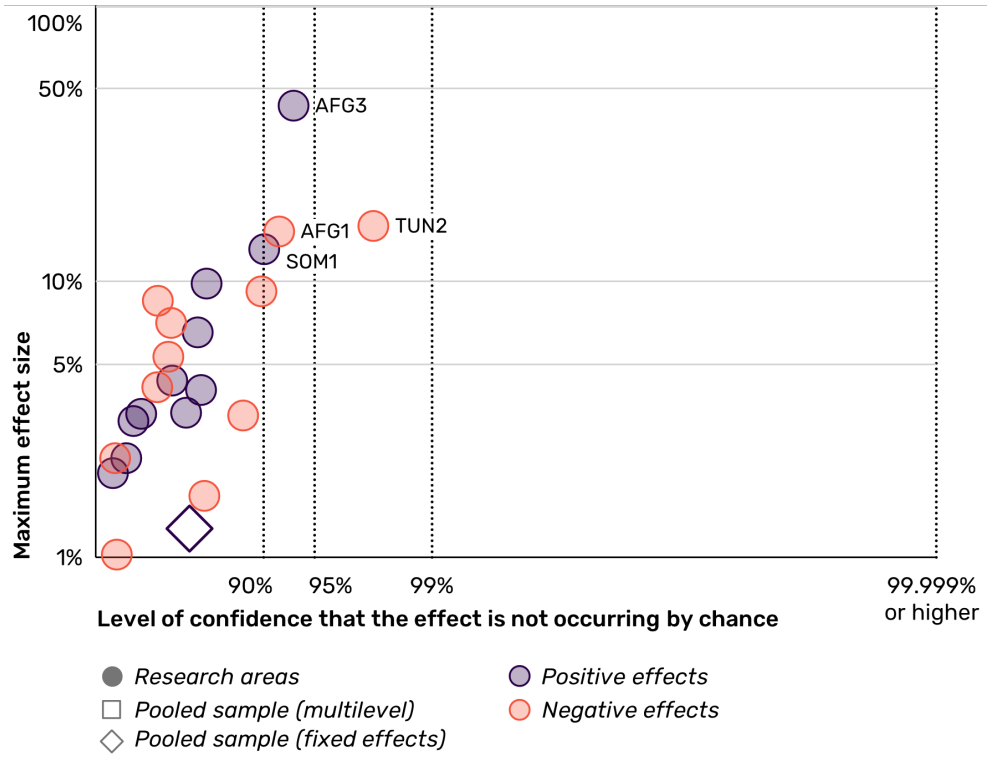

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Figure 33. Effects of receiving social protection support on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Has received social protection support' variable in multivariate LPM regressions. See Figure 11 for explanations.

When looking at this variable at the research area level, we see that there are both positive and negative effects (Figure 33). The findings statistically significant (at least at the 10% level) are also split across negative and positive coefficients. To understand the dynamics at play here, it is necessary to dig into the design and implementation of the specific social protection interventions carried out in those research areas.

Finally, we considered three personal traits. *Acceptance of uncertainty* is shown to be an important determinant of migration aspirations in the literature. It is statically significant in almost all specifications, and positive, though its average effect size is small at 0.06. This means that a shift from the category '1' (not willing to accept any uncertainty) to '4' (would always accept uncertainty) is associated with 6% higher migration aspirations.

At the research area level, the findings are less clear. *Acceptance of uncertainty* has a negative effect on resolute migration aspirations in some research areas, and a positive effect in others (Figure 34). The findings statistically significant at least at the 10% level are also split between positive and negative, suggesting that willingness to accept uncertainty has diverse effects on migration aspirations.

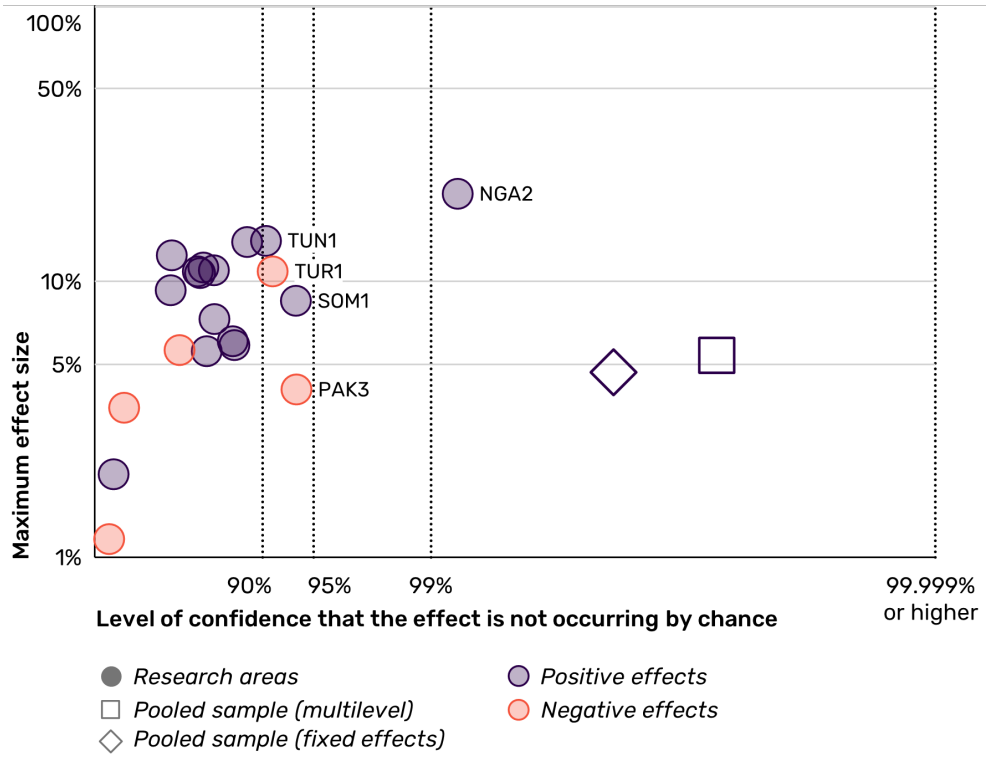

Figure 34. Effects of acceptance of uncertainty on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Acceptance of uncertainty' variable in multivariate LPM regressions. See Figure 11 for explanations.

The variable *Thinks most people can be trusted* is rarely statistically significant, only for 'prefers to leave country'. , where the effect is negative. This suggests that those who stated that most people in the research area can be trusted - an indication of attachment to their local area - are less likely to have migration aspirations. The average comparable effect size is very small at -0.01. This means that respondents who trust most people in the research area are 1% less likely to have migration aspirations.

When looking at this variable at the research area level, we see that it is only statistically significant in one research area (Figure 35). For Redeyef (TUN2) the effect is significant and positive. This somewhat counter-intuitive finding indicates that those who trust most people in the research area are more likely to have resolute migration aspirations. In the research areas with a maximum effect size that is at least 1%, but no statistically significant, we see a mix of positive and negative effects.

Finally, the literature shows that gender norms have varied effects on migration aspirations. Our variable *Conservative gender norms* is statistically significant for some specifications, but not for any for 'has seriously considered international migration in the past year' and 'resolute migration aspirations'. Its sign is always negative, indicating that those with more conservative gender norms have lower migration aspirations.

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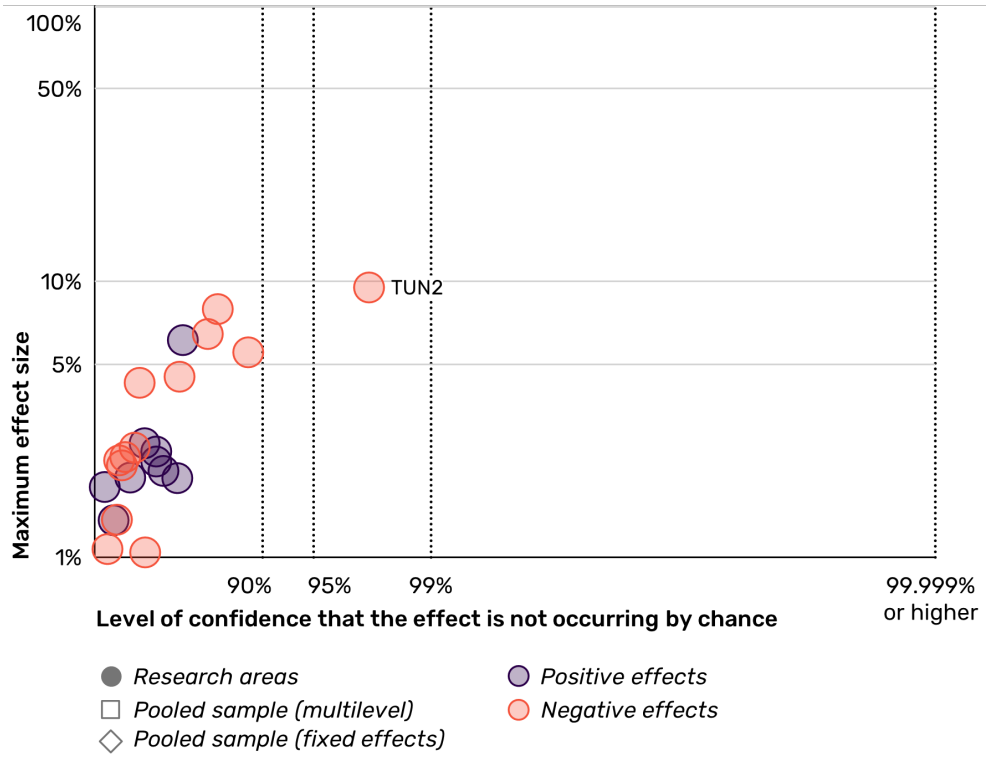

Figure 35. Effects of thinking that most people can be trusted on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Acceptance of uncertainty' variable in multivariate LPM regressions. See Figure 11 for explanations.

The small effect size of -0.02 shows that gender norms are not, in general, an important determinant of migrant aspirations. Those who have the most conservative gender norms (4) are 2% less likely to aspire to migrate, compared to those with the least conservative gender norms.

At the research area level, we find both positive and negative effects (Figure 36). For the five research areas where the effect is statistically significant at least at the 10% level, *Conservative gender norms* has a negative effect on resolute migration aspirations for three. The maximum effect size is also bigger for two of the negative effects. However, gender norms can clearly both increase or reduce migration aspirations, with the precise dynamic depending on the local area, for instance for Nigeria there is both a positive effect (Awe (NGA2)) and a negative effect (Down Quarters (NGA1)).

Other research area characteristics

In addition to the root cause analysis, we included three additional variables at the research area level. The Gini index measuring inequality within a research area is statistically significant in a few instances for each dependent variable. Its sign is mostly positive, indicating that greater inequality is associated with stronger migration aspirations. This is to be expected based on the existing literature. However, there are a few negative coefficients for 'has seriously considered migration in the past year'. The reason for this result is not clear.

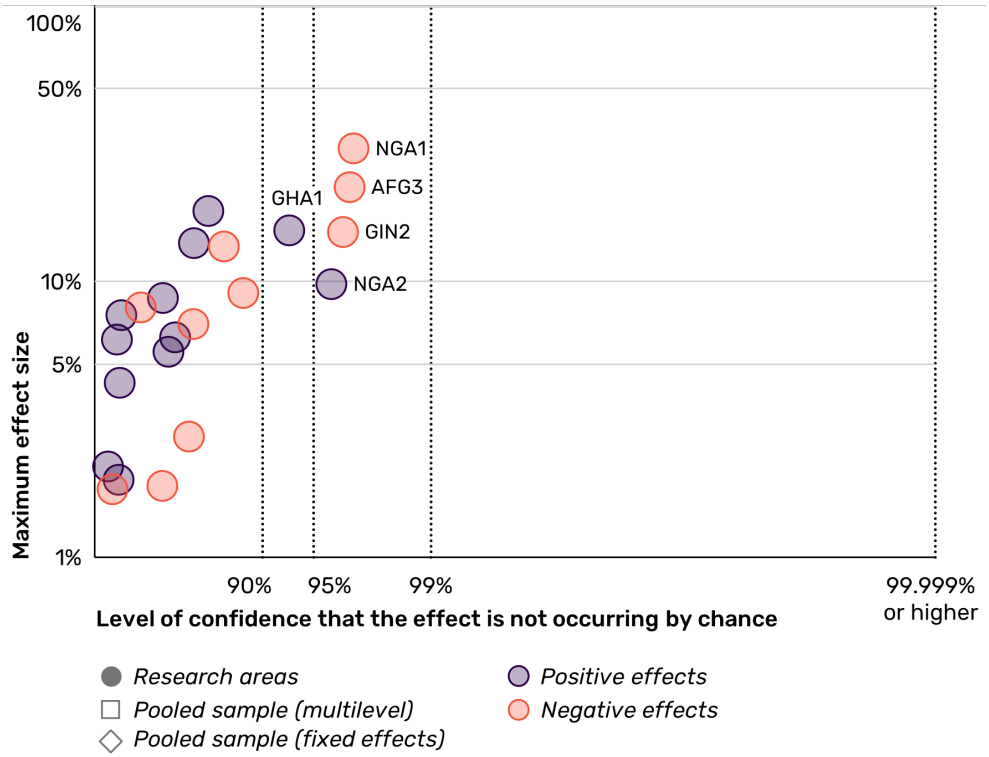

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Figure 36. Effects of conservative gender norms on resolute migration aspirations, by research area

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows the effect of the 'Conservative gender norms' variable in multivariate LPM regressions. See Figure 11 for explanations.

Overall, the average comparable effect size is fairly sizeable, at 0.18. This shows that a shift from a research area with no inequality to complete inequality – where one household owns the entire wealth – is associated with a 18% increase in migration aspirations. While this is an extreme scenario, it does indicate that inequality in the local area influences migration aspirations.

Linguistic fractionalisation acts as proxy for ethnic fractionalisation. It is statistically significant in almost all specifications, and always has a positive coefficient. This suggests that respondents in more fractionalised local areas have greater migration aspirations. The fairly sizeable average comparable effect size of 0.12 indicates that a shift from '0' (everyone speaks the same language) to '1' (no-one speaks the same language) is associated with a 12% increase in migration aspirations.

Finally, we predicted that the presence of international actors in the research area could affect migration aspirations in different ways. The variable is statistically significant in all specifications. The negative sign indicates a negative association between presence of international actors and migration aspirations, potentially because international actors on the whole have a positive effect on local economic development. The effect size is small at -0.07. This means that a shift from no international actors present to the greatest numbers of international actors present is associated with a 7% decrease in migration aspirations.

Summary of effects at the research-area level

The preceding section described how the effect of individual-level variables on migration aspirations varies across research areas. We now conclude by summarising this variation across research areas for all 30 individual-level variables. Figure 37 shows all the statistically significant effects at the 10% level. The research areas are ordered, so that the ones with the largest positive or negative effects are placed furthest from the vertical line in the centre.

The figure shows that most of the factors that affect migration aspirations have a positive effect in some research areas and a negative effect in others. This is an important finding in its own right. The are six instances where two research areas in the same country have statistically significant effects in opposite directions. For instance, people with more conservative gender norms are *less* likely to have migration aspirations in Down Quarters (NGA1) and *more* likely to have migration aspirations in Awe (NGA2).

Only six variables have effects that are all in the same direction and statistically significant in more than one or two research areas. These reasonably consistent effects are as follows:

- In five research areas people with a negative view on the quality of governance are more likely to have resolute migration aspirations.
- In nine research areas women are less likely than others in the same research area to have resolute migration aspirations.
- In six research areas people who are married or cohabiting are less likely to have resolute migration aspirations.
- In four research areas people who are not in the work force are less likely to have resolute migration aspirations.
- In ten research areas, people with higher levels of life satisfaction are less likely to have resolute migration aspirations.
- In five research areas, people who were negatively affected by Covid are more likely to have resolute migration aspirations.

No migration aspirations

Here we consider the dependent variable ‘No migration aspirations’. As a reminder, these are those who prefer to stay, and would not seize the opportunity to migrate. They might have considered migrating and decided against it, or they might not have thought about it at all.

The results for no migration aspirations largely follow the opposite pattern to resolute migration aspirations, as to be expected. Root causes, migration experiences and networks and other research area characteristics are the most important set of individual variables explaining the absence of migration aspirations. In the following section, we discuss the regression findings in more detail, considering statistical significance, sign and magnitude of independent variables.

Root causes

The regression findings summarised in Table 35 show that both indices specified in the **Livelihoods and poverty domain** are very strong predictors of no migration aspirations and statistically significant in every specification, signalling robust results.

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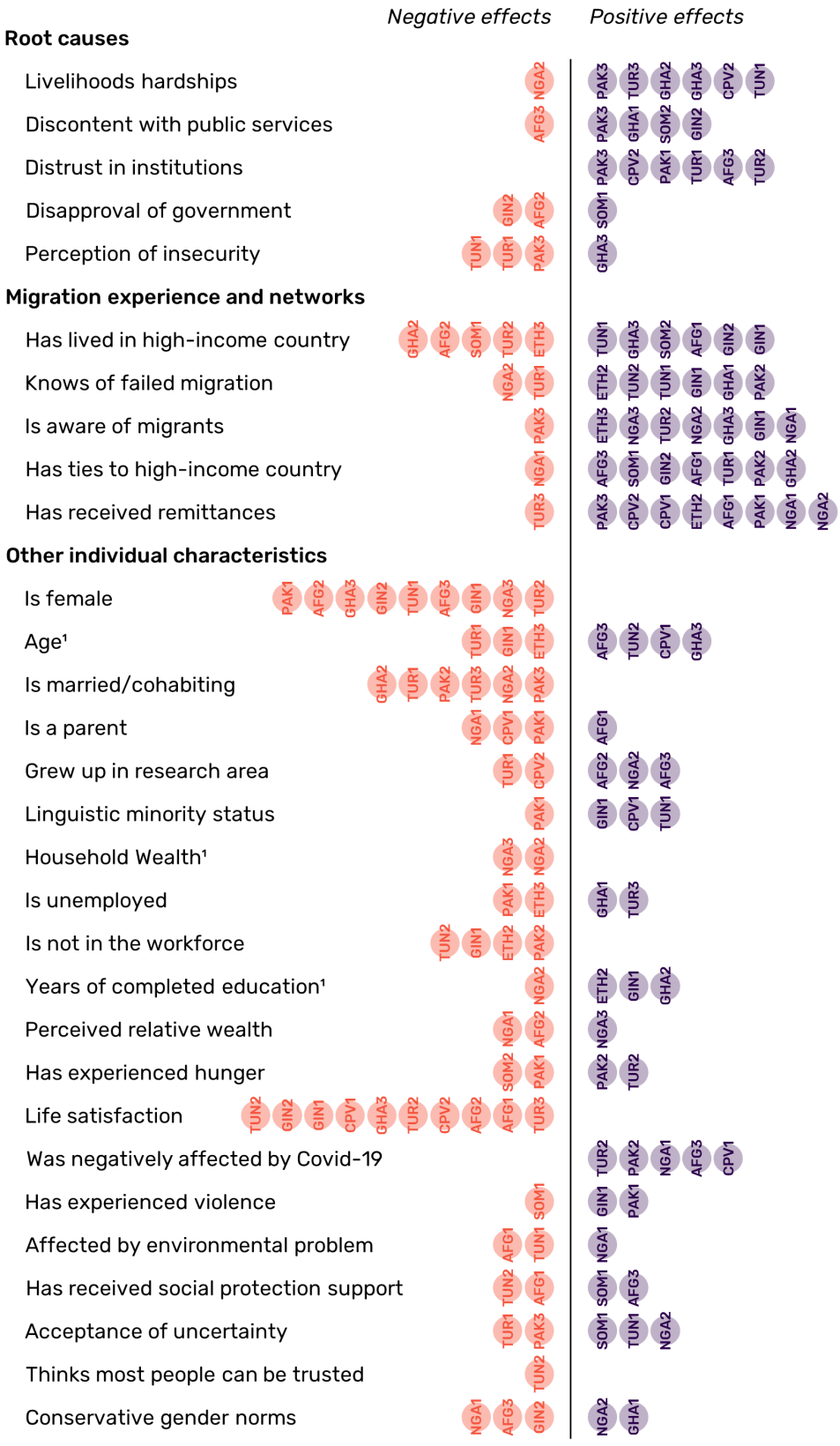

Figure 37. Comparison of effects on resolute migration aspirations

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows statistically significant (p<0.1) effects found in multivariate LPM regressions at the research-area level. Research areas are ordered by increasing effect size away from the central line. Note: (1) Not including squared term.

Livelihoods hardships has a negative sign, showing that the greater the hardships associated with livelihoods, the lower the likelihood of not having migration aspirations. The size of the coefficient is small, with an average comparable effect size of -0.09. This means that an increase from the bottom (1) to the top of *Livelihoods hardships* (4) is associated with a 9% decrease in no migration aspirations.

Poverty has a positive sign, indicating in research areas with higher poverty individuals are more likely to not have migration aspirations. The average effect size is the largest one for the entire model at 0.84, indicating that a shift from being in the least poor (1) to the poorest research area (4) is associated with an 84% lower likelihood of not having migration aspirations.

Next, we have the **Governance and public services domain**, with four variables. All four variables are almost always statistically significant across the different models, all with a negative effect. This indicates that greater governance and public services hardships are associated with lower likelihoods of not having migration aspirations. This chimes with some studies that show improvements in public service provision or governance are associated with reductions in migration aspirations.

The first three variables have a small effect on having no migration aspirations, as shown by magnitude of the coefficients. *Discontent with public services* has an average comparable effect size of -0.07, indicating than an increase in *Discontent with public services* from '1' to '4' is associated with a 7% lower likelihood of not having migration aspirations.

Distrust in institutions and Disapproval of government have an average comparable effect size of -0.09 and -0.07, respectively, meaning that an increase from 1 to 4 on the scale is associated with 9% and 7% lower likelihood of not having migration aspirations, respectively. It should be noted that *Disapproval of government* is a relevant determinant of not having migration aspirations, being statistically significant in most specifications, and at least at the 5% level – unlike for resolute migration aspirations where this variable was not statistically significant.

Corruption experience (%) in the research area stands out in terms of magnitude of the effect, as it does for resolute migration aspirations. The comparable effect size of - 0.67 shows that a shift from no-one in the research area having experienced corruption (0%) to everyone experiencing it (100%) is associated with a 67% decrease in the likelihood of not having migration aspirations. This indicates that the experience of wide-scale corruption influences both aspirations to leave (as we saw in the previous section) as well as not having migration aspirations.

For the **Security and conflict domain**, we see that the same way as for resolute migration aspirations, perceptions of overall safety are not major determinants of not having migration aspirations – with *Perception of insecurity* mostly not statistically significant across different specifications. Likewise, *violence and crime* measured at the research area level is not statistically significant in all specifications.

The individual level perception of insecurity is only statistically significant in one specification, where it has a positive coefficient. This means that people

who perceive the area to be safer are more likely to have no migration aspirations. The average comparable effect size is small, however. Feeling insecure is associated with only a 1% increase in the likelihood of not having migration aspirations.

Meanwhile *Violence and crime* at the research area level is not statistically significant in any specification.

Finally, within the **Environmental hazards and stresses** domain, the *Environmental hazard and stresses* variable is statistically significant in all specifications, unlike for resolute migration aspirations, where the variable was not always significant. The negative coefficient shows that greater environmental hazard and stresses are associated with lower likelihood of no migration aspirations. The average comparable effect size is fairly sizeable at -0.27 – the largest effect size by far for this variable across all dependent variables. It suggests that a shift from the bottom (1) to the top (4) – overall greater environmental hazard and stress within the research area – is associated with a 27% drop in no migration aspirations.

Migration experiences and networks

The group of variables included in this domain tends to be highly relevant in explaining not having migration aspirations, though somewhat less so than for resolute migration aspirations, with two variables being not/ rarely statistically significant across different specifications.

In terms of migration experiences, knowing of someone's failed experiences is statistically significant in every specification and this association exhibits a negative sign. This implies that being aware of someone's *failed* migration experience – be that deportation or someone dying en route to another country – *reduces* the likelihood of not having migration aspirations. This finding counters common assumptions amongst policy-makers that awareness of the risks of migration can act as a deterrent for migration aspirations. The average comparable effect size is very small (-0.05), however, showing that awareness of someone's failed migration experience is associated with a 5% reduction of not having migration aspirations.

Similarly, *Being aware of migrants* is negatively associated with not having migration aspirations, and consistently statistically significant, as is having family/ relatives/ friends in a high-income country and having had contact with them (the latter variable is statistically significant in all but one specification). Thus, knowing a migrant – or of their experiences – or having one in the family, appears to weaken the likelihood of not having migration aspirations. The average comparable effect size of knowing a migrant or having one in the family are small at -0.09 and -0.04 respectively, indicating that knowing of an international migrant reduces the likelihood of not having aspirations by 9% and having one in the family reduces the likelihood by 4%.

Meanwhile *Has lived in high-income country for at least one year* is not statistically significant across any specification and the household having received remittances in the past year is only weakly statistically significant at the 10% level in a few specifications. The latter variable has a very small average comparable effect size of -0.02, suggesting that those whose household received remittances are 2% less likely to not have migration aspirations.

Finally, *Culture of migration* is statistically significant in most specifications, again with a negative association, pointing to a stronger culture of migration reducing the likelihood of not having migration aspirations. The average comparable effect size is sizeable – and amongst the largest for no migration aspirations – at -0.24. This can be interpreted as a shift from the bottom of the variable (1), indicating a weak culture of migration, to the top of the variable (4), showing a very strong culture of migration, being associated with a 24% reduction in no migration aspirations.

Other individual characteristics

As expected, the other individual characteristics tend to affect the likelihood of having no migration aspirations in the opposite way of how they affected resolute migration aspirations. But, in some cases, the effect is only statistically significant for one of the outcomes and not for the other.

Starting with being female, this highly and consistently statistically significant variable has a small average comparable effect size of 0.07. Females thus have a 7% higher likelihood of not having migration aspirations, compared to men.

Likewise, being married or cohabiting also has a positive coefficient that is statistically significant across all specifications, with an average comparable effect size of 0.05. Those who are married/ cohabiting have a 5% higher likelihood of not having migration aspirations. While being married/ cohabiting appears to affect not having migration aspirations, being a parent does not, which is not statistically significant in any regression.

Meanwhile the age of the respondent and its squared form are not statistically significant. This suggests that within our age range of young adults aged 18-39 years, their age does not determine migration aspirations.

Whether the respondent has grown up in the research area does not seem relevant to not having migration aspirations, it is not statistically significant in any specification. Likewise, whether the respondent is part of a linguistic minority is also not statistically significant.

Coming to wellbeing and life-satisfaction individual variables, we find that *Household wealth* and its squared form are both statistically significant in every specification, with a negative and positive coefficient respectively. This means there is a non-linear relationship between household wealth and no migration aspirations: as wealth increases, the likelihood of not having migration aspirations decreases but after a wealth threshold, the likelihood starts increasing. The average comparable effect size is large at -0.50, indicating that an individual with the highest level of wealth is 50% less likely to have no migration aspirations, compared to the poorest individual.

The two variables relating to workforce status are both statistically significant for most specifications. Both have a negative coefficient, showing that those in the workforce but unemployed or not being in the workforce are less likely to have no migration aspirations than those who are working. The average comparable effect size for both variables is very small at -0.04 and 0.03, respectively, indicating that being in either of these two groups is associated with a 4% and 3% decrease in the likelihood of not having migration aspirations, respectively, compared to those working.

A respondent's education level, meanwhile, has a statistically significant effect in all specifications, and a negative coefficient. This indicates that the higher the year of formal schooling, the lower the likelihood of not having migration aspirations. The fairly sizeable average comparable effect size of -0.18 indicates that having a PhD (23 years of education) decreases the likelihood by 18%, compared to those with no formal education. The squared term for education is not statistically significant in any specification, suggesting that the relationship is linear for our sampled age range

While *Perceived relative wealth* is not statistically significant in any specification, whether anyone in the household has experienced hunger in the past month is statistically significant in just over half of the specifications. The average comparable effect size is very small at -0.03, indicate that those in households where someone has experienced hunger in the past month, are 3% less likely to have no migration aspirations.

Meanwhile – as to be expected – *Life satisfaction* is positively associated with no migration aspirations and statistically significant in every specification. The average comparable effect size of 0.11 shows that those who are most satisfied with their life (category 4) have 11% higher likelihood of no migration aspirations than those who are least satisfied with their life (category 1).

Moving onto negative household shocks and protection, *Was negatively affected by Covid-19* is statistically significant in most specifications, but with a very small average comparable effect size of -0.04. It suggests that those respondents where someone in the household was seriously ill, or who were seriously impacted by Covid-19 restrictions, are associated with a 4% reduction in having no migration aspirations, than those who were not negatively affected by Covid-19 in this way. As such, this particular shock does not appear to influence not having migration aspirations very much.

The same can be said for *Experience of violence*. The variable is statistically significant in most specifications, and has a very small average comparable effect size of -0.05. This indicates that those respondents where a household member experienced physical violence are only 5% less likely to not have migration aspirations than those who did not. Meanwhile the variable 'Household affected by an environmental problem' is not statistically significant in any specification, showing that, on the whole, negative shocks experienced by the household do not appear to affect not having migration aspirations very much.

Whether someone in the household has received social protection support is also not statistically significant. This means that *Has received social protection support* is not associated with no migration aspirations, thus countering a common assumption amongst policymakers. The broader literature on this topic shows that in some instances receipt of social protection can influence people in staying, for example because of conditionalities attached to transfers (Himmelstine et al., 2023). However, our findings show that social protection receipt seems to be neither a reason to stay nor to leave (see the discussion on Individual migration aspirations above).

The final set of other individual characteristics are personal traits. As for migration aspirations, the variable assessing *Acceptance of uncertainty* is statistically significant in all specifications, and it has a negative coefficient. This indicates that the more uncertainty an individual is willing to bear, the lower the likelihood of no migration aspirations. The average comparable effect size is very small, however, at -0.05: a shift from the least acceptance of uncertainty (1) to the highest acceptance of uncertainty (4) is associated with a 5% drop in not having migration aspirations.

Meanwhile *Thinks most people can be trusted* is not statistically significant in any specification, while *Conservative gender norms* is statistically significant in most specifications. The positive coefficient of the latter variable suggests that those with more conservative gender norms have a higher likelihood of no migration aspirations. The average comparable effect size of 0.02 is very small, indicating that moving from the least conservative gender norms (1) to the most conservative gender norms (4) is associated with a 2% increase in not having migration aspirations.

Other research area characteristics

In terms of other research area characteristics, the level of inequality within a research area, as measured by the Gini index, does not appear to be a determinant of no migration aspirations, only one of the specifications is statistically significant.

Linguistic fractionalisation – a proxy for ethnic diversity within a research area – is statistically significant in all specifications and has a negative coefficient. This suggest that the greater the fractionalization, the lower the likelihood of not having migration aspirations. The average comparable effect size of -0.15 indicates that a shift from '0' (everyone speaks the same language) to '1' (no-one speaks the same language) is associated with a 15% decrease in no migration aspirations.

Finally, *Presence of international actors* is also statistically significant in all specifications and has a positive coefficient. This suggests that greater presence of international actors is associated with a greater likelihood of no migration aspirations. Potentially this effect captures the employment opportunities that can be derived from the presence of international actors. The effect size is small at 0.07. This means that a shift from no international actors present to the greatest numbers of international actors present has a 7% increase in no migration aspirations.

Summary of effects at the research-area level

Figure 38 summarises the effects of individual-level variables on the likelihood of having no migration aspirations, by research area, in the same way as Figure 37 did for effects on the likelihood of having resolute migration aspirations. Overall, we find that:

- As expected, the effects are broadly opposite in the two figures. For instance, the effects of *Life satisfaction* shown here are all positive, while the effects of life satisfaction on resolute migration aspirations were all negative. These are just different expressions of the same relationship: people who are more satisfied in life are less likely to want to migrate.

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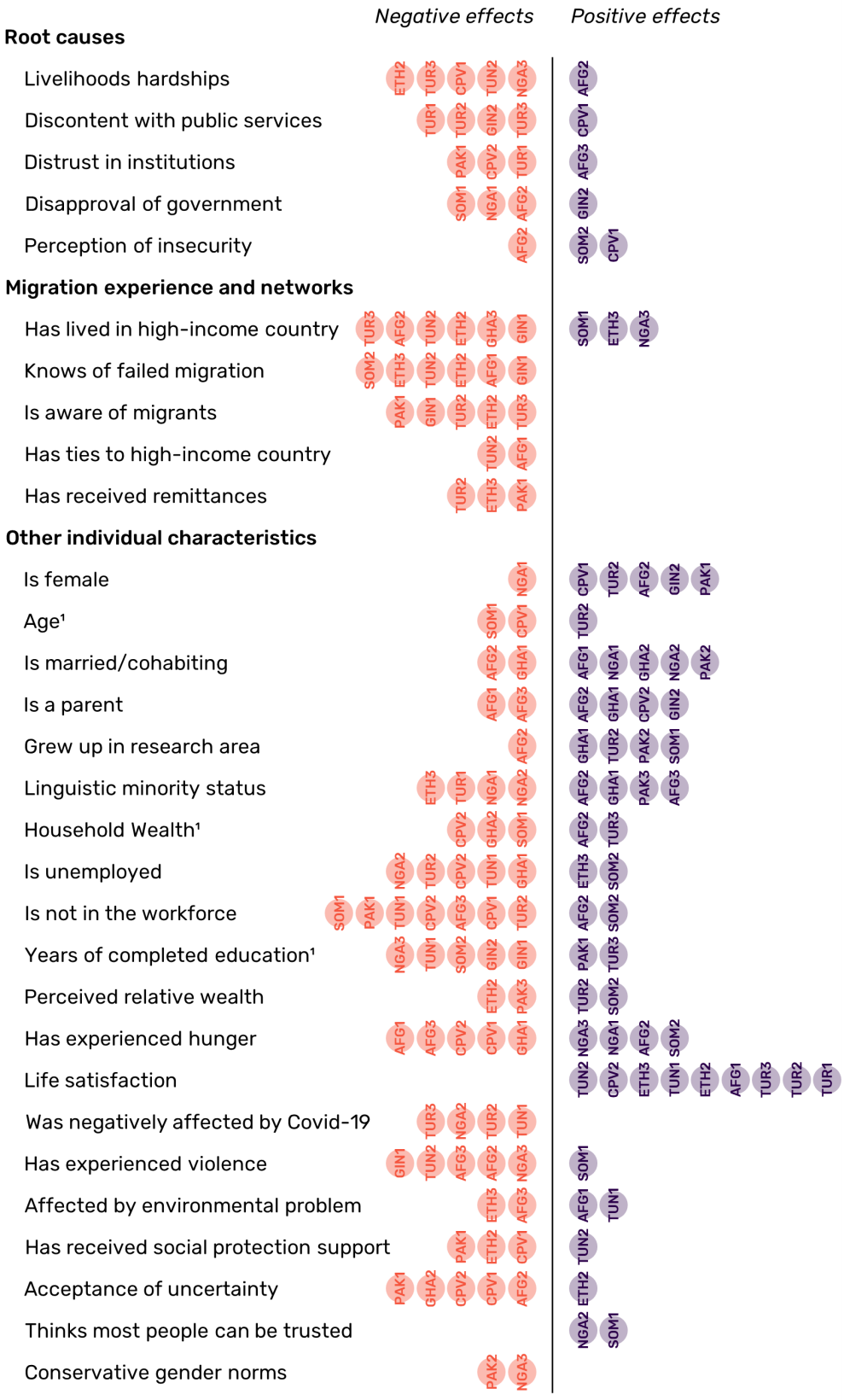

Figure 38. Comparison of effects on the likelihood of having no migration aspirations

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows statistically significant (p<0.1) effects found in multivariate LPM regressions at the research-area level. Research areas are ordered by increasing effect size away from the central line. Note: (1) Not including squared term.

- However, there are exceptions. Women were less likely to have resolute migration aspirations in nine research areas, but only in four of those areas are women more likely to have no migration aspirations. This is because the analyses focus on the two extremes of the typology of migration aspirations, leaving out the three middle categories of people who have different forms of indeterminate migration aspirations. So, with respect to the gender dimension, we see that women mainly stand out with their lower likelihood of having resolute migration aspirations, and less so in terms of not having migration aspirations at all.
- As with the effects on resolute migration aspirations, the effects on having no migration aspirations are most often contradictory between research areas.

Encouragement of migration

As explained in the Dependent variables section, migration decision-making is not always an individual concern. We consider one aspect of these interpersonal dimensions of migration aspirations: encouraging others to migrate.

Broadly speaking, the patterns found for encouragement of migration are similar to those for migration aspirations. That is, the same factors that increase the likelihood of wanting to migrate also increase the likelihood of encouraging others to migrate. Within this overall picture there are some exceptions.

In the following section, we discuss the regression findings specified in in Table 35 in more detail, considering statistical significance, sign and magnitude of independent variables.

Root causes

Once again, we consider the role of root causes across four domains. Unlike for individual migration aspirations, neither of the variables included in the **Livelihoods and poverty** domain is a strong determinant of encouragement of migration.

Livelihoods hardships is statistically significant for just two specifications with a positive coefficient, as for individual migration aspirations. Its average comparable effect size is very small at 0.04, showing that a shift from the bottom of *Livelihoods hardships* (1) to the top (4), is associated with a 4% increase in encouragement of migration.

Poverty at the research area level is a strong determinant of individual migration aspirations, but appears less relevant in encouragement of migration. It is only statistically significant in two specifications and has an average comparable effect size of 0.35. This means that a move from the bottom (1) to the top of the *Poverty* variable (4), is associated with a 35% increase in encouragement of migration, which is a sizeable effect, but it is not consistently significant across all specifications.

The second domain is **Governance and public services**, which on the whole seems to be relevant in explaining encouragement of migration. Greater

hardships in this domain are associated with higher encouragement of migration.

The three individual level perceptions based variables, *Discontent with public services, Distrust in institutions and Disapproval of government*, are all statistically significant in the majority of specifications. The coefficients are positive, indicating that greater hardships in terms of public service, governance or perceptions of government are associated with higher encouragement of migration, mirroring the findings for individual migration aspirations. The average comparable effect sizes are 0.07, 0.04 and 0.05 respectively, suggesting that an increase from the bottom (1) to the top (4) of each variable is associated; with a 7% higher encouragement of migration amid *Discontent with public services*; 4% higher encouragement due to *Distrust in institutions*; and 5% higher encouragement due to *Disapproval of government.*

Finally, *Corruption experience (%)* within a research area is again one of the strongest determinants. It is statistically significant in most specifications, with a positive coefficient. Its average comparable effect size is on the large side at 0.41. In other words, when the rate of corruption in the research area shifts from 0% to 100%, encouragement of migration is 41% higher.

Within the **security and conflict domain**, there is once again not a clear pattern. *Perception of insecurity* is not statistically significant in any specification. However, *Violence and crime* is statistically significant in every specification and has a negative coefficient; pointing to a negative association between hardships and encouragement of migration. The average comparable effect is sizeable at -0.37 - this means that greater experiences and fear of violence and crime within a research area, is associated with a 37% decrease in encouragement of migration.

Finally, the **Environmental hazards and stresses** domain does not appear relevant in encouragement of migration. None of the regressions show a statistically significant association for the *Environmental hazard and stresses* variable. This means that environmental hardships do not seem to be associated with encouragement of migration.

Migration experiences and networks

As Table 35 shows, the six measures of migration experiences and networks consistently have a positive statistical association with encouragement of migration. This effect is strong and highly significant at the 1% level across most model specifications. Overall, migration experiences and networks are a strong predictor of aspirations for encouragement of migration.

The first two variables capture direct and indirect migration experiences. *Has lived in a high-income country* is consistently statistically significant and positively correlated with the outcome ‘Has encouraged someone else in research area to migrate’. The comparable effect size is sizeable at 0.19, showing that a change from ‘0’ (not having lived in a high-income country) to ‘1’ (having lived in one) is associated with a 19% increase in encouragement of migration.

Moreover, *Knows of failed migration* exhibits a statistically significant and positive correlation with aspirations for someone else to migrate. The

average effect size is small at 0.06, indicating that a move from '0' (not knowing someone who had a failed migration attempt) to '1' (knowing someone) is associated with a 6% increase in the likelihood of encouraging someone else to migrate.

The next two variables capture transnational migration networks which include awareness of current, recent or former international migrant and having family/relatives/friends in a high-income country. *Being aware of migrants* is positively and statistically significantly correlated with encouragement of migration. The average effect size is 0.09, indicating that shifting from '0' (not knowing an international migrant) to '1' (knowing one) is associated with a 9% increase in the probability of encouraging someone else to migrate.

Has ties to high-income country is highly statistically associated with having encouraged others to migrate. This relationship is consistently positive and significant across all model specifications showing a strong link between stronger migration ties and encouragement of migration. The comparable effect size is 0.06, meaning that a move from '0' (not having strong ties) to '1' (having strong ties) is associated with a 6% increase in encouragement of migration.

Has received remittances is another variable that is consistently statistically correlated with aspirations for someone else to migrate. This association is positive, and the average effect size is 0.05 showing that receiving remittances is associated with a 5% higher likelihood of encouragement of migration compared to those who do not receive remittances.

Finally, *Culture of migration* is statistically significantly linked with aspirations for someone else to migrate. This relationship is consistently significant and positive across all model specifications. The comparable effect size of this variable is large at 0.53, indicating that with move from the bottom (1) to the top of *Culture of migration* (4), i.e., a stronger migration culture within the local area, is associated with a 53% increase in the likelihood of having encouraged someone else in research area to migrate.

Other individual characteristics

Table 35 shows that eight characteristics at the individual level exhibit consistent and strong associations with aspirations of migration for someone else, these are gender, age, married/cohabiting status, years of completed formal education, whether the respondent has experienced hunger, whether any household member has experienced physical violence, whether anyone in the household receives support from at least one of the social protection programmes and level of acceptance of uncertainty.

A respondent's gender is strongly and consistently significant across all model specifications at the 1% level of significance. Female respondents exhibit a negative association with influencing aspirations for someone else to migrate compared to their male counterparts. The comparative size effect is -0.07, showing that young women are 7% less likely to have encouraged someone from their research area to migrate compared to young men.

Age consistently has a significant association with 'Has encouraged someone else in research area to migrate.' We find that age and encouraging

aspirations for others to migrate exhibit a non-linear statistically significant relationship where the effect of age is positive up to a specific threshold, after which its effect declines. The comparable effect size of age on aspirations for others to migrate is sizeable at 0.29. This means that those in the oldest group (39 years) are 29% more likely to have encouraged someone else to migrate, compared to those in the youngest group (18 years).

The marital or cohabitational status of respondents exhibits a significant and negative link with encouragement of migration for most model specifications. The comparable effect size is very small at -0.03, indicating that respondents who are married or cohabiting respondents are 3% less likely to have encouraged others in their research area to migrate.

Moreover, the variable *Years of completed education* is positively linked with encouraging others to migrate. The average comparable effect size is 0.16 showing that having a PhD (23 years of education) increases the likelihood of encouraging others in research area to migrate by 16%, compared to those with no formal education.

Whether the respondent experienced hunger in the past month is also statistically correlated with our encouragement of migration for most model specifications. More specifically, experiencing hunger in the past month is positively associated with 'Has encouraged someone else in research area to migrate', where the average comparable effect size is very small at 0.02. This shows that those who have experienced hunger are 2% more likely to encourage others to migrate, compared to those who have not suffered hunger in the past month.

Has experienced violence also exhibits a statistically significant and positive correlation with encouragement of migration, and the effect is consistently positive across all specifications. The average comparable effect size is small (0.06), which shows that households where someone experienced physical violence are 6% more likely to encourage others in the research area to migrate than those where no-one experienced violence.

Receiving social protection support is consistently linked with encouragement of migration. The average comparable effect size is small at 0.05, indicating that receiving social protection support increases the likelihood of encouraging others in research area to migrate by 5%, compared to those who do not receive social protection support. Existing literature shows that social protection can often support the migration of other household or family members, for instance by providing a stable income to family members staying back (Himmelstine et al., 2023).

Acceptance of uncertainty is statically significantly and positively associated with the encouragement of migration. Its average effect size is very small at 0.04, which means that a shift from the category '1' (not willing to accept any uncertainty) to '4' (would always accept uncertainty) results in 4% higher likelihood of encouraging others in research area to migrate.

Other individual-level characteristics exhibit a statistically significant association with encouragement of migration, but this relationship is less consistent as it is not present across all model specifications. These

individual-level variables include household wealth index, , and whether respondent grew up in the research area.

Household wealth is statistically associated with an encouragement of others to migrate for one model specification only. This model shows that the relationship between household wealth index and encouragement of migration is statistically non-linear, whereby an increase of household wealth index leads to a decrease in encouragement of migration up to a certain threshold (after which the household wealth index results in an increase in encouragement of migration). Overall, the comparable effect size is -0.07, showing that an individual with the highest level of wealth is 7% less likely to encourage others in research area to migrate, compared to the poorest respondent.

Grew up in research area, is associated with encouragement of migration for some model specifications. Where the relationship is present, this effect is positive and highly statistically significant. The comparable effect size is very small at 0.02, which shows that those respondents who grew up in research area and have stronger ties to the locality are 2% more likely to encourage others in research area to migrate, than those who did not grow up in research area. This is an interesting finding as it would be expected that those who have stronger ties to the research area value living there more and would likely not encourage others to migrate.

Conversely, nine individual-level characteristics show no statistically significant association with encouragement of migration, including: *Is a parent, Linguistic minority status, Respondent's workforce and employment status, Was negatively affected by Covid-19, Perceived relative wealth, Affected by an environmental problem, Thinks most people can be trusted, Conservative gender norms,* and *Life satisfaction.*

Other research area characteristics

Finally, there are two other variables at the research area level that are associated with encouragement of migration: the Gini index and presence of international actors.

The Gini index, measuring inequality at the research area level, is statistically significant in most regressions and has a negative association with encouragement of migration. Its average comparable effect size is sizeable at – 0.28, one of the biggest effects for encouragement of migration. It shows that a shift from a research area with no inequality to complete inequality – where one household owns the entire wealth – is associated with a 28% drop in encouragement of migration. Its unclear what lies behind this negative association and why those living in more unequal research areas are less likely to encourage migration.

The presence of international actors is statistically significant in almost all regressions, also with a negative association. The average comparable effect size is very small (-0.02); indicating that a shift from no international actors present to the greatest numbers of international actors present has a 2% decrease on encouragement of migration.

Linguistic fractionalisation at the research area level, meanwhile, is not statistically significant across any of the specifications.

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Summary of effects at the research-area level

Figure 39 summarises the effects of individual-level variables on the likelihood of encouraging someone else to migrate by research area. Once again, we see that variables have different effects across research areas. The same variable can have a positive effect in some research area and a negative one in others, even within the same country (as for *Discontent with public services*, for example).

Eight of the 30 variables have effects that are all in the same direction and statistically significant in more than one or two research areas. These reasonably consistent effects are as follows:

- *Livelihoods hardships* is the only root cause with a consistent pattern, with greater livelihoods hardships being associated with greater encouragement of migration (3 research areas).
- Migration experiences and networks group of variables shows some diversity in effect, however two of the variables are consistently positively associated with encouragement of migration: *Has ties to high-income country* (4 research areas) and *Has received remittances* (4 research areas).
- Being female is associated with lower encouragement of migration (12 research areas, as is being married/ cohabiting (4 research areas).
- Being older is associated with higher encouragement of migration (3 research areas).
- *Has received social protection support* is positively associated with encouragement of migration (5 research areas), all in countries with large-scale social protection programmes.
- Finally, those willing to accept more uncertainty are more likely to encourage others to migrate (3 research areas).

Migration preparations

The migration preparations category is measured by three dependent variables: Has prepared but was unable to migrate (past 5 years); Has valid passport and would migrate to richer country if given papers; Has applied for visa and would migrate for richer country if given papers. Here, we discuss the detailed regression findings, considering the significance, sign and magnitude of independent variables across different model specifications.

Root causes

The regression findings of the relationship between the three measures of migration preparations and the root causes domains are specified in Table 35. These findings show that all four root causes domains are statistically significantly associated with migration preparations, but the presence and strength of this relationship varies within domain and across migration preparation measures.

One of the indices part of the **Livelihoods and poverty domain**, namely the livelihoods hardships index, consistently has a statistically significant and positive effect on all three measures of migration preparations. Poverty on the other hand is rarely statistically significant across the different model specifications and measures of migration preparations.

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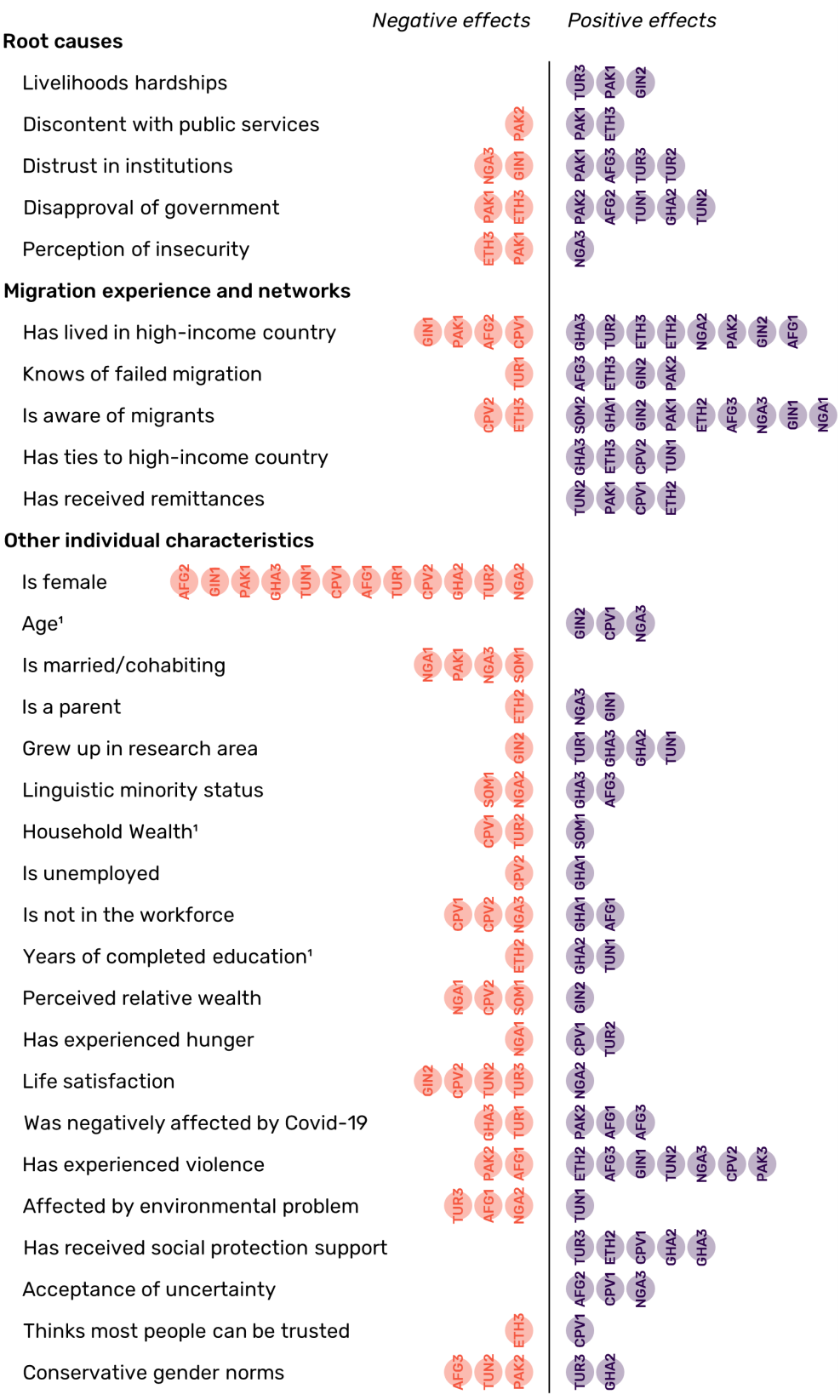

Figure 39. Comparison of effects on encouraging someone else to migrate

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows statistically significant (p<0.1) effects found in multivariate LPM regressions at the research-area level. Research areas are ordered by increasing effect size away from the central line. Note: (1) Not including squared term.

Livelihoods hardships has a positive and statistically significant correlation with the three measures of migration preparations and across most model specifications, showing that the higher the livelihoods-related hardships, the greater the likelihood of preparing to migrate. The effect size for the three measures of migration preparations is small at 0.06 for 'Has prepared but was unable to migrate', at 0.03 for 'Has valid passport and would migrate to richer country if given papers' and at 0.02 for 'Has applied for visa and would migrate to richer country if given papers'. This means that an increase from the bottom (1) to the top of the *Livelihoods hardships* (4) is associated with a 6%, 3% and 2% increase in migration preparations, respectively.

The link between *Poverty* and migration preparations varies substantially by measure of migration preparations. On one hand, *Poverty* exhibits a negative and statistically significant correlation with one migration preparation variable 'Has valid passport and would migrate to richer country if given papers' for most model specifications. The comparable effect size is small at 0.11, showing that the higher *Poverty*, the lower the probability of preparing to migrate but being unable to do so. On the whole, this means that a move from the bottom (1) to the top of *Poverty* (4), is associated with an 11% decrease in 'Has valid passport and would migrate to richer country if given papers'. On the other hand, *Poverty* is not statistically significantly associated with the other two measures of migration preparations for most specifications and the sign is not consistently the same.

Table 35 shows that there is a weak association between the **Governance and public services** domain and migration preparations. Out of the five indices that conform the **Governance and public services** domain, only *Distrust in institutions* and *Corruption experience (%)* show a statistical association. *Distrust in institution* consistently shows a positive significant association with two migration preparations measure, 'Has prepared but was unable to migrate' and 'Has applied for visa and would migrate to richer country if given papers'. While *Corruption experience (%)* is negatively and statistically significantly associated with 'Has applied for visa and would migrate for richer country if given papers' only for most model specifications.

Distrust in institutions is strongly statistically associated with migration preparations. This effect is positive and statistically significant for two measures of migration preparations, 'Has prepared but was unable to migrate' and 'Has applied for visa and would migrate to richer country if given papers', across most model specifications. Overall, *Distrust in institutions* has a comparable effect size of 0.07 and 0.01 on each measure of migration preparations, respectively. This means that a shift from the bottom (1) to the top of *Distrust in institutions* (4), is associated with a 7% and 1% increase in both measures of migration preparations respectively.

Discontent with public services is statistically associated with one measure of migration preparations, 'Has prepared but was unable to migrate', across most model specifications, showing a comparable effect size of 0.03. This means that a shift from the bottom (1) to the top of *Discontent with public services* (4), is associated with a 3% increase in 'Has prepared but was unable to migrate'.

Corruption experience (%) is statistically significant and negatively associated with one measure of migration preparations, 'Has applied for visa and would migrate for richer country if given papers', whereas no association is found with the other measures. Its comparable effect is small at -0.03, indicating that a shift from no-one in the research area experiencing corruption (0%) to everyone experiencing corruption (100%) is associated with a 3% decrease in migration preparations.

Conversely, *Disapproval of government* shows no statistical association with any of the three measures of migration preparations.

The **Security and conflict domain** is associated with migration preparations, but the sign of the effect can be both positive and negative. *Violence and crime* is positively and consistently associated with all three measures of migration preparations, whereas *Perception of insecurity* is statistically correlated with one measure of migration preparations only, 'Has applied for visa and would migrate for richer country if given papers.'

Violence and crime at the research area level, is significantly linked with the three measures of migration preparations.. This association is positive and statistically significant across most model specifications, and the comparable effect is sizeable at 0.30 for 'Has prepared but was unable to migrate', at 0.05 for 'Has passport and would migrate to richer country if given papers'; and at 0.06 for 'Has applied for visa and would migrate to richer country if given paper' . On the whole, we find that a move from the bottom (1) to the top Violence and crime (4), i.e. overall greater experiences and fear of violence and crime within a research area, is associated with a 30% increase in 'Has prepared but was unable to migrate', 5% increase in 'Has passport and would migrate to richer country if given papers'; and 6% increase in 'Has applied for visa and would migrate to richer country if given paper'.

Perception of insecurity is negatively associated with one measure of migration preparations, 'Has applied for visa and would migrate to richer country if given papers'. In other words, those who feel insecure are slightly less likely to prepare for migration. The overall effect is very small at -0.01, which shows that thinking that it is not safe to walk streets at night is associated with a 1% decrease in the likelihood of preparing to migrate.

Table 35 shows that the **Environmental hazards and stresses domain**, comprised by one variable at the research area level, is statistically associated with one of the three migration preparations measures, 'Has prepared but was unable to migrate'.. The comparable effect size is small at -0.11. This shows that a move from the bottom (1) to the top of the environmental hazards and stresses variable (4), i.e. overall greater experiences of hazards and degradation within a research area, is associated with an 11% decrease in 'Has prepared but was unable to migrate'..

Migration experiences and networks

As shown in Table 35, the five measures of migration experiences and networks are highly statistically significant and positively correlated with migration preparations. As discussed above, migration experiences and networks can be very important in practical terms to prepare for migration. This relationship is consistently significant across all models and measures

of migration experiences and networks for the variable 'Has prepared but was unable to migrate'. There are also strong correlations with the other two measures of migration preparations, but the effect varies across the migration experiences and networks variables.

Having lived in a high-income country is consistently statistically significant and positively correlated with the three measures of migration preparations across all model specifications. The average effect size of the three measures of migration preparations on having lived in high-income country for at least one year is 0.13 for 'Has prepared but was unable to migrate', 0.12for 'Has valid passport and would migrate to richer country if giver papers' and 0.07 for 'Has applied for visa and would migrate to richer country if given papers.' This shows that a change from '0' (not having lived in a high-income country) to '1' (having lived in one) is associated with a 13%, 12% and 7% increase in the three measures of migration preparations, respectively.

On the other hand, knowing of someone's failed migration experience exhibits a statistically significant and positive link with two migration preparations measures, 'Has prepared and was unable to migrate' and 'Has applied for visa and would migrate to richer country if given paper'. In the case of the latter outcome, this relationship is less consistent as it is statistically significant only in a few model specifications. Interestingly, *Knows of failed migration* also has a positive coefficient, indicating that awareness of the 'risks of migration' does not act as a deterrence for migration preparations. Overall, the comparable effect size is 0.07 and 0.00 for each migration preparations measure, respectively. This shows that a move from '0' (not knowing someone who had a failed migration attempt) to '1' (knowing someone) is associated with a 7% increase in 'Has prepared and was unable to migrate', the effect on 'Has applied for visa and would migrate for richer country if given paper' is negligible.

The next two variables capture transnational migration networks which include awareness of current, recent or former international migrant *(Is aware of migrants)* and having family/relatives/friends in a high-income country *(Has ties to high-income country). Is aware of migrants* is positively and statistically significantly associated with the first migration preparation measure, 'Has prepared but was unable to migrate', while the relationship with 'Has applied for visa and would migrate for richer country if given papers' is statistically significant for a few model specifications only and there is no statistical relationship with 'Has valid passport and would migrate to richer country if given papers.' The comparable effect size is 0.06 for 'Has prepared but was unable to migrate' and 0.01 for 'Has applied for visa and would migrate to richer country if given papers', indicating that shifting from '0' (not knowing an international migrant) to '1' (knowing one) is associated with a 6% and 1% increase in preparing to migrate but being unable to do so, respectively

Has ties to high-income country is strongly associated with the three measures of migration preparations. This relationship is consistently positive and significant across all model specifications, showing a strong link between strong migration ties and migration preparations. The comparable effect size is 0.06 for 'Has prepared but was unable to migrate', 0.04 for 'Has valid passport and would migrate to richer country if given papers' and 0.01

for 'Has applied for visa and would migrate to richer country if given papers'. This means that a move from '0' (not having strong ties) to '1' (having strong ties) is associated with a 6%, 4% and 1% increase in each measure of migration preparations, respectively.

Has received remittances is another measure of transnational networks that is consistently statistically associated with the three measures of migration preparations, showing the importance of the practical side of transnational networks. The link between remittance receipt and migration preparations is positive and the comparable effect size is 0.06 for 'Has prepared but was unable to migrate', 0.07 for 'Has valid passport and would migrate to richer country if given papers' and 0.03 for 'Has applied for visa and would migrate for richer country if given papers'. This shows that receiving remittances is associated with a 6%, 7% and 3% higher likelihood of having migration preparations, respectively for each measure, compared to those who do not receive remittances.

Lastly, *Culture of migration* at the research area level is statistically significantly linked with one measure of migration preparations only, 'Has prepared but was unable to migrate'. This relationship is positive and consistent across all model specifications. The comparable effect size of this variable is sizeable at 0.12, indicating that with a move from the bottom (1) to the top of *Culture of migration* (4), i.e. a stronger migration culture within the local area, is associated with a 12% increase in migration preparations.

Other individual characteristics

There are several other factors at the individual level that can influence migration preparations. Table 35 shows that most of the 19 individual-level characteristics are statistically associated with migration preparations, the association is mostly present for one or two measures of migration preparations.

Gender and experiencing violence are strong determinants of migration preparations. Being a female exhibits a statistically significant and negative association with the three migration preparations measures. The average size effect is -0.06 for 'Has prepared but was unable to migrate', -0.02 for 'Has valid passport and would migrate to richer country if given papers' and -0.01 for 'Has applied for visa and would migrate to richer country if given papers.' This shows that overall, young women are between 1% and 6% less likely to prepare to migrate than young men, depending on the measure of migration preparations.

Experiencing violence exhibits a statistically significant association migration preparations, and the effect is consistently positive across all three measures of migration preparations. The comparable effect size is 0.04 for 'Has prepared but was unable to migrate', 0.03 for 'Has valid passport and would migrate to richer country if given papers' and 0.01 for 'Has applied for visa and would migrate to richer country if given papers.' This means that those respondents where someone in the household experienced violence are 1-4% more likely to prepare to migrate, depending on the measure, than those where no-one experienced violence.

Six other individual factors show a statistically significant association with two measures of migration preparations: age, household wealth, linguistic minority status, workforce participation and employment, having experienced hunger and acceptance of uncertainty.

Age consistently has a significant association with two measures of migration preparations, namely 'Has prepared but was unable to migrate' and 'Has valid passport and would migrate to richer country if given papers.' This relationship is non-linear as it increases up to a specific threshold, after which its effect on migration preparations declines. In terms of its effect, the average comparable effect size of age on 'Has prepared but was unable to migrate' and 'Has valid passport and would migrate to richer country if given papers' is sizeable at 0.35 and 0.25 respectively. This means that those in the oldest group (39 years) are 35% and 25% more likely to 'prepare to migrate but are unable to' and to 'have a valid passport and would migrate to richer country if given papers', respectively, compared to those in the youngest group (18 years).

Household wealth exhibits a non-linear relationship with two measures of migration preparations, particularly for the measures 'Has prepared but was unable to migrate' and 'Has applied for visa and would migrate to richer country if given papers', showing that as wealth increases, migration preparations decrease but after a wealth threshold, migration preparations start increasing. The average comparable effect size is -0.16 and -0.10, respectively for each measure, indicating that an individual with the highest level of wealth is 16% and 10% less likely to prepare to migrate, respectively, compared to the poorest respondent.

Linguistic minority status is positively linked with two migration preparations measures, 'Has prepared but was unable to migrate' and 'Has applied for visa and would migrate to richer country if given papers.' The average comparable effect size is of 0.06 and 0.02, respectively. This means that linguistic minorities are 6% and 2% more likely to prepare for migrating but unable to do so and to apply for visa and be willing to migrate to richer country if given papers, respectively, compared to those who are not a linguistic minority.

Workforce participation and employment status correlated with two measures of migration preparations. Surprisingly, being in the workforce but unemployed has no statistical association with any of the three measures of migration preparations. However, the effect of respondents who are not in the workforce is consistently statistically associated with two measures of migration preparations. This association is negative, where the comparable effect size is -0.05 for 'Has prepared but was unable to migrate', and -0.02 for 'Has applied for visa and would migrate to richer country if given papers', indicating that those who are not in the workforce are 5% and 2% less likely to have migration preparations, respectively for each measure, compared to those who are employed.

Interestingly, whether the respondent experienced hunger in the past month is also statistically correlated with two measures of migration preparations, but the direction of the effect varies by measure. On the one hand, experiencing hunger in the past month is positively associated with 'Has

prepared but was unable to migrate', where the average comparable effect size is 0.04. This shows that those who have experienced hunger are 4% more likely to prepare to migrate but are unable to do so, compared to those who have not suffered hunger in the past month. Conversely, having experienced hunger in the past month is negatively associated with having a valid passport and be willing to migrate to richer country if given papers. More specifically, the average comparable effect size is very small at 0.01 showing that those who have experienced hunger are 1% less likely to have a valid passport and would migrate to richer country if given papers.

Acceptance of uncertainty is statically significantly and positively associated with 'Has prepared but was unable to migrate' and 'Has applied for visa and would migrate to richer country if given papers.' Its average effect size is small at 0.03 and 0.01, respectively for each measure. This means that a shift from the category '1' (not willing to accept any uncertainty) to '4' (would always accept uncertainty) is associated with a 3% higher likelihood of preparing to migrate but being unable to and a 1% higher likelihood of having applied for visa and would migrate to richer country if given papers.

Seven other factors at the individual level show a statistically significantly relationship with one of the three measures of migration preparations: *Is married/ cohabiting, Years of completed education, Household wealth, Is a parent, Grew up in research area, Was negatively affected by the COVID-19, Conservative gender norms* and *Life satisfaction.*

Is married/ cohabiting is statistically associated with 'Has valid passport and would migrate to richer country if given papers', and this relationship is strongly negative. The average comparable effect size is very small, however, at -0.02, indicating that married/ cohabiting respondents are 2% less likely to prepare, compared to those no married / cohabiting.

Moreover, the variable years of completed education is statistically and positively linked with 'having prepared but was unable to migrate' . The average comparable effect size is 0.19.. This means that having a PhD (23 years of education) increases the likelihood of preparing to migrate but being unable to by 19% compared to those with no formal education.

Whether respondent is a parent is statistically associated with 'Has valid passport and would migrate to richer country if given papers', and this relationship is negative. Its average comparable effect size is also very small at 0.02, indicating that being a parent reduces migration preparations by 2%.

Whether the respondent grew up in research area exhibits a statistical and negative link with one measure of migration preparations, 'Has valid passport and would migrate to richer country if given papers.' Its average comparable effect size is very small at 0.02, indicating that growing up in research area reduces migration preparations by 2% compared to those who grew up elsewhere.

Whether the household was negatively affected by Covid-19 is statistically significantly associated with one migration preparations variable, 'Has valid passport and would migrate to richer country if given papers'. The effect is positive suggesting that a Covid-19 shock – in terms of severe illness amongst a household member and / or being severely affected by Covid-19 measures –

is positively associated with migration preparations. The comparable effect size of 0.02 shows that those negatively affected by Covid-19 are 2% more likely to prepare to migrate, compared to those who were not affected.

Conservative gender norms is statistically significant for one migration preparations measure, 'Has prepared but was unable to migrate (past 5 years).' The association is positive indicating that those with more conservative gender norms exhibit higher migration preparations. Its average comparable effect is of 0.03 indicating that those who have the most conservative gender norms (4) are 3% less likely to prepare to migrate but being unable to, compared to those with the least conservative gender norms (1).

Life satisfaction is not such a strong predictor of migration preparations. It is statistically linked to only one migration preparation measure, 'Has prepared but was unable to migrate', and the direction of the effect is negative. Its effect size is small at 0.04, showing that those completely satisfied ('4') are 4% less likely to have migration preparations than those completely dissatisfied ('1').

Lastly, four other individual-level characteristics show no statistical association with any of the three migration preparation measures, namely *Perceived relative wealth, Affected by environmental problem, Has received social protection support*, and *Thinks most people can be trusted.*

Other research area characteristics

We include three other variables at the level of research areas, linguistic fractionalisation, the presence of international actors and the Gini index.

The linguistic fractionalisation measure, which acts as proxy for ethnic fractionalisation, exhibits a statistically significant link with one migration preparations measure, 'Has prepared but was unable to migrate' . The sign of the effect is negative and the magnitude of the comparable effect size is -0.13. This means that a shift from '0' (everyone speaks the same language) to '1' (no-one speaks the same language) is associated with a 13% decrease in 'Has prepared but was unable to migrate'.

The presence of international actors in the research area could affect migration preparations in multiple ways. The variable is statistically associated with one measure of migration preparations, 'Has valid passport and would migrate to richer country if given papers.' This relationship is positive, and the magnitude of the comparable size effect is relatively very small at 0.02. This effect shows that a shift from no international actors present to the greatest numbers of international actors increases migration preparations by 2%.

Lastly, the Gini index, measuring inequality within a research area, is not statistically significantly associated with any of the measures of migration preparations.

Summary of effects at the research-area level

Effects on migration preparations at the research area level are presented in Figure 40 (Has prepared but was unable to migrate), Figure 41 (Has valid passport and would migrate to richer country if given papers) and Figure 42 (Has applied for visa and would migrate for richer country if given papers).

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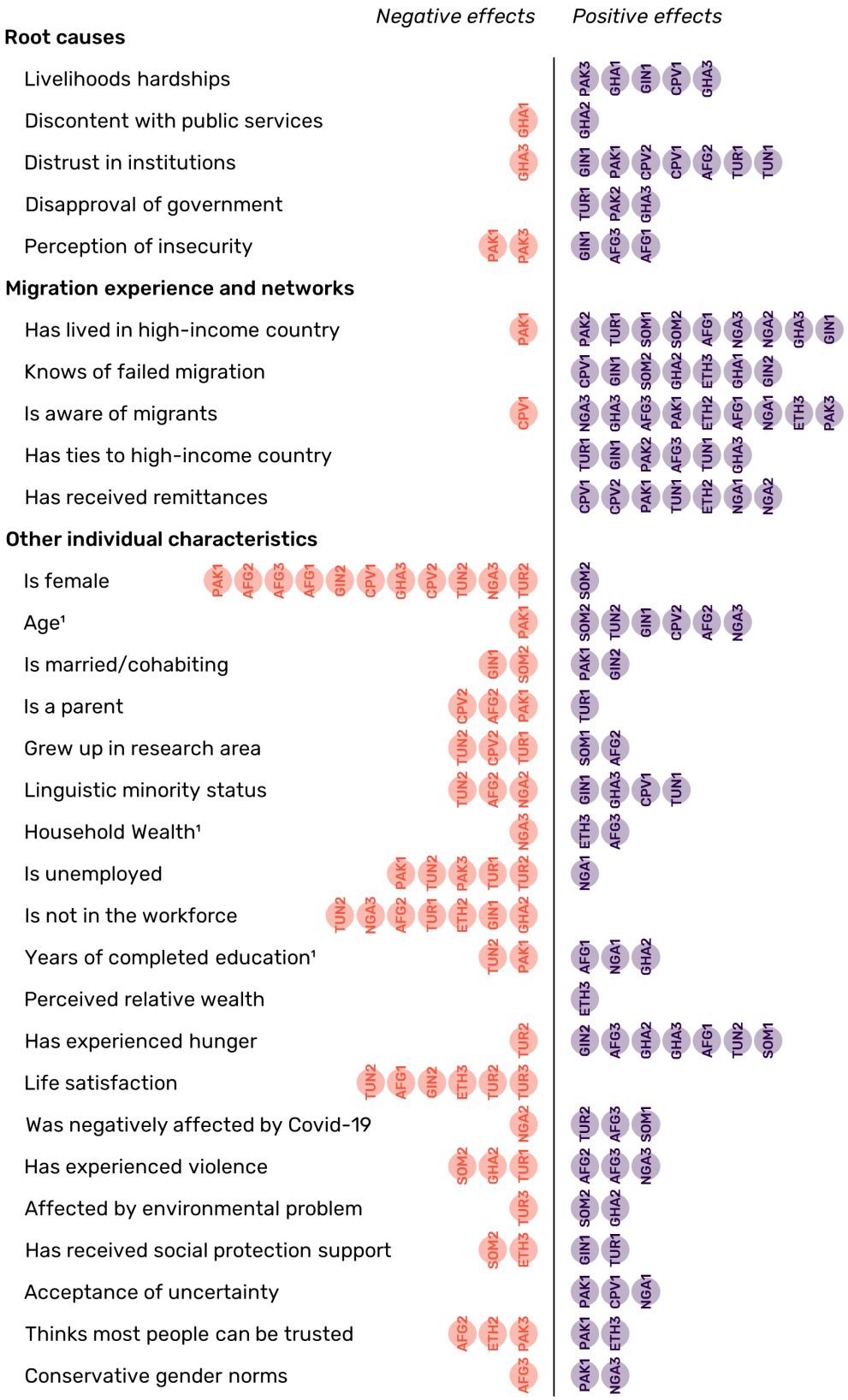

Figure 40. Effects on the likelihood of having prepared but being unable to migrate (past five years)

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows statistically significant (p<0.1) effects found in multivariate LPM regressions at the research-area level. Research areas are ordered by increasing effect size away from the central line. Note: (1) Not including squared term.

MIGNEX Background Paper

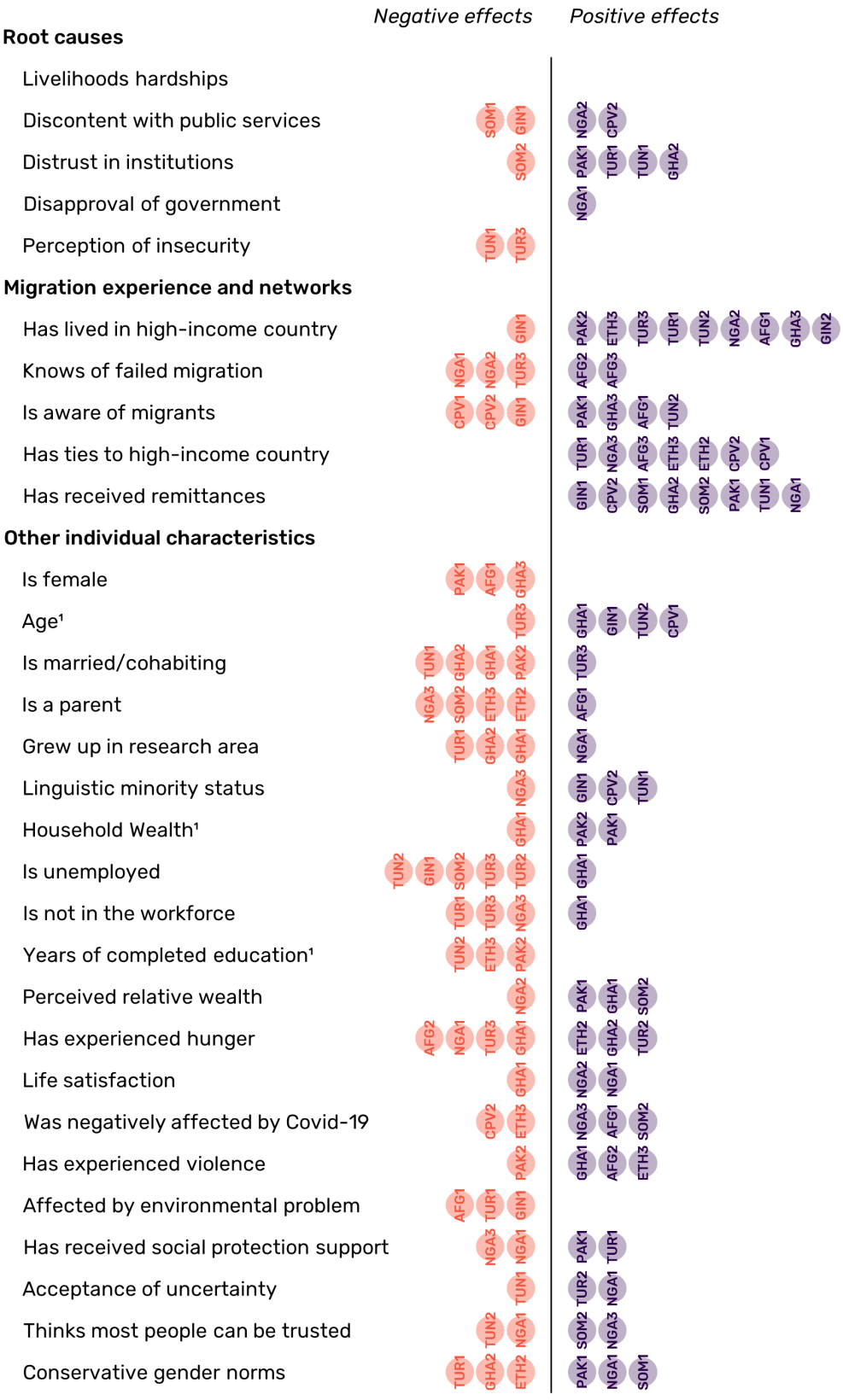

Figure 41. Effects on the likelihood of having a valid passport and being ready to migrate to a richer country if given papers

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows statistically significant (p<0.1) effects found in multivariate LPM regressions at the research-area level. Research areas are ordered by increasing effect size away from the central line. Note: (1) Not including squared term.

MIGNEX Background Paper

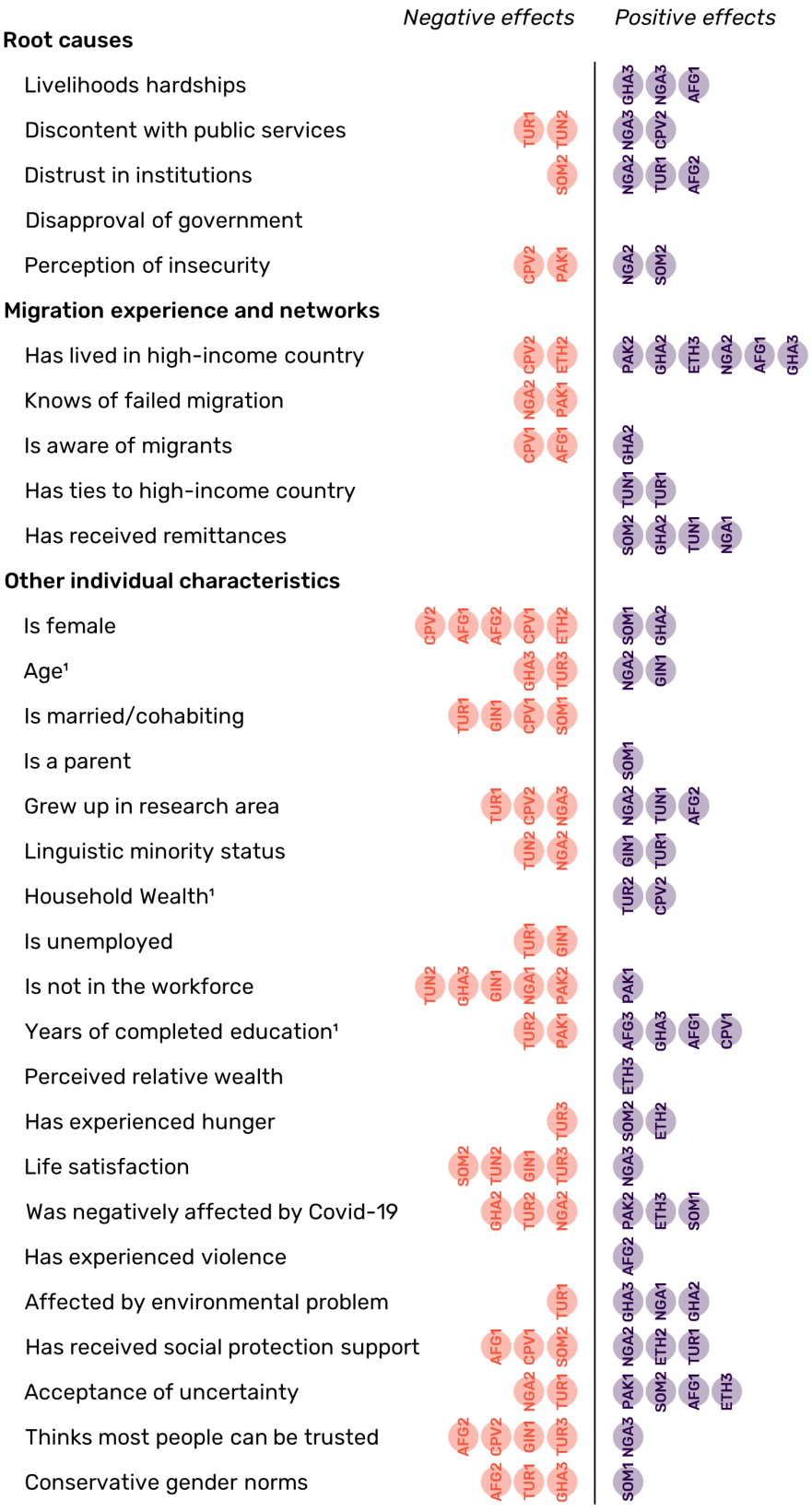

Figure 42. Effects on the likelihood of having applied for a visa and being ready to migrate to a richer country if given papers

Data source: MIGNEX survey dataset (restricted variant, v1). Data are weighted to reflect the survey design. The figure shows statistically significant (p<0.1) effects found in multivariate LPM regressions at the research-area level. Research areas are ordered by increasing effect size away from the central line. Note: (1) Not including squared term.

The overall conclusion from preceding sections – that there are fewer clear patterns in determination of migration preparations than in determination of migration aspirations – is reflected in inconsistent effects across research areas. This is especially the case for having a valid passport and having applied for a visa. Having prepared for migration but being unable to leave is more consistently affected by root causes, migration-related factors and some individual-level characteristics.

At the research area level, we find consistent evidence of strong associations between having prepared for migration but being unable to leave and root causes and migration experiences and networks, while only with some individual-level characteristics. More specifically:

- Having prepared for migration but being unable to leave is associated with three measures of root causes in five to either research areas, namely: livelihoods hardships, distrust in institutions, and violence and crime. The sign of the effect varies by research area for distrust in institutions, and violence and crime. Whereas the effect is consistently positive for livelihoods hardships across all five research areas. For instance, in the case of violence and crime, the effect is negative in Chot Dheeran (PAK1) and Keti Bandar (PAK3) while positive in Shahrake Jabrael (AFG1) and Shahrake Mahdia (AFG3), showing the presence of similar patterns across research areas within countries.
- The strongest association is found between general migration preparations and migration experiences and networks, where the five measures of the latter are highly statistically significant in seven to nine research areas. The direction of the effect is positive for most measures of migration experiences and networks across all research areas, with the exception of has lived in high-income country and is aware of migrants, where the effect is negative in one research area.
- Six of the other individual-level factors, namely female, age, has experienced hunger, not in the workforce, life satisfaction and has experienced violence are significantly correlated with general migration preparations across six to 12 research areas. The strongest association found is with the respondent's gender, where for 11 research areas being a female is negatively associated with general migration preparations. The direction of the effect is consistently positive for not in the workforce and life satisfaction whereas it can be positive or negative for experience of hunger and experience of violence depending on the research area.

More concrete migration preparations such as having a valid passport and being ready to migrate to a richer country if given papers show less consistency within research areas:

- Out of all measures of root causes, distrust in institutions is the only measure that exhibits the highest number (five) of associations with having a valid passport and being ready to migrate to a richer country if given papers across research areas. The sign of the effect is mostly positive, and negative only in Baidoa (SOM2).

- Migration experiences and networks show consistent associations with this measure of migration preparations. However, significant associations are present in a lower number of research areas compared to the broader measure of migration preparations. Having transnational ties and receiving remittances consistently show positive associations with migration preparations. The other three measures of migration networks and experiences predominantly exhibit positive associations but the effect is negative in a few research areas.
- In terms of individual level characteristics, age, being unemployed, having experienced hunger and having conservative gender norms have the strongest associations with this measure of migration preparations across all research areas. Gender seems to be a weaker determinant for this measure of migration preparations whereas being employed is a stronger determinant.

Lastly, having applied for a visa and being ready to migrate to a richer country if given papers shows the least consistency among the three migration preparations measures:

- All measures of root causes show very weak associations across all research areas with only four research areas exhibiting statistical associations with livelihoods hardships, discontent with public services, distrust in institutions, and violence and crime, whereas disapproval of government shows no statistical association in any research area. The effects of the livelihood index are consistently positive, whereas the direction of the association varies by research area for discontent with public services, distrust in institutions, and violence and crime.
- One measure of migration experiences and networks, having lived in high-income country, shows the strongest associations with migration preparations in eight research areas, whereas the other four measures exhibit significant associations in two to four research areas only. The sign of the effect is consistently positive for transnational ties and having received remittances, and consistently negative for knowing of failed migration across all research areas. For the other two measures, having lived in a high-income country and being aware of migrants, the association can be positive or negative depending on the research area.
- Other individual characteristics seem to be stronger determinants of preparations to migrate by having applied for a visa and being ready to migrate to a richer country if given papers than root causes or migration experiences and networks. Being female, growing up in the research area, not being in the workforce, years of education completed, being negatively affected by Covid, and acceptance of uncertainty are statistically significant in six to seven research areas. The sign of the effect varies across research areas for these six individual-level factors.

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Conclusion

In this final section we first give a non-technical summary of the multi-level determinants of migration processes. Based on this summary we then draw out key conclusions from this analysis. We then reflect on the root causes concept and provide some policy implications.

Key findings

The section *The multi-level determination of migration processes* gave a detailed description of all analyses conducted for this paper. Here we extract key findings from the 513 regressions conducted, reflecting on the most interesting patterns as well as the key differences between the different groups of migration processes (individual migration aspirations, no migration aspirations, encouragement of migration and migration preparations).

Determinants of migration aspirations

What determines resolute migration aspirations but also what constitutes them (preference, consideration and readiness to leave)?

Our results show that root causes are a clear determinant of migration aspirations. Moreover, livelihoods, poverty, governance and public services are the root causes with the strongest relationship to the formation of migration aspirations.

Greater livelihoods hardships are associated with greater migration aspirations, which is in line with existing research. In other words, the more people struggle to find jobs, and the more dissatisfied they are with the quality of jobs, the more likely it is they have migration aspirations. Higher levels of poverty, on the other hand, result in lower migration aspirations, a well-known pattern. The *Poverty* variable has the largest effect of all the determinants included.

Negative perceptions of the quality of governance and public services are associated with greater migration aspirations. For example, the higher levels of dissatisfaction with the quality of education and health services, the higher the migration aspirations. When corruption in the research area is higher, migration aspirations are also higher. The corruption (bribes rate) variable has a high effect on migration aspirations.

Perhaps surprisingly, security and conflict are less relevant in explaining migration aspirations. Higher levels of fear and experience of violence and crime and violence in the research area are associated with higher migration aspirations, but this only has a small effect, while perception of insecurity does not seem to matter.

Likewise, environmental hazards and stresses domain also plays a role in explaining migration aspirations. While higher levels of environmental hazards and stresses at the research area, such as floods and droughts, result in higher migration aspirations, this effects is somewhat smaller some of the other root causes. They could of course indirectly influence migration

aspirations via their effect on livelihoods, which do influence migration aspirations, as we've shown above.

Our analysis shows that migration experiences and networks play a critical role in shaping migration aspirations, and hereby confirms the existing literature. This is one of the most important determinants of migration.

International migration experience, awareness of failed migration and having transnational networks result in greater migration aspirations, but have a relatively small effect. Interestingly, being aware of someone's failed migration – for example knowing someone who died on the migration journey or got stuck – results in stronger migration aspirations. This indicates that this awareness does not act as a deterrence to migration aspirations. Of the transnational networks variables, having family members, relatives or friends who live in a high-income country and having had contact is the most important. This confirms the idea that migrants as bridgeheads – someone who can provide information or other help – are crucial.

Whether the research area has a culture of migration, that is societies where out-migration has become established in institutions and values, is the most important variables in this group and has one of the largest effects among the 41 determinants. The higher the culture of migration, the stronger the migration aspirations. With this finding we are now able to quantify a common finding in the migration literature that has to date been rarely studied in a comparative or quantitative way.

The effects of other individual characteristics on migration aspirations are somewhat less consistent and not all relevant in explaining migration aspirations. The most important variables terms of the size of effect are life satisfaction and education. Higher education levels result in higher migration aspirations – though there is some levelling off. The more satisfied individuals are with their life, the lower their migration aspirations.

Some individual characteristics confirm widely found patterns, for instance being female is associated with lower migration aspirations. Higher wealth is associated with greater migration aspirations (with some levelling off), confirming that poorer households may not even consider migration because they are unable to finance the costs of migration.

Other findings are more surprising. For example, being unemployed has a small effect and results in lower migration aspirations in some research areas, and higher aspirations in others. This means that unemployment does not necessarily have the straightforward association with migration aspirations that is often assumed, however, it should be noted that we do not capture employment or unemployment of other household members. And as previously mentioned, shocks experienced by the respondent's household – such as experience of environmental problems and to a lesser degree experience of violence – tend not to be important determinants of migration aspirations.

Only some personal traits are associate with having migration aspirations. Being less risk averse is associated with stronger migration aspirations, confirming the connection between risk tolerance and migration aspirations.

The extent to which respondents have conservative gender norms is also a determinant of migration aspirations, but its effect varies widely by research area, highlighting the significance of the broader context.

Finally, two additional research area level characteristics emerge as relevant determinants. The presence of international actors consistently results in lower migration aspirations. A possible explanation is that international presence increases confidence in local opportunities, which in turn contributes to muting migration aspirations. Linguistic fractionalisation capturing ethnic diversity within a research area results in higher migration aspirations in some research areas, and lower aspirations in others. This showing that the determinants of migration aspirations can have opposite effects in different contexts.

Determinants of no migration aspirations

The results for no migration aspirations largely follow the opposite pattern of resolute migration aspirations, however with some interesting divergences. As with aspirations to leave, root causes, migration experiences and networks and other research area characteristics are the most important set of individual variables explaining no migration aspirations.

Once again, livelihoods and poverty are important determinants. The higher the livelihood hardships, the lower the likelihood of having no migration aspiration. Poverty has one of the strongest effects on not having migration aspiration. The poorer the research area, the more likely it is that the individual does not have migration aspirations.

Governance and public services variables are even more important for no migration aspirations than for resolute migration aspirations, with three out of the four variables being consistently statistically significant. All these variables show that the greater the dissatisfaction with, say the quality of public services or perceptions of government, the lower the likelihood of no migration aspirations. The effects are mainly small, except for levels of corruption in the research area.

While higher levels of fear and experience of crime and violence at the research area level or perceptions of insecurity at the individual level are not associated with the likelihood of having no migration aspirations.

In comparison to the determinants of migration aspirations, what stands out is that environmental hazards and stresses are a key determinant of no migration aspirations. The greater the level of floods, soil degradation or other environmental issues at the research area, the lower the likelihood of no migration aspirations. Unlike for other migration outcomes, the size of the effect is fairly sizeable for no migration aspirations. In other words, environmental issues reduce the likelihood of not wanting to migrate, but they do not necessarily increase the likelihood of resolute migration aspirations or preparing for it.

The group of variables included in the migration experiences and networks domain tends to be important determinants of not having migration aspirations, though not for all variables. As for resolute migration aspirations, failed migration produces an effect not anticipated by policy

makers: awareness of failed migration is associated with a decrease of no migration aspirations. *Culture of migration* is amongst the most critical variables in explaining no migration aspirations with a large effect size. The greater the culture of migration in a research area, the lower the likelihood of no migration aspirations.

The effects of other individual characteristics on no migration aspirations tend to be the opposite effect to the one for having migration aspirations, though there are instances where other individual characteristics are statistically significant for one of the outcomes, but not the others. What stands out the most is that individual level shocks, such as having been severely affected by Covid-19, do seem to be more influential in not having migration aspirations, though the effect is mostly very small.

In terms of other research-area level characteristics, ethnic fractionalisation within the research area, a proxy for ethnic diversity, which was also key in explaining migration aspirations, is significant for not having migration aspirations. The greater the diversity, the lower the likelihood of no migration aspirations.

Finally, presence of international actors is also statistically significant. Greater presence of international actors is associated with a greater likelihood of no migration aspirations. Potentially this effect captures the employment opportunities that can be derived from the presence of international actors.

Determinants of encouragement of migration

Migration decision-making is not always individual. In the context of migration aspirations, we focus on one aspect of these interpersonal dimensions: encouraging others to migrate.

Broadly speaking, the patterns found for encouragement of migration are similar to those for migration aspirations. That is, similar determinants that increase migration aspirations also increase the likelihood of encouraging others to migrate. Within this overall picture there are some exceptions and overall we find fewer significant determinants of encouragement.

Overall, root causes are still very important determinants in explaining encouragement of migration, but there are some differences. For instance livelihood hardships and poverty in the research area are particularly relevant determinants, while environmental hazards and stresses are not.

Governance and public services, on the other hand, are important determinants of migration encouragement. For example, having worse perceptions of local and central government or not getting access to healthcare when needed, all result in stronger encouragement of migration. Meanwhile, the corruption rate in the research area has the highest effect of all root causes, with the likelihood of encouragement of migration higher for those living in areas with higher levels of corruption.

While individual perception of insecurity does not explain encouragement of migration, those living in research areas where a higher share of people is

worried about violence, or has experienced it, are more likely to encourage others to migrate.

Overall, migration experiences and networks are a strong determinant of encouragement of migration. Individuals living in research area where out-migration has become established in institutions and values are much more likely to encourage others to migrate. The culture of migration has the strongest effect on encouragement of migration of all the determinants included.

At the individual level, female, younger and married respondents are less likely to encourage others to migrate. Those who are less risk averse, those who have experienced hunger or violence are more likely to encourage migration. Those in households where someone receives support from at least one of the social protection programmes are more likely to encourage migration, perhaps seeing the support as a means to finance the cost of migration. Other individual level determinants are either not statistically significant, or less consistently so.

There are two other variables at the research area level that are associated with encouragement of migration. If inequality in the research area is high, individuals are less likely to encourage migration. Meanwhile, when more international actors are present, individuals are less likely to encourage migration. Both results point to general conditions in the research area being important determinants of encouragement of migration.

Determinants of migration preparations

Migration preparations capture concrete actions taken to migrate, including visa applications, obtaining a passport or getting information from migrant networks. We consider a respondent stating they have made migration preparations, preparations made by obtaining a passport and preparations made by applying to a visa, reflecting a spectrum of increasing concrete preparations.

Overall, we find fewer determinants of migration preparations than for the other migration processes. Root causes are somewhat associated with migration preparations, but not consistently. The more concrete migration preparations become, the more important root causes become.

Livelihoods hardship are relevant for all three types of migration preparations, while poverty rates do not seem to be relevant. Perceptions of governance and public services barely affect migration preparations, and sometimes have opposite effects. Only higher distrust in institutions results in a higher likelihood of making preparations to migrate.

Those feeling less safe and living in research areas where a higher share of people is worried about violence, or has experienced it, tend to be more likely to make migration preparations, and the effect is quite large particularly for general migration preparations.

Environmental hazards and stresses are determinants of the least concrete measure of migration preparations. The greater the exposure to droughts, soil degradation or other environmental issues at the research area, the higher the likelihood of migration preparations.

Migration experiences and networks are the most important determinants of migration preparations, which makes sense given their important role in preparing for migration. All five measures are statistically significant and show that higher levels of individual migration experience, awareness of failed migration and transnational networks and a stronger culture of migration result in higher levels of migration preparations. This is because people can draw on these networks and experiences – including failed ones – to seek out concrete information on how to migrate.

Most of the individual characteristics are associated with migration preparations, but predominantly for different measures of preparations. This shows that, largely speaking, individual characteristics are more important in explaining migration preparations than root causes are. Particularly consistent is the effect of gender, linguistic minority status, workforce status and experience of physical violence. Those who are female and those not in the workforce are less likely to make migration preparations, while those where a household member has experienced physical violence are more likely to make migration preparations.

The other determinants at the research area level are statistically significant for two of the measures of migration preparations but with no consistent patterns as to which measures and the specific effect. Higher presence of international actors results in a lower likelihood of general preparations but a higher level of concrete preparation by applying for a passport or a visa. On the other hand, more ethnic diversity as captured with linguistic fractionalisation result in lower general migration preparations. While higher levels of inequality do not influence migration preparations.

How the different groups of independent variables matter

Root causes are key determinants of migration processes and the effects of each specific root cause tends to be quite consistent across the different migration processes (aspirations, preparations and encouragement). However, the effects of root causes on migration preparations are weaker and more disparate. On the other hand, root causes are particularly important determinants of both having and not having individual migration aspirations.

The effects of migration experiences and networks are generally consistent across all outcomes. They are an important determinant of all migration processes, particular having individual migration aspirations, or not having them, encouragement of migration and *general* preparations of migration. Our findings thus confirm a large body of evidence pointing to the importance of these determinants.

The effects of other individual level and research area variables are much more disparate, with no clear patterns. Individual level determinants are particularly important for understanding migration preparations but there are also high numbers of significant individual level determinants for individual migration aspirations, no migration aspirations and encouragement of migration.

On the whole we have a higher proportion of research area level determinants that are statistically significant, and often they have a large

effect, such as the *Culture of migration* or *Corruption experience*. Nevertheless, the actual contribution of the research area level indicators to explaining migration processes is rather small. However, there are only 25 research areas, compared to more than 13,000 individual observations, which carry a huge amount of variability. We cannot say that either research area level nor individual level determinants are more important in explaining migration processes, but instead they are clearly both important.

Overall conclusions from the analysis

1. **Migration aspirations, preparations and encouragement can be explained**. The results of our multi-variate regressions based on the experiences and perceptions of more than 13,000 respondents across 25 research area in Africa and Asia shows the value of using a multi-level approach, and thus contributes significantly to the literature on the drivers of migration. In general, we see that around half of our proposed measures are (statistically) significant predictors of migration aspirations, preparations, or encouragement. This means we are able to provide a good picture of which factors explain migration processes.

2. **Many things matter, and all at the same time.** Our results show the relevance and contribution of conducting more complex statistical analysis that allows to paint a more nuanced and accurate picture of how migration processes are constructed. By including information on experiences and perceptions both at the individual (respondent) level and at the research area level we are able – to our knowledge for the very first time – to include two complementary levels of information that contribute to the explanation of migration processes. Both levels coexist, are relevant and interact to contribute to the formation of migration processes.

3. **Livelihood hardships and quality of governance and public services are important predictors of migration aspirations**. Across research areas, model specifications and variations in our measures of migration aspirations, we observe that greater livelihood hardships and poorer perceptions of public services and levels of corruption in the research area boost migration aspirations.

4. **Security, conflict and environmental hazards matter relatively less in comparison to livelihoods and public services hardships**. While the exposure to conflict or environmental hazards acts as a trigger of migration aspirations in some research areas, the pooled effect is not statistically significant in all instances.

5. **Migration fosters migration at different levels**. Migration experiences and networks are key predictors of migration aspirations, preparations, and encouragement. In many cases, the six measures of migration experiences and networks are not only significant predictors but also have relatively large effects on any of the migration processes. All levels of migration experiences and migration networks (including individual experiences, ties, awareness of other migrations and a culture of migration in the research area) have a significant association with migration aspirations, preparations and encouragement.

6. **Personal traits have a consistent and important weight in the formation of migration aspirations**. Male, single, unemployed, more educated, less satisfied and less risk averse respondents are more likely to have migration aspirations. Other combinations can be found for other migration processes.

7. **Different combinations of factors are influential across different communities**. While our analysis suggests that general trends can be found, the results vary greatly across the 25 local areas. We find that, often, clear trends in the pooled analyses go in different directions at the research-area level. More importantly, the combinations of relevant factors vary across different local areas. This implies that one cannot predict or address migration with a set combination of factors, which ones are relevant depends on the local area.

Reflections on the term 'root causes'

The term 'root causes' has remained elusive in policy debates and academia, with no established understanding of what 'root causes' are and what they do, nor a formal definition to our knowledge. We put forward a definition of root causes as *widely experienced hardships to which migration is a possible response, that are perceived to be persistent, immediately threatening, or both*. We also proposed that 'root causes' only affect migration aspirations and how people act upon those aspirations, not migration outcomes. This definition has allowed us to put this concept to the test for the first time, both analytically and conceptually.

The notion of 'root causes' rests on the assumption that migration is an adverse problem that should be mitigated. Much migration does indeed lead to hardship, suffering, and even death. And if root causes, such as poverty and conflict are successfully addressed, high-risk migration might less often be seen as the best available option.

However, this means that 'root causes' should only be used with reference to *some forms of migration*, i.e. those forms that represent adverse outcomes. States and migrants have coinciding interests, for instance in preventing migrant deaths. But migration that represents an adverse outcome for states – be it adverse economically or in political terms – is not necessarily also adverse for migrants and their communities. This means that, in practice, the term 'root causes' is often used much broadly in policy circles.

When 'root causes of migration' is used without reservations and implicitly refers to migration in general, it underpins the view that migration, in general, is a problem to be solved.

Beyond the consequences for how migration is perceived, 'root causes' can potentially cloud the analytical understanding of migration processes. The concept suggests that migration is fundamentally problem-driven. While our analyses have shown that migration aspirations are indeed stimulated by certain hardships – such as exposure to corruption, or low levels of life satisfaction – we also find that they are also stimulated by higher household wealth and higher educational attainment, for instance, with different combinations of factors relevant in different local areas. More generally,

migration can be motivated by desires for learning, experience, and adventure, irrespective of current levels of welfare or security.

The analytical value of 'root causes of migration' is therefore truncated from two sides: they are not relevant for all forms of migration, and they are never the only causes.

Policy implications

As laid out in the introduction, 'addressing the root causes of migration' is a long-standing policy ambition that has seen a resurgence in recent years. Yet, what root causes are and how to measure them is often unclear.

This paper has proposed a definition and operationalisation of root causes that allows for a more specific analysis of these policy debates. As such, we have for the first time been able to test a common assumption, which is that root causes are the key determinants of migration processes. Our analysis drawing on 25 local areas shows that, indeed, root causes are a determinant of migration processes, in particular for migration aspirations, and especially livelihood and poverty hardships and dissatisfaction with governance and public services. However, not all root causes are equally important. Safety and violence and environmental issues matter much less than the other domains, in our specifications.

Our analysis has also shown the limits of tackling root causes. Individual level characteristics are important determinants of migration processes. Our analysis suggests that policies to tackle root causes, even if designed and implemented perfectly, are unlikely to make a major dent into migration aspirations or preparations. This also makes it much more challenging for policy-makers as individual level factors are much harder or not possible to address, for instance men are more likely to have migration aspirations.

Along the same line, our findings have also reinforced the importance of migration networks and experiences, in particular the key effect a strong culture of migration has. These self-perpetuating effects are again outside of the realm of control of policy-makers.

More specifically, the findings in this MIGNEX Background Paper question common policy assumptions. For instance, being aware other's failed migration – be it that they were deported or injured on the journey – is not a deterrent to either migration aspirations or preparations. On the contrary it is associated with stronger migration aspirations and preparations. This suggests that information campaigns on the risks of migration will not have the desired impact.

To give another example, our analysis does not provide evidence to back a common narrative in the media, that there will be an impending mass exodus of people caused by climate-change-related factors. Both environmental hazards and stresses as a root cause and the experience of environmental shocks at the household level are not major determinants of migration aspirations for the research areas we have studied, some of which were facing severe climatic challenges. Our analysis suggests that the effects of climate change depend on how it interacts with other drivers, such as livelihoods.

More generally, our findings suggest that there are no obvious or universal policies that can be used to reduce migration aspirations, if that is an objective. A common aim of programmes part of the EUTF is to create jobs and reduce unemployment, with the assumption that this reduces the need to migrate. Yet, our analysis shows that being unemployed does not automatically lead to stronger migration aspirations, it depends on the research area. This points to the need to relate policies to the specific local area they are targeting and to understand the specific migration dynamics at play.

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Appendix 1. Technical definition of the Typology of three-dimensional migration aspirations

In Stata, the Typology of three-dimensional migration aspirations is created on the basis of the variables `consideration_c3`, `preference_c3`, and `readiness_c3`, which have the nonmissing values 0 'No', 1 'Yes' and 9 'Don't know'. The generation of the new typology variable uses 'if' expressions that manage 'don't know' responses by setting Boolean criteria such as 'not yes' (!=1) and 'not no' (!=0) in addition to simple 'yes' (==1) and 'no' (==0). Correct encoding of each value is ensured by the sequence of replacements; the expressions on each line of code are not self-contained definitions of each type.

```
generate typologyma_c5 = .
label variable typologyma_c5 "Typology of three-dimensional migration
aspirations" ///
of migration aspirations'
replace typologyma_c5 = 1 if preference_c3==0 & ///
readiness_c3==0
replace typologyma_c5 = 3 if preference_c3!=1 & ///
readiness_c3!=0 & !missing(preference_c3, readiness_c3)
replace typologyma_c5 = 2 if preference_c3!=0 & ///
readiness_c3!=1 & !missing(preference_c3, readiness_c3)
replace typologyma_c5 = 4 if preference_c3==1 & readiness_c3==1
replace typologyma_c5 = 5 if preference_c3==1 & ///
readiness_c3==1 & consideration_c3==1
```

This approach ensures that there is no unnecessary loss of observations due to missing values on `consideration_c3` when that variable is not required. The alternative approach of first allocating each observation to one of the 27 possible combinations (using the `group()` function of `egen`) and then recoding from 27 to 5 values would have been vulnerable to such losses. The nonmissing criterion is needed only when the primary criteria is a negation, as in when the criterion that `preference_c3` must be 'not yes' includes observations where `preference_c3` is missing.

Appendix 2. Regression tables

This appendix includes the full regression tables for all models that use the pooled sample. We have divided the results of the pooled dataset regressions in two subsets, set A and B.

In set A, each table displays up to five models (LPM, Mixed, Logit, Melogit and GLLAMM) and in set B each table displays two models (LPM and Logit with research area fixed effects).

Below we present the same overview of the seven models that are run for each one of our nine dependent variables to facilitate the read of this Appendix.

Table 35. Overview of regression models

				Use		
Abbreviation	**Full name**	**Multiple levels**	**Survey correction[1]**	**Pooled sample**	**By research area**	**Stata command**
LPM	Linear probability model	●	●	●	○	regress
LPM-FE	Linear probability model with research area fixed effects	●	●	●		regress
Mixed	Multilevel mixed-effects linear regression	●		●		mixed
Logit	Logistic regression	●	●	●	○	logit
Logit-FE	Logistic regression with research area fixed effects	●	●	●		logit
Melogit	Multilevel mixed-effects logistic regression	●		○		melogit
GLLAMM	Generalized linear and latent mixed model	●		●		gllamm

● Executing with all variables (and research areas, where relevant)
○ Not executing with all variables in all research areas.
Note: (1) Command compatible with Stata's svy prefix for complex survey design

In the tables, the models describe as Logit Mg and Melogit Mg represent the marginal effects after logistic and mixed logistic regressions.
In the tables when an 'X' is visualised it means that this model was not possible to run on the respective dependent variable of interest.
Empty cells for omitted variables are included in each table to facilitate comparative reading of the tables.

Appendix table A1. Pooled dataset regressions results for 'Prefers to leave country (next 5 years)'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	0.0256***	0.0310***	0.0300**	0.0300**	0.152**
	(0.00890)	(0.00947)	(0.0117)	(0.0117)	(0.0700)
Poverty	-0.275***	-0.321***	-0.383***	-0.383***	-2.304***
	(0.0553)	(0.0921)	(0.0692)	(0.0692)	(0.234)
Discontent with public services	0.0195	0.00898	0.0454	0.0454	0.0892
	(0.0267)	(0.0564)	(0.0351)	(0.0351)	(0.167)
Distrust in institutions	-0.00714**	-0.00722	-0.00966**	-0.00966**	-0.0277
	(0.00359)	(0.00502)	(0.00470)	(0.00470)	(0.0413)
Disapproval of government	0.0298***	0.0412***	0.0351***	0.0351***	0.284***
	(0.00863)	(0.0116)	(0.0114)	(0.0114)	(0.0919)
Corruption experience (%)	0.0192**	0.0306***	0.0252**	0.0252**	0.108
	(0.00822)	(0.0111)	(0.0107)	(0.0107)	(0.0721)
Violence and crime	0.0330***	0.0218*	0.0410***	0.0410***	0.107
	(0.00858)	(0.0124)	(0.0113)	(0.0113)	(0.108)
Perception of insecurity	0.765***	0.718***	1.059***	1.059***	5.478***
	(0.106)	(0.253)	(0.136)	(0.136)	(0.478)
Environmental hazards and stresses	0.0275	0.0270	0.0373*	0.0373*	-0.00775
	(0.0176)	(0.0542)	(0.0221)	(0.0221)	(0.103)
Migration-related factors					
Has lived in high-income country	0.0935*	0.0878	0.115*	0.115*	0.708**
	(0.0533)	(0.0546)	(0.0662)	(0.0662)	(0.309)
Knows of failed migration	0.0118	0.0380**	0.0124	0.0124	0.195**
	(0.0137)	(0.0188)	(0.0172)	(0.0172)	(0.0988)
Is aware of migrants	0.0730***	0.0869***	0.0932***	0.0932***	0.327***
	(0.0148)	(0.0194)	(0.0187)	(0.0187)	(0.0762)
Has ties to high-income country	0.0494***	0.0431***	0.0584***	0.0584***	0.214**
	(0.0144)	(0.0164)	(0.0179)	(0.0179)	(0.105)
Has received remittances	0.0561***	0.0484***	0.0704***	0.0704***	0.333***
	(0.0151)	(0.0157)	(0.0189)	(0.0189)	(0.0687)
Culture of migration	0.0935***	0.102**	0.0903***	0.0903***	0.192**
	(0.0268)	(0.0462)	(0.0326)	(0.0326)	(0.0914)
Other individual characteristics					
Is female	-0.0739***	-0.0753***	-0.0928***	-0.0928***	-0.500***
	(0.0126)	(0.0197)	(0.0162)	(0.0162)	(0.193)
Age	0.00411	-0.000677	0.00599	0.00599	0.0112
	(0.00777)	(0.00988)	(0.0102)	(0.0102)	(0.0580)
Age (squared)	-0.000149	-7.15e-05	-0.000211	-0.000211	-0.000396
	(0.000133)	(0.000168)	(0.000175)	(0.000175)	(0.000944)
Is married/cohabiting	-0.0651***	-0.0645***	-0.0773***	-0.0773***	-0.243*
	(0.0149)	(0.0188)	(0.0183)	(0.0183)	(0.142)
Is a parent	-0.0293**	-0.0314*	-0.0309*	-0.0309*	-0.218
	(0.0142)	(0.0174)	(0.0184)	(0.0184)	(0.148)
Grew up in research area	-0.0121	-0.00338	-0.0172	-0.0172	0.0915
	(0.0114)	(0.0168)	(0.0147)	(0.0147)	(0.123)
Linguistic minority status	0.0319	0.0286	0.0420	0.0420	-0.0939
	(0.0272)	(0.0428)	(0.0332)	(0.0332)	(0.257)

Appendix table A1. *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	0.00626***	0.00537***	0.00879***	0.00879***	0.0239**
	(0.00127)	(0.00152)	(0.00173)	(0.00173)	(0.00953)
Household Wealth (squared)	-6.55e-05***	-5.80e-05***	-9.09e-05***	-9.09e-05***	-0.000284***
	(1.15e-05)	(1.37e-05)	(1.54e-05)	(1.54e-05)	(8.12e-05)
Is unemployed	0.0519***	0.0517	0.0637***	0.0637***	0.102
	(0.0156)	(0.0321)	(0.0193)	(0.0193)	(0.172)
Is not in the workforce	0.0306**	0.0402**	0.0341**	0.0341**	0.203*
	(0.0127)	(0.0202)	(0.0168)	(0.0168)	(0.122)
Years of completed education	0.0156***	0.00872*	0.0194***	0.0194***	0.0791***
	(0.00327)	(0.00463)	(0.00435)	(0.00435)	(0.0268)
Years of completed education (squared)	-0.000415**	-9.54e-05	-0.000519**	-0.000519**	-0.00258*
	(0.000187)	(0.000284)	(0.000245)	(0.000245)	(0.00137)
Perceived relative wealth	-0.00334	0.00264	-0.00546	-0.00546	0.0142
	(0.0101)	(0.0106)	(0.0138)	(0.0138)	(0.0775)
Has experienced hunger	0.0201	0.0105	0.0279	0.0279	-0.124
	(0.0133)	(0.0242)	(0.0176)	(0.0176)	(0.212)
Life satisfaction	-0.0457***	-0.0398***	-0.0618***	-0.0618***	-0.233***
	(0.00729)	(0.0102)	(0.00987)	(0.00987)	(0.0526)
Was negatively affected by Covid-19	-0.00350	0.0274*	-0.00545	-0.00545	0.191**
	(0.0117)	(0.0164)	(0.0155)	(0.0155)	(0.0972)
Has experienced violence	0.0429***	0.0351	0.0568***	0.0568***	0.172
	(0.0163)	(0.0226)	(0.0208)	(0.0208)	(0.144)
Affected by environmental problem	-0.00490	-0.000952	-0.00659	-0.00659	-0.00174
	(0.0124)	(0.0168)	(0.0156)	(0.0156)	(0.124)
Has received social protection support	0.00180	-0.00633	-0.000565	-0.000565	-0.109
	(0.0130)	(0.0179)	(0.0171)	(0.0171)	(0.132)
Acceptance of uncertainty	0.0121**	0.0155**	0.0131*	0.0131*	0.0632
	(0.00523)	(0.00742)	(0.00700)	(0.00700)	(0.0610)
Thinks most people can be trusted	-0.0261**	-0.00732	-0.0341**	-0.0341**	0.155
	(0.0110)	(0.0222)	(0.0143)	(0.0143)	(0.199)
Conservative gender norms	-0.0272***	-0.0132	-0.0401***	-0.0401***	-0.129
	(0.00702)	(0.0114)	(0.00936)	(0.00936)	(0.106)
Other research area characteristics					
Gini index	0.325***	0.359*	0.288**	0.288**	1.849***
	(0.0933)	(0.197)	(0.139)	(0.139)	(0.385)
Linguistic fractionalisation	0.0680	0.160*	0.0542	0.0542	0.384
	(0.0422)	(0.0948)	(0.0551)	(0.0551)	(0.243)
Presence of international actors	-0.0827***	-0.101**	-0.0908***	-0.0908***	-0.446***
	(0.0136)	(0.0407)	(0.0164)	(0.0164)	(0.0530)
Other					
Constant	0.258	0.328			1.580
	(0.189)	(0.293)			(1.256)
Observations	11,562	11,562	11,562	11,562	11,562
R-squared	0.230				

Appendix table A2. Pooled dataset regressions results for 'Has seriously considered international migration (past year)'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	0.0236***	0.0257***	0.0243**	0.0243**	0.132**
	(0.00835)	(0.00901)	(0.00954)	(0.00954)	(0.0577)
Poverty	-0.137***	-0.159*	-0.180***	-0.180***	0.175
	(0.0431)	(0.0891)	(0.0514)	(0.0514)	(0.257)
Discontent with public services	-0.0499**	-0.0451	-0.0188	-0.0188	-0.472***
	(0.0249)	(0.0512)	(0.0279)	(0.0279)	(0.145)
Distrust in institutions	-0.00315	-0.000401	-0.00437	-0.00437	-0.0111
	(0.00342)	(0.00467)	(0.00379)	(0.00379)	(0.0223)
Disapproval of government	0.0327***	0.0402***	0.0365***	0.0365***	0.253***
	(0.00806)	(0.00982)	(0.00891)	(0.00891)	(0.0847)
Corruption experience (%)	0.0248***	0.0278***	0.0264***	0.0264***	0.0996**
	(0.00738)	(0.00819)	(0.00801)	(0.00801)	(0.0438)
Violence and crime	0.00164	-0.00530	0.000712	0.000712	-0.0721
	(0.00792)	(0.00770)	(0.00909)	(0.00909)	(0.0555)
Perception of insecurity	0.361***	0.327	0.417***	0.417***	2.508***
	(0.0935)	(0.234)	(0.100)	(0.100)	(0.335)
Environmental hazards and stresses	0.0307*	0.0265	0.0470**	0.0470**	0.268***
	(0.0177)	(0.0386)	(0.0183)	(0.0183)	(0.101)
Migration-related factors					
Has lived in high-income country	0.135**	0.145**	0.123**	0.123**	0.864**
	(0.0555)	(0.0626)	(0.0509)	(0.0509)	(0.405)
Knows of failed migration	0.0575***	0.0642***	0.0502***	0.0502***	0.386***
	(0.0124)	(0.0161)	(0.0122)	(0.0122)	(0.131)
Is aware of migrants	0.0802***	0.0743***	0.105***	0.105***	0.417***
	(0.0135)	(0.0170)	(0.0158)	(0.0158)	(0.0799)
Has ties to high-income country	0.0687***	0.0760***	0.0600***	0.0600***	0.355***
	(0.0152)	(0.0169)	(0.0141)	(0.0141)	(0.0992)
Has received remittances	0.0820***	0.0828***	0.0725***	0.0725***	0.413***
	(0.0153)	(0.0119)	(0.0136)	(0.0136)	(0.0681)
Culture of migration	0.0603***	0.0598	0.0596**	0.0596**	0.686***
	(0.0227)	(0.0453)	(0.0235)	(0.0235)	(0.122)
Other individual characteristics					
Is female	-0.0837***	-0.0829***	-0.0902***	-0.0902***	-0.487***
	(0.0115)	(0.0149)	(0.0120)	(0.0120)	(0.136)
Age	0.00938	0.0102	0.00593	0.00593	0.0411
	(0.00721)	(0.00875)	(0.00796)	(0.00796)	(0.0396)
Age (squared)	-0.000195	-0.000200	-0.000152	-0.000152	-0.000870
	(0.000123)	(0.000154)	(0.000137)	(0.000137)	(0.000748)
Is married/cohabiting	-0.0345**	-0.0410***	-0.0343**	-0.0343**	-0.132
	(0.0140)	(0.0154)	(0.0148)	(0.0148)	(0.0897)
Is a parent	-0.0168	-0.0126	-0.0120	-0.0120	-0.0824
	(0.0132)	(0.0111)	(0.0147)	(0.0147)	(0.100)
Grew up in research area	-0.0255**	-0.0180	-0.0218*	-0.0218*	0.0102
	(0.0117)	(0.0140)	(0.0123)	(0.0123)	(0.0934)
Linguistic minority status	0.0682***	0.0638**	0.0783***	0.0783***	0.155
	(0.0256)	(0.0268)	(0.0255)	(0.0255)	(0.221)

Appendix table A2. *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	-0.00137	-0.00113	-0.00131	-0.00131	-0.0139
	(0.00117)	(0.00143)	(0.00131)	(0.00131)	(0.0117)
Household Wealth (squared)	1.77e-05	8.30e-06	1.58e-05	1.58e-05	0.000113
	(1.12e-05)	(1.31e-05)	(1.21e-05)	(1.21e-05)	(0.000100)
Is unemployed	0.0346**	0.0410***	0.0258*	0.0258*	0.181***
	(0.0155)	(0.0119)	(0.0153)	(0.0153)	(0.0635)
Is not in the workforce	-0.0450***	-0.0484***	-0.0660***	-0.0660***	-0.332***
	(0.0117)	(0.00976)	(0.0133)	(0.0133)	(0.0573)
Years of completed education	0.00694**	0.00716*	0.00984***	0.00984***	0.0830***
	(0.00285)	(0.00382)	(0.00347)	(0.00347)	(0.0216)
Years of completed education (squared)	-0.000204	-0.000189	-0.000299	-0.000299	-0.00358**
	(0.000172)	(0.000263)	(0.000195)	(0.000195)	(0.00148)
Perceived relative wealth	-0.00263	-2.95e-05	-0.00165	-0.00165	-0.0283
	(0.00902)	(0.00935)	(0.0105)	(0.0105)	(0.0657)
Has experienced hunger	0.00606	0.0192	0.00882	0.00882	0.0650
	(0.0130)	(0.0127)	(0.0144)	(0.0144)	(0.0864)
Life satisfaction	-0.0437***	-0.0383***	-0.0504***	-0.0504***	-0.214***
	(0.00700)	(0.00956)	(0.00819)	(0.00819)	(0.0479)
Was negatively affected by Covid-19	0.0151	0.0160	0.0177	0.0177	0.0587
	(0.0115)	(0.0102)	(0.0129)	(0.0129)	(0.0641)
Has experienced violence	0.0540***	0.0503***	0.0533***	0.0533***	0.293***
	(0.0162)	(0.0143)	(0.0154)	(0.0154)	(0.0507)
Affected by environmental problem	0.0118	0.0159	0.0114	0.0114	0.0837
	(0.0109)	(0.0129)	(0.0115)	(0.0115)	(0.0959)
Has received social protection support	0.00789	0.00359	0.00774	0.00774	-0.0644
	(0.0120)	(0.0128)	(0.0130)	(0.0130)	(0.0725)
Acceptance of uncertainty	0.0231***	0.0242***	0.0247***	0.0247***	0.131***
	(0.00488)	(0.00489)	(0.00543)	(0.00543)	(0.0391)
Thinks most people can be trusted	-0.00616	-0.0129	-0.0117	-0.0117	-0.130*
	(0.0105)	(0.00837)	(0.0115)	(0.0115)	(0.0733)
Conservative gender norms	-0.000293	0.00149	-0.00400	-0.00400	0.0464
	(0.00637)	(0.00846)	(0.00732)	(0.00732)	(0.0687)
Other research area characteristics					
Gini index	0.0518	0.00844	0.00528	0.00528	-1.774***
	(0.0876)	(0.160)	(0.105)	(0.105)	(0.421)
Linguistic fractionalisation	0.114***	0.129	0.108**	0.108**	1.030***
	(0.0413)	(0.0884)	(0.0421)	(0.0421)	(0.285)
Presence of international actors	-0.0452***	-0.0556**	-0.0406***	-0.0406***	-0.447***
	(0.0122)	(0.0244)	(0.0117)	(0.0117)	(0.0480)
Other					
Constant	0.103	0.129			-3.781***
	(0.155)	(0.275)			(0.899)
Observations	11,716	11,716	11,716	11,716	11,716
R-squared	0.159				

Appendix table A3. Pooled dataset regressions results for 'Would migrate to richer country if given papers'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	0.0308***	0.0324***	0.0354***	0.0354***	0.178***
	(0.00841)	(0.00726)	(0.00952)	(0.00952)	(0.0593)
Poverty	-0.324***	-0.351***	-0.324***	-0.324***	-2.160***
	(0.0541)	(0.105)	(0.0577)	(0.0577)	(0.152)
Discontent with public services	0.0447	0.0422	0.00542	0.00542	-0.131
	(0.0283)	(0.0555)	(0.0323)	(0.0323)	(0.141)
Distrust in institutions	-0.00822**	-0.00601	-0.00915**	-0.00915**	-0.0262
	(0.00369)	(0.00499)	(0.00429)	(0.00429)	(0.0425)
Disapproval of government	0.00812	0.0289***	0.00880	0.00880	0.185***
	(0.00908)	(0.00995)	(0.0104)	(0.0104)	(0.0597)
Corruption experience (%)	0.0248***	0.0289***	0.0283***	0.0283***	0.0732
	(0.00748)	(0.0107)	(0.00878)	(0.00878)	(0.0816)
Violence and crime	0.0270***	0.0253**	0.0292***	0.0292***	0.135
	(0.00854)	(0.0119)	(0.00970)	(0.00970)	(0.101)
Perception of insecurity	0.694***	0.646**	0.767***	0.767***	4.950***
	(0.101)	(0.256)	(0.118)	(0.118)	(0.521)
Environmental hazards and stresses	0.0863***	0.0840*	0.0839***	0.0839***	0.330***
	(0.0137)	(0.0459)	(0.0178)	(0.0178)	(0.114)
Migration-related factors					
Has lived in high-income country	0.00883	0.00255	0.00230	0.00230	0.138
	(0.0523)	(0.0435)	(0.0601)	(0.0601)	(0.298)
Knows of failed migration	0.0318***	0.0485***	0.0423***	0.0423***	0.334***
	(0.0122)	(0.0144)	(0.0152)	(0.0152)	(0.116)
Is aware of migrants	0.0786***	0.0837***	0.0815***	0.0815***	0.310***
	(0.0136)	(0.0154)	(0.0151)	(0.0151)	(0.0605)
Has ties to high-income country	0.0391***	0.0338**	0.0511***	0.0511***	0.166*
	(0.0127)	(0.0165)	(0.0164)	(0.0164)	(0.0944)
Has received remittances	0.0198	0.00947	0.0287	0.0287	0.0281
	(0.0132)	(0.0107)	(0.0179)	(0.0179)	(0.111)
Culture of migration	0.0779***	0.0794	0.0925***	0.0925***	0.468***
	(0.0239)	(0.0496)	(0.0272)	(0.0272)	(0.103)
Other individual characteristics					
Is female	-0.0580***	-0.0570***	-0.0712***	-0.0712***	-0.388***
	(0.0114)	(0.0163)	(0.0137)	(0.0137)	(0.0990)
Age	-0.00236	-0.00417	-0.00156	-0.00156	0.0141
	(0.00767)	(0.00945)	(0.00898)	(0.00898)	(0.0888)
Age (squared)	-4.40e-05	-8.86e-06	-6.08e-05	-6.08e-05	-0.000460
	(0.000134)	(0.000164)	(0.000156)	(0.000156)	(0.00143)
Is married/cohabiting	-0.0349**	-0.0370***	-0.0426**	-0.0426**	-0.174
	(0.0145)	(0.0135)	(0.0166)	(0.0166)	(0.114)
Is a parent	-0.0136	-0.0230	-0.0218	-0.0218	-0.134
	(0.0136)	(0.0157)	(0.0160)	(0.0160)	(0.125)
Grew up in research area	0.00248	0.00496	-0.00422	-0.00422	0.0396
	(0.0112)	(0.0148)	(0.0134)	(0.0134)	(0.109)
Linguistic minority status	0.0176	0.0255	0.0126	0.0126	-0.117
	(0.0250)	(0.0393)	(0.0295)	(0.0295)	(0.204)

Appendix table A3. *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	0.00535***	0.00364**	0.00647***	0.00647***	0.0177*
	(0.00130)	(0.00170)	(0.00147)	(0.00147)	(0.0106)
Household Wealth (squared)	-6.31e-05***	-4.57e-05***	-7.48e-05***	-7.48e-05***	-0.000246***
	(1.17e-05)	(1.66e-05)	(1.32e-05)	(1.32e-05)	(8.18e-05)
Is unemployed	0.0315**	0.0294	0.0418**	0.0418**	-0.0227
	(0.0149)	(0.0245)	(0.0180)	(0.0180)	(0.158)
Is not in the workforce	0.0181	0.0240	0.0324**	0.0324**	0.0381
	(0.0121)	(0.0183)	(0.0145)	(0.0145)	(0.130)
Years of completed education	0.00852**	0.00631	0.00816**	0.00816**	0.0672**
	(0.00345)	(0.00398)	(0.00374)	(0.00374)	(0.0265)
Years of completed education (squared)	-0.000122	1.43e-05	-8.16e-05	-8.16e-05	-0.00201
	(0.000185)	(0.000250)	(0.000209)	(0.000209)	(0.00167)
Perceived relative wealth	-0.0134	-0.00479	-0.0157	-0.0157	-0.0182
	(0.00959)	(0.0104)	(0.0110)	(0.0110)	(0.0634)
Has experienced hunger	0.0227*	0.0219	0.0273*	0.0273*	-0.0902
	(0.0132)	(0.0241)	(0.0160)	(0.0160)	(0.187)
Life satisfaction	-0.0456***	-0.0395***	-0.0525***	-0.0525***	-0.271***
	(0.00717)	(0.0115)	(0.00840)	(0.00840)	(0.0477)
Was negatively affected by Covid-19	0.0138	0.0348**	0.0151	0.0151	0.243***
	(0.0119)	(0.0174)	(0.0136)	(0.0136)	(0.0923)
Has experienced violence	0.0501***	0.0412*	0.0664***	0.0664***	0.282*
	(0.0142)	(0.0219)	(0.0194)	(0.0194)	(0.160)
Affected by environmental problem	-0.000816	0.00468	-0.000854	-0.000854	0.00173
	(0.0112)	(0.0154)	(0.0131)	(0.0131)	(0.0968)
Has received social protection support	0.0188	0.0160	0.0211	0.0211	0.0487
	(0.0125)	(0.0192)	(0.0148)	(0.0148)	(0.129)
Acceptance of uncertainty	0.0139***	0.0187**	0.0168***	0.0168***	0.0800*
	(0.00525)	(0.00775)	(0.00616)	(0.00616)	(0.0456)
Thinks most people can be trusted	-0.00195	0.00519	0.000408	0.000408	0.122
	(0.0104)	(0.0153)	(0.0121)	(0.0121)	(0.101)
Conservative gender norms	-0.0138**	0.000772	-0.0137*	-0.0137*	0.0267
	(0.00662)	(0.00790)	(0.00760)	(0.00760)	(0.0771)
Other research area characteristics					
Gini index	0.155	0.177	0.243*	0.243*	1.143***
	(0.104)	(0.273)	(0.125)	(0.125)	(0.390)
Linguistic fractionalisation	0.127***	0.193**	0.162***	0.162***	0.922***
	(0.0409)	(0.0965)	(0.0510)	(0.0510)	(0.318)
Presence of international actors	-0.0607***	-0.0675**	-0.0767***	-0.0767***	-0.490***
	(0.0121)	(0.0289)	(0.0149)	(0.0149)	(0.0687)
Other					
Constant	0.579***	0.541*			1.353
	(0.177)	(0.283)			(1.050)
Observations	11,617	11,617	11,617	11,617	11,617
R-squared	0.195				

Appendix table A4. Pooled dataset regressions results for 'Resolute migration aspirations'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	0.0271***	0.0292***	0.0250***	0.0250***	0.198***
	(0.00735)	(0.00974)	(0.00770)	(0.00770)	(0.0649)
Poverty	-0.130***	-0.155**	-0.179***	-0.179***	-1.205***
	(0.0397)	(0.0787)	(0.0449)	(0.0449)	(0.253)
Discontent with public services	-0.0610***	-0.0622*	-0.00650	-0.00650	-0.199
	(0.0230)	(0.0373)	(0.0241)	(0.0241)	(0.128)
Distrust in institutions	-0.00396	-0.00328	-0.00493	-0.00493	-0.0201
	(0.00308)	(0.00415)	(0.00307)	(0.00307)	(0.0259)
Disapproval of government	0.0269***	0.0311***	0.0270***	0.0270***	0.283***
	(0.00766)	(0.00912)	(0.00774)	(0.00774)	(0.0847)
Corruption experience (%)	0.0219***	0.0273***	0.0209***	0.0209***	0.183***
	(0.00689)	(0.00902)	(0.00665)	(0.00665)	(0.0549)
Violence and crime	0.0109	0.00291	0.0111	0.0111	-0.0484
	(0.00762)	(0.00692)	(0.00805)	(0.00805)	(0.0775)
Perception of insecurity	0.365***	0.328*	0.368***	0.368***	2.142***
	(0.0853)	(0.173)	(0.0815)	(0.0815)	(0.455)
Environmental hazards and stresses	0.0208	0.0166	0.0383**	0.0383**	0.0424
	(0.0172)	(0.0427)	(0.0157)	(0.0157)	(0.114)
Migration-related factors					
Has lived in high-income country	0.0879	0.0989*	0.0712*	0.0712*	0.780*
	(0.0577)	(0.0575)	(0.0423)	(0.0423)	(0.423)
Knows of failed migration	0.0379***	0.0465***	0.0264***	0.0264***	0.331***
	(0.0112)	(0.0135)	(0.00959)	(0.00959)	(0.0873)
Is aware of migrants	0.0669***	0.0660***	0.0872***	0.0872***	0.476***
	(0.0123)	(0.0167)	(0.0139)	(0.0139)	(0.103)
Has ties to high-income country	0.0638***	0.0672***	0.0482***	0.0482***	0.420***
	(0.0148)	(0.0159)	(0.0119)	(0.0119)	(0.0830)
Has received remittances	0.0647***	0.0651***	0.0470***	0.0470***	0.355***
	(0.0149)	(0.0127)	(0.0110)	(0.0110)	(0.0886)
Culture of migration	0.0727***	0.0771*	0.0633***	0.0633***	0.649***
	(0.0208)	(0.0402)	(0.0190)	(0.0190)	(0.113)
Other individual characteristics					
Is female	-0.0696***	-0.0683***	-0.0668***	-0.0668***	-0.525***
	(0.0112)	(0.0128)	(0.0103)	(0.0103)	(0.127)
Age	0.0107	0.00999	0.00582	0.00582	0.0542
	(0.00676)	(0.00884)	(0.00680)	(0.00680)	(0.0480)
Age (squared)	-0.000214*	-0.000200	-0.000145	-0.000145	-0.00118
	(0.000116)	(0.000151)	(0.000118)	(0.000118)	(0.000822)
Is married/cohabiting	-0.0325**	-0.0354**	-0.0277**	-0.0277**	-0.162
	(0.0129)	(0.0143)	(0.0123)	(0.0123)	(0.117)
Is a parent	-0.0286**	-0.0243**	-0.0205*	-0.0205*	-0.143
	(0.0113)	(0.0112)	(0.0114)	(0.0114)	(0.116)
Grew up in research area	-0.0145	-0.00815	-0.00774	-0.00774	0.0443
	(0.0112)	(0.0142)	(0.0105)	(0.0105)	(0.105)
Linguistic minority status	0.0630**	0.0525*	0.0656***	0.0656***	0.237
	(0.0256)	(0.0275)	(0.0222)	(0.0222)	(0.209)

Appendix table A4. *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	-0.000362	0.000137	-0.000162	-0.000162	-0.00600
	(0.00108)	(0.00133)	(0.00112)	(0.00112)	(0.0121)
Household Wealth (squared)	8.64e-06	-2.31e-06	4.20e-06	4.20e-06	2.66e-05
	(1.03e-05)	(1.20e-05)	(1.01e-05)	(1.01e-05)	(0.000105)
Is unemployed	0.0308**	0.0350**	0.0168	0.0168	0.0784
	(0.0149)	(0.0140)	(0.0129)	(0.0129)	(0.0702)
Is not in the workforce	-0.0187*	-0.0223**	-0.0363***	-0.0363***	-0.210***
	(0.0110)	(0.00968)	(0.0112)	(0.0112)	(0.0696)
Years of completed education	0.00595**	0.00432	0.00902***	0.00902***	0.0673***
	(0.00263)	(0.00375)	(0.00310)	(0.00310)	(0.0197)
Years of completed education (squared)	-0.000211	-0.000129	-0.000308*	-0.000308*	-0.00309**
	(0.000159)	(0.000248)	(0.000167)	(0.000167)	(0.00125)
Perceived relative wealth	0.000410	0.00303	0.00128	0.00128	0.00376
	(0.00852)	(0.00954)	(0.00916)	(0.00916)	(0.115)
Has experienced hunger	0.00606	0.0115	0.00813	0.00813	-0.0712
	(0.0124)	(0.0143)	(0.0125)	(0.0125)	(0.152)
Life satisfaction	-0.0464***	-0.0430***	-0.0492***	-0.0492***	-0.326***
	(0.00655)	(0.00905)	(0.00704)	(0.00704)	(0.0450)
Was negatively affected by Covid-19	0.0150	0.0241***	0.0166	0.0166	0.235***
	(0.0107)	(0.00706)	(0.0109)	(0.0109)	(0.0653)
Has experienced violence	0.0361**	0.0317**	0.0319**	0.0319**	0.256***
	(0.0149)	(0.0141)	(0.0124)	(0.0124)	(0.0672)
Affected by environmental problem	6.84e-07	0.00460	-0.00134	-0.00134	0.0152
	(0.0103)	(0.0141)	(0.00967)	(0.00967)	(0.126)
Has received social protection support	0.0127	0.00533	0.00975	0.00975	0.000862
	(0.0117)	(0.0125)	(0.0114)	(0.0114)	(0.0942)
Acceptance of uncertainty	0.0156***	0.0165***	0.0140***	0.0140***	0.0833***
	(0.00465)	(0.00544)	(0.00472)	(0.00472)	(0.0301)
Thinks most people can be trusted	-0.00525	-0.00557	-0.00907	-0.00907	-0.0617
	(0.00952)	(0.00907)	(0.00951)	(0.00951)	(0.0775)
Conservative gender norms	-0.00311	-0.000788	-0.00731	-0.00731	0.0359
	(0.00566)	(0.00729)	(0.00597)	(0.00597)	(0.0773)
Other research area characteristics					
Gini index	0.169**	0.154	0.102	0.102	1.119*
	(0.0794)	(0.121)	(0.0867)	(0.0867)	(0.617)
Linguistic fractionalisation	0.102**	0.132	0.0872**	0.0872**	1.314***
	(0.0405)	(0.0818)	(0.0351)	(0.0351)	(0.334)
Presence of international actors	-0.0540***	-0.0669***	-0.0405***	-0.0405***	-0.507***
	(0.0119)	(0.0200)	(0.0100)	(0.0100)	(0.0633)
Other					
Constant	-0.0190	0.0355			-2.824**
	(0.146)	(0.243)			(1.162)
Observations	11,727	11,727	11,727	11,727	11,727
R-squared	0.157				

Appendix table A5. Pooled dataset regressions results for 'No migration aspirations'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	-0.0275***	-0.0294***	-0.0313***	-0.0313***	-0.184***
	(0.00796)	(0.00765)	(0.00878)	(0.00878)	(0.0603)
Poverty	0.280***	0.311***	0.266***	0.266***	1.819***
	(0.0538)	(0.102)	(0.0549)	(0.0549)	(0.171)
Discontent with public services	-0.0440	-0.0430	-0.000588	-0.000588	0.166
	(0.0284)	(0.0532)	(0.0317)	(0.0317)	(0.161)
Distrust in institutions	0.00624*	0.00381	0.00652	0.00652	0.0136
	(0.00357)	(0.00473)	(0.00402)	(0.00402)	(0.0439)
Disapproval of government	-0.00819	-0.0287***	-0.00909	-0.00909	-0.168**
	(0.00875)	(0.0101)	(0.00972)	(0.00972)	(0.0686)
Corruption experience (%)	-0.0236***	-0.0278***	-0.0261***	-0.0261***	-0.0727
	(0.00746)	(0.0106)	(0.00853)	(0.00853)	(0.0850)
Violence and crime	-0.0265***	-0.0249**	-0.0280***	-0.0280***	-0.162
	(0.00844)	(0.0113)	(0.00927)	(0.00927)	(0.102)
Perception of insecurity	-0.657***	-0.606**	-0.716***	-0.716***	-4.217***
	(0.0982)	(0.257)	(0.112)	(0.112)	(0.579)
Environmental hazards and stresses	-0.0930***	-0.0915**	-0.0901***	-0.0901***	-0.238**
	(0.0137)	(0.0444)	(0.0175)	(0.0175)	(0.112)
Migration-related factors					
Has lived in high-income country	-0.0152	-0.00924	-0.00835	-0.00835	-0.212
	(0.0494)	(0.0449)	(0.0565)	(0.0565)	(0.305)
Knows of failed migration	-0.0289**	-0.0456***	-0.0398***	-0.0398***	-0.336***
	(0.0116)	(0.0151)	(0.0144)	(0.0144)	(0.116)
Is aware of migrants	-0.0814***	-0.0868***	-0.0803***	-0.0803***	-0.321***
	(0.0135)	(0.0170)	(0.0145)	(0.0145)	(0.0668)
Has ties to high-income country	-0.0346***	-0.0305*	-0.0464***	-0.0464***	-0.161
	(0.0123)	(0.0157)	(0.0160)	(0.0160)	(0.103)
Has received remittances	-0.0227*	-0.0152	-0.0330*	-0.0330*	-0.0642
	(0.0124)	(0.0114)	(0.0169)	(0.0169)	(0.113)
Culture of migration	-0.0736***	-0.0746	-0.0841***	-0.0841***	-0.577***
	(0.0236)	(0.0480)	(0.0259)	(0.0259)	(0.110)
Other individual characteristics					
Is female	0.0589***	0.0579***	0.0721***	0.0721***	0.397***
	(0.0111)	(0.0153)	(0.0130)	(0.0130)	(0.104)
Age	0.00422	0.00566	0.00349	0.00349	0.00420
	(0.00760)	(0.00917)	(0.00873)	(0.00873)	(0.0820)
Age (squared)	5.57e-06	-2.34e-05	1.64e-05	1.64e-05	0.000108
	(0.000133)	(0.000159)	(0.000151)	(0.000151)	(0.00133)
Is married/cohabiting	0.0453***	0.0482***	0.0544***	0.0544***	0.238**
	(0.0140)	(0.0143)	(0.0158)	(0.0158)	(0.116)
Is a parent	0.00648	0.0159	0.0143	0.0143	0.131
	(0.0133)	(0.0148)	(0.0152)	(0.0152)	(0.125)
Grew up in research area	0.00552	0.00125	0.0142	0.0142	-0.0208
	(0.0112)	(0.0160)	(0.0131)	(0.0131)	(0.123)
Linguistic minority status	-0.00188	-0.0108	0.00673	0.00673	0.228
	(0.0237)	(0.0372)	(0.0270)	(0.0270)	(0.203)

Appendix table A5. *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	-0.00567***	-0.00401**	-0.00664***	-0.00664***	-0.0198**
	(0.00128)	(0.00178)	(0.00140)	(0.00140)	(0.0100)
Household Wealth (squared)	6.65e-05***	5.05e-05***	7.63e-05***	7.63e-05***	0.000278***
	(1.15e-05)	(1.67e-05)	(1.25e-05)	(1.25e-05)	(7.60e-05)
Is unemployed	-0.0296**	-0.0298	-0.0400**	-0.0400**	0.0226
	(0.0147)	(0.0234)	(0.0175)	(0.0175)	(0.160)
Is not in the workforce	-0.0207*	-0.0288*	-0.0373***	-0.0373***	-0.0678
	(0.0114)	(0.0173)	(0.0132)	(0.0132)	(0.131)
Years of completed education	-0.00971***	-0.00695*	-0.00902***	-0.00902***	-0.0643**
	(0.00331)	(0.00383)	(0.00342)	(0.00342)	(0.0261)
Years of completed education (squared)	0.000154	-9.32e-06	0.000100	0.000100	0.00150
	(0.000177)	(0.000235)	(0.000193)	(0.000193)	(0.00158)
Perceived relative wealth	0.00675	-0.00226	0.00810	0.00810	-0.0186
	(0.00975)	(0.0104)	(0.0108)	(0.0108)	(0.0629)
Has experienced hunger	-0.0249*	-0.0256	-0.0296*	-0.0296*	0.0737
	(0.0127)	(0.0219)	(0.0151)	(0.0151)	(0.174)
Life satisfaction	0.0422***	0.0353***	0.0469***	0.0469***	0.265***
	(0.00696)	(0.0117)	(0.00788)	(0.00788)	(0.0492)
Was negatively affected by Covid-19	-0.0203*	-0.0408**	-0.0220*	-0.0220*	-0.276***
	(0.0117)	(0.0173)	(0.0131)	(0.0131)	(0.0967)
Has experienced violence	-0.0451***	-0.0354*	-0.0600***	-0.0600***	-0.237
	(0.0137)	(0.0198)	(0.0188)	(0.0188)	(0.154)
Affected by environmental problem	0.00536	9.51e-05	0.00618	0.00618	0.0143
	(0.0108)	(0.0153)	(0.0126)	(0.0126)	(0.100)
Has received social protection support	-0.0190	-0.0152	-0.0208	-0.0208	-0.0228
	(0.0121)	(0.0171)	(0.0139)	(0.0139)	(0.124)
Acceptance of uncertainty	-0.0121**	-0.0168**	-0.0146**	-0.0146**	-0.0811*
	(0.00531)	(0.00778)	(0.00606)	(0.00606)	(0.0461)
Thinks most people can be trusted	0.00654	0.000174	0.00471	0.00471	-0.115
	(0.0100)	(0.0148)	(0.0113)	(0.0113)	(0.0987)
Conservative gender norms	0.0164**	0.00129	0.0155**	0.0155**	-0.00987
	(0.00646)	(0.00790)	(0.00718)	(0.00718)	(0.0753)
Other research area characteristics					
Gini index	-0.0239	-0.0383	-0.0923	-0.0923	-0.665*
	(0.105)	(0.263)	(0.119)	(0.119)	(0.399)
Linguistic fractionalisation	-0.116***	-0.185*	-0.147***	-0.147***	-0.810**
	(0.0392)	(0.0958)	(0.0475)	(0.0475)	(0.316)
Presence of international actors	0.0593***	0.0676**	0.0748***	0.0748***	0.451***
	(0.0117)	(0.0279)	(0.0142)	(0.0142)	(0.0670)
Other					
Constant	0.422**	0.459			-1.084
	(0.176)	(0.288)			(0.909)
Observations	11,727	11,727	11,727	11,727	11,727
R-squared	0.194				

Appendix table A6. Pooled dataset regressions results for 'Has prepared but was unable to migrate (past 5 years)'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	0.0210***	0.0192***	0.0181***	0.0181***	0.155***
	(0.00688)	(0.00627)	(0.00672)	(0.00672)	(0.0500)
Poverty	0.0677*	0.0842	0.0263	0.0263	-0.275*
	(0.0349)	(0.0691)	(0.0392)	(0.0392)	(0.160)
Discontent with public services	0.107***	0.105**	0.0911***	0.0911***	1.022***
	(0.0206)	(0.0425)	(0.0200)	(0.0200)	(0.168)
Distrust in institutions	-0.00137	-0.00305	-0.00163	-0.00163	-0.0217
	(0.00303)	(0.00354)	(0.00285)	(0.00285)	(0.0351)
Disapproval of government	0.0148**	0.0108	0.0121*	0.0121*	0.0894
	(0.00716)	(0.00785)	(0.00665)	(0.00665)	(0.0713)
Corruption experience (%)	0.0252***	0.0238***	0.0243***	0.0243***	0.146**
	(0.00656)	(0.00907)	(0.00601)	(0.00601)	(0.0696)
Violence and crime	-0.000497	-0.000796	-0.00161	-0.00161	-0.0346
	(0.00635)	(0.00674)	(0.00606)	(0.00606)	(0.0469)
Perception of insecurity	-0.0170	0.00456	0.00788	0.00788	-0.939*
	(0.0776)	(0.139)	(0.0703)	(0.0703)	(0.502)
Environmental hazards and stresses	-0.0412***	-0.0375***	-0.0310***	-0.0310***	-0.142
	(0.0123)	(0.0137)	(0.0116)	(0.0116)	(0.0938)
Migration-related factors					
Has lived in high-income country	0.158***	0.150***	0.0961***	0.0961***	0.902***
	(0.0458)	(0.0507)	(0.0264)	(0.0264)	(0.261)
Knows of failed migration	0.0933***	0.0821***	0.0630***	0.0630***	0.492***
	(0.0117)	(0.0159)	(0.00859)	(0.00859)	(0.139)
Is aware of migrants	0.0555***	0.0492***	0.0829***	0.0829***	0.539***
	(0.0110)	(0.0165)	(0.0126)	(0.0126)	(0.154)
Has ties to high-income country	0.0600***	0.0683***	0.0422***	0.0422***	0.463***
	(0.0140)	(0.0152)	(0.0100)	(0.0100)	(0.0716)
Has received remittances	0.0754***	0.0733***	0.0507***	0.0507***	0.316***
	(0.0146)	(0.0167)	(0.00953)	(0.00953)	(0.110)
Culture of migration	0.0400**	0.0392	0.0395**	0.0395**	0.420***
	(0.0190)	(0.0315)	(0.0172)	(0.0172)	(0.127)
Other individual characteristics					
Is female	-0.0663***	-0.0631***	-0.0586***	-0.0586***	-0.492***
	(0.00921)	(0.0151)	(0.00824)	(0.00824)	(0.163)
Age	0.0169**	0.0182**	0.0147**	0.0147**	0.195***
	(0.00664)	(0.00722)	(0.00632)	(0.00632)	(0.0701)
Age (squared)	-0.000287**	-0.000305**	-0.000253**	-0.000253**	-0.00341***
	(0.000112)	(0.000121)	(0.000107)	(0.000107)	(0.00119)
Is married/cohabiting	0.0143	0.00836	0.0137	0.0137	0.207
	(0.0134)	(0.0177)	(0.0117)	(0.0117)	(0.146)
Is a parent	-0.0198*	-0.0187	-0.0156	-0.0156	-0.159
	(0.0104)	(0.0116)	(0.00958)	(0.00958)	(0.128)
Grew up in research area	-0.0113	-0.0100	-0.00488	-0.00488	0.0751
	(0.0104)	(0.0142)	(0.00937)	(0.00937)	(0.136)
Linguistic minority status	0.0501**	0.0541**	0.0549***	0.0549***	0.142
	(0.0232)	(0.0256)	(0.0192)	(0.0192)	(0.208)

Appendix table A6 *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	-0.00209**	-0.00166	-0.00169*	-0.00169*	-0.0162
	(0.00102)	(0.00123)	(0.000983)	(0.000983)	(0.0136)
Household Wealth (squared)	1.84e-05*	1.53e-05	1.34e-05	1.34e-05	0.000162
	(1.01e-05)	(1.07e-05)	(9.18e-06)	(9.18e-06)	(0.000126)
Is unemployed	0.0251*	0.0170	0.0145	0.0145	0.128
	(0.0141)	(0.0143)	(0.0107)	(0.0107)	(0.105)
Is not in the workforce	-0.0481***	-0.0536***	-0.0519***	-0.0519***	-0.449***
	(0.0100)	(0.0124)	(0.0103)	(0.0103)	(0.138)
Years of completed education	0.00653***	0.00978***	0.00578**	0.00578**	0.110***
	(0.00250)	(0.00301)	(0.00253)	(0.00253)	(0.0188)
Years of completed education (squared)	-0.000277*	-0.000450***	-0.000230	-0.000230	-0.00529***
	(0.000151)	(0.000174)	(0.000140)	(0.000140)	(0.00135)
Perceived relative wealth	0.0123	0.00842	0.0124	0.0124	0.0217
	(0.00815)	(0.00899)	(0.00783)	(0.00783)	(0.119)
Has experienced hunger	0.0304***	0.0392***	0.0335***	0.0335***	0.295*
	(0.0105)	(0.0143)	(0.00956)	(0.00956)	(0.153)
Life satisfaction	-0.0123**	-0.0143*	-0.0103*	-0.0103*	-0.131***
	(0.00593)	(0.00762)	(0.00550)	(0.00550)	(0.0502)
Was negatively affected by Covid-19	0.00664	0.00850	0.00721	0.00721	0.115
	(0.00985)	(0.00931)	(0.00939)	(0.00939)	(0.106)
Has experienced violence	0.0517***	0.0533***	0.0362***	0.0362***	0.392***
	(0.0151)	(0.0183)	(0.0106)	(0.0106)	(0.125)
Affected by environmental problem	0.00942	0.00806	0.00700	0.00700	0.0713
	(0.00977)	(0.0121)	(0.00856)	(0.00856)	(0.121)
Has received social protection support	0.0181*	0.0157	0.0136	0.0136	-0.00793
	(0.0101)	(0.0132)	(0.00931)	(0.00931)	(0.0795)
Acceptance of uncertainty	0.0129***	0.00889**	0.0107***	0.0107***	0.0484*
	(0.00424)	(0.00425)	(0.00378)	(0.00378)	(0.0277)
Thinks most people can be trusted	-0.00938	-0.0101	-0.0117	-0.0117	-0.176*
	(0.00950)	(0.00864)	(0.00858)	(0.00858)	(0.104)
Conservative gender norms	0.0168***	0.0114**	0.0127**	0.0127**	0.119*
	(0.00532)	(0.00553)	(0.00504)	(0.00504)	(0.0669)
Other research area characteristics					
Gini index	-0.103	-0.109	-0.0900	-0.0900	-0.365
	(0.0753)	(0.0936)	(0.0837)	(0.0837)	(0.408)
Linguistic fractionalisation	-0.139***	-0.164**	-0.106***	-0.106***	-0.316
	(0.0365)	(0.0643)	(0.0332)	(0.0332)	(0.255)
Presence of international actors	-0.0114	-0.00626	-0.00937	-0.00937	-0.205***
	(0.0107)	(0.0186)	(0.00856)	(0.00856)	(0.0368)
Other					
Constant	-0.545***	-0.567**			-7.100***
	(0.133)	(0.221)			(0.930)
Observations	11,719	11,719	11,719	11,719	11,719
R-squared	0.136				

Appendix table A7. Pooled dataset regressions results for 'Has valid passport and would migrate to richer country if given papers'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	0.0138**	0.0112*	0.00863**	0.00863**	0.243***
	(0.00574)	(0.00605)	(0.00370)	(0.00370)	(0.0841)
Poverty	-0.0186	-0.00476	-0.0588**	-0.0588**	-3.008***
	(0.0342)	(0.101)	(0.0251)	(0.0251)	(0.266)
Discontent with public services	0.00873	-0.000252	0.0259**	0.0259**	0.918***
	(0.0141)	(0.0337)	(0.0105)	(0.0105)	(0.132)
Distrust in institutions	-0.00343	-0.00462	-0.00167	-0.00167	-0.0483
	(0.00238)	(0.00321)	(0.00155)	(0.00155)	(0.0384)
Disapproval of government	-0.00642	-4.53e-05	-0.00302	-0.00302	0.106
	(0.00595)	(0.00621)	(0.00412)	(0.00412)	(0.0826)
Corruption experience (%)	0.00327	0.00546	0.00196	0.00196	-0.125
	(0.00578)	(0.00813)	(0.00338)	(0.00338)	(0.123)
Violence and crime	-0.00293	-0.000856	-0.00353	-0.00353	-0.0793
	(0.00483)	(0.00510)	(0.00326)	(0.00326)	(0.0755)
Perception of insecurity	-0.0602	-0.0451	-0.0143	-0.0143	0.143
	(0.0705)	(0.199)	(0.0436)	(0.0436)	(0.598)
Environmental hazards and stresses	0.0154	0.0203	0.00573	0.00573	0.255**
	(0.00962)	(0.0174)	(0.00656)	(0.00656)	(0.104)
Migration-related factors					
Has lived in high-income country	0.205***	0.194***	0.0509***	0.0509***	0.978***
	(0.0504)	(0.0420)	(0.0142)	(0.0142)	(0.254)
Knows of failed migration	6.05e-05	-0.00745	-0.000247	-0.000247	0.00683
	(0.00821)	(0.00850)	(0.00413)	(0.00413)	(0.125)
Is aware of migrants	0.00408	0.00449	0.0322***	0.0322***	0.541***
	(0.00702)	(0.00955)	(0.00761)	(0.00761)	(0.136)
Has ties to high-income country	0.0542***	0.0544***	0.0234***	0.0234***	0.488***
	(0.0118)	(0.0119)	(0.00614)	(0.00614)	(0.146)
Has received remittances	0.102***	0.0933***	0.0374***	0.0374***	0.747***
	(0.0146)	(0.0216)	(0.00550)	(0.00550)	(0.132)
Culture of migration	0.0339*	0.0352	0.0143	0.0143	-0.243*
	(0.0180)	(0.0512)	(0.00943)	(0.00943)	(0.128)
Other individual characteristics					
Is female	-0.0210**	-0.0212**	-0.0154***	-0.0154***	-0.276*
	(0.00818)	(0.00880)	(0.00485)	(0.00485)	(0.143)
Age	0.0169***	0.0148**	0.00863**	0.00863**	0.182***
	(0.00537)	(0.00662)	(0.00353)	(0.00353)	(0.0520)
Age (squared)	-0.000243***	-0.000214**	-0.000116*	-0.000116*	-0.00225**
	(9.25e-05)	(0.000109)	(6.04e-05)	(6.04e-05)	(0.000893)
Is married/cohabiting	-0.0253**	-0.0236*	-0.0143**	-0.0143**	-0.392**
	(0.0104)	(0.0127)	(0.00602)	(0.00602)	(0.192)
Is a parent	-0.0229**	-0.0255*	-0.0146**	-0.0146**	-0.519*
	(0.00913)	(0.0150)	(0.00593)	(0.00593)	(0.292)
Grew up in research area	-0.0148*	-0.0176*	-0.0101**	-0.0101**	-0.152**
	(0.00829)	(0.0104)	(0.00515)	(0.00515)	(0.0638)
Linguistic minority status	0.0258	0.0442	0.0160	0.0160	0.00141
	(0.0197)	(0.0314)	(0.0122)	(0.0122)	(0.294)

Appendix table A7. *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	-0.000704	-0.000675	0.00119*	0.00119*	0.0207
	(0.000806)	(0.00115)	(0.000667)	(0.000667)	(0.0139)
Household Wealth (squared)	1.81e-05**	2.12e-05*	-4.22e-06	-4.22e-06	-6.87e-05
	(8.75e-06)	(1.25e-05)	(5.58e-06)	(5.58e-06)	(8.81e-05)
Is unemployed	0.00192	-0.0125	0.00114	0.00114	-0.506
	(0.0113)	(0.0163)	(0.00604)	(0.00604)	(0.358)
Is not in the workforce	-0.0115	-0.0164	-0.00541	-0.00541	-0.317***
	(0.00785)	(0.0104)	(0.00507)	(0.00507)	(0.114)
Years of completed education	-0.00462**	-0.00320	-0.00149	-0.00149	0.0385
	(0.00191)	(0.00209)	(0.00154)	(0.00154)	(0.0413)
Years of completed education (squared)	0.000441***	0.000377***	0.000181**	0.000181**	0.00108
	(0.000128)	(0.000113)	(7.92e-05)	(7.92e-05)	(0.00187)
Perceived relative wealth	-0.00591	-0.00430	-0.00434	-0.00434	-0.0660
	(0.00594)	(0.00559)	(0.00392)	(0.00392)	(0.0936)
Has experienced hunger	-0.0118*	-0.0136	-0.0135**	-0.0135**	-0.460**
	(0.00701)	(0.0120)	(0.00634)	(0.00634)	(0.209)
Life satisfaction	-0.00322	-0.00584	-0.00121	-0.00121	-0.0443
	(0.00446)	(0.00395)	(0.00283)	(0.00283)	(0.0830)
Was negatively affected by Covid-19	0.0175**	0.0243	0.0133**	0.0133**	0.482*
	(0.00830)	(0.0168)	(0.00519)	(0.00519)	(0.252)
Has experienced violence	0.0344***	0.0383***	0.0198***	0.0198***	0.631***
	(0.0131)	(0.0127)	(0.00722)	(0.00722)	(0.113)
Affected by environmental problem	-0.00427	-0.00754	-0.00360	-0.00360	-0.110
	(0.00872)	(0.00790)	(0.00506)	(0.00506)	(0.0805)
Has received social protection support	0.0124	0.0116	0.00607	0.00607	0.0371
	(0.00899)	(0.0109)	(0.00536)	(0.00536)	(0.116)
Acceptance of uncertainty	0.00284	0.00250	0.00157	0.00157	-0.0294
	(0.00347)	(0.00440)	(0.00205)	(0.00205)	(0.0477)
Thinks most people can be trusted	0.00574	0.0111	0.00496	0.00496	0.245*
	(0.00722)	(0.0104)	(0.00448)	(0.00448)	(0.128)
Conservative gender norms	0.00665	0.00378	0.00480	0.00480	-0.0300
	(0.00456)	(0.00498)	(0.00320)	(0.00320)	(0.0741)
Other research area characteristics					
Gini index	0.0169	0.0342	0.0479	0.0479	4.757***
	(0.0477)	(0.119)	(0.0391)	(0.0391)	(0.714)
Linguistic fractionalisation	-0.0747**	-0.0871	-0.0326	-0.0326	-0.623**
	(0.0325)	(0.0642)	(0.0204)	(0.0204)	(0.308)
Presence of international actors	0.0190**	0.0247	0.0116**	0.0116**	0.292***
	(0.00891)	(0.0205)	(0.00493)	(0.00493)	(0.0425)
Other					
Constant	-0.321***	-0.344			-4.815***
	(0.114)	(0.215)			(0.886)
Observations	11,601	11,601	11,601	11,601	11,601
R-squared	0.129				

Appendix table A8. Pooled dataset regressions results for 'Has applied for visa and would migrate for richer country if given papers'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	0.00756**	0.00814**	0.00377**	0.00377**	0.293
	(0.00338)	(0.00393)	(0.00167)	(0.00167)	(0.222)
Poverty	0.00643	0.00743	-0.00454	-0.00454	-1.161***
	(0.0211)	(0.0255)	(0.0127)	(0.0127)	(0.427)
Discontent with public services	0.0227**	0.0225	0.0159**	0.0159**	1.523***
	(0.0109)	(0.0139)	(0.00634)	(0.00634)	(0.142)
Distrust in institutions	-0.00290*	-0.00342**	-0.00132*	-0.00132*	-0.110*
	(0.00162)	(0.00149)	(0.000744)	(0.000744)	(0.0570)
Disapproval of government	-0.00573	-0.00563	-0.00250	-0.00250	0.0232
	(0.00418)	(0.00515)	(0.00223)	(0.00223)	(0.180)
Corruption experience (%)	0.00837*	0.00856*	0.00368**	0.00368**	0.153
	(0.00429)	(0.00498)	(0.00187)	(0.00187)	(0.174)
Violence and crime	0.00208	0.00230	0.000252	0.000252	0.0172
	(0.00336)	(0.00285)	(0.00177)	(0.00177)	(0.124)
Perception of insecurity	-0.0807*	-0.0740	-0.0385*	-0.0385*	-2.748***
	(0.0472)	(0.0502)	(0.0228)	(0.0228)	(0.644)
Environmental hazards and stresses	-0.0101	-0.0103*	-0.00379	-0.00379	-0.182
	(0.00656)	(0.00613)	(0.00380)	(0.00380)	(0.143)
Migration-related factors					
Has lived in high-income country	0.125***	0.115**	0.0171***	0.0171***	1.104**
	(0.0477)	(0.0576)	(0.00650)	(0.00650)	(0.464)
Knows of failed migration	0.0148***	0.0139***	0.00485**	0.00485**	0.255
	(0.00565)	(0.00524)	(0.00209)	(0.00209)	(0.191)
Is aware of migrants	0.00111	0.000785	0.0121**	0.0121**	0.534
	(0.00484)	(0.00573)	(0.00470)	(0.00470)	(0.477)
Has ties to high-income country	0.0187**	0.0199**	0.00676**	0.00676**	0.361**
	(0.00814)	(0.00828)	(0.00329)	(0.00329)	(0.170)
Has received remittances	0.0428***	0.0411***	0.0121***	0.0121***	0.842***
	(0.00918)	(0.00993)	(0.00261)	(0.00261)	(0.161)
Culture of migration	0.00713	0.00634	0.00467	0.00467	0.547**
	(0.0108)	(0.0132)	(0.00453)	(0.00453)	(0.234)
Other individual characteristics					
Is female	-0.0116*	-0.0114	-0.00645**	-0.00645**	-0.516
	(0.00596)	(0.00870)	(0.00293)	(0.00293)	(0.335)
Age	0.000549	0.000302	-0.000656	-0.000656	0.0570
	(0.00320)	(0.00259)	(0.00159)	(0.00159)	(0.0815)
Age (squared)	9.43e-07	4.50e-06	1.69e-05	1.69e-05	-0.000710
	(5.43e-05)	(4.40e-05)	(2.67e-05)	(2.67e-05)	(0.00136)
Is married/cohabiting	-0.00392	-0.00272	-0.00164	-0.00164	0.168
	(0.00780)	(0.00907)	(0.00341)	(0.00341)	(0.177)
Is a parent	-0.00731	-0.00843	-0.00415	-0.00415	-0.422***
	(0.00628)	(0.00641)	(0.00304)	(0.00304)	(0.144)
Grew up in research area	-0.0101	-0.0109	-0.00368	-0.00368	-0.0896
	(0.00690)	(0.00911)	(0.00278)	(0.00278)	(0.294)
Linguistic minority status	0.0216	0.0241*	0.0116**	0.0116**	0.623**
	(0.0144)	(0.0141)	(0.00512)	(0.00512)	(0.256)

Appendix table A8. *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	-0.00164***	-0.00176***	-0.000303	-0.000303	-0.0314*
	(0.000572)	(0.000670)	(0.000295)	(0.000295)	(0.0174)
Household Wealth (squared)	2.24e-05***	2.40e-05***	5.56e-06**	5.56e-06**	0.000519***
	(6.42e-06)	(7.20e-06)	(2.39e-06)	(2.39e-06)	(0.000160)
Is unemployed	-0.00810	-0.00935*	-0.00360	-0.00360	-0.208
	(0.00775)	(0.00564)	(0.00306)	(0.00306)	(0.140)
Is not in the workforce	-0.0225***	-0.0231***	-0.0128***	-0.0128***	-0.994***
	(0.00629)	(0.00605)	(0.00323)	(0.00323)	(0.185)
Years of completed education	0.00117	0.00165	0.00134*	0.00134*	0.210**
	(0.00119)	(0.00194)	(0.000742)	(0.000742)	(0.0926)
Years of completed education (squared)	-6.24e-05	-9.25e-05	-6.02e-05	-6.02e-05	-0.0112**
	(8.11e-05)	(0.000120)	(3.99e-05)	(3.99e-05)	(0.00460)
Perceived relative wealth	0.00255	0.00253	0.00110	0.00110	0.0629
	(0.00407)	(0.00425)	(0.00222)	(0.00222)	(0.166)
Has experienced hunger	0.00227	0.00303	0.00216	0.00216	0.201
	(0.00489)	(0.00608)	(0.00289)	(0.00289)	(0.212)
Life satisfaction	-0.00275	-0.00359	-0.00121	-0.00121	-0.191*
	(0.00326)	(0.00317)	(0.00157)	(0.00157)	(0.104)
Was negatively affected by Covid-19	0.000128	0.00159	0.00136	0.00136	0.173
	(0.00657)	(0.00535)	(0.00313)	(0.00313)	(0.125)
Has experienced violence	0.0200**	0.0207**	0.00692**	0.00692**	0.608***
	(0.00910)	(0.00847)	(0.00304)	(0.00304)	(0.182)
Affected by environmental problem	-0.00119	-0.00236	-0.000916	-0.000916	-0.0414
	(0.00545)	(0.00692)	(0.00227)	(0.00227)	(0.167)
Has received social protection support	0.00365	0.00596	0.00172	0.00172	0.00387
	(0.00674)	(0.00868)	(0.00302)	(0.00302)	(0.237)
Acceptance of uncertainty	0.00447**	0.00434**	0.00190**	0.00190**	0.230***
	(0.00216)	(0.00197)	(0.000900)	(0.000900)	(0.0543)
Thinks most people can be trusted	-0.00607	-0.00704	-0.00316	-0.00316	-0.266
	(0.00496)	(0.00477)	(0.00247)	(0.00247)	(0.223)
Conservative gender norms	0.00148	0.000684	0.000842	0.000842	-0.0100
	(0.00272)	(0.00288)	(0.00162)	(0.00162)	(0.157)
Other research area characteristics					
Gini index	0.0416	0.0414	0.0245	0.0245	4.570***
	(0.0339)	(0.0370)	(0.0219)	(0.0219)	(1.057)
Linguistic fractionalisation	-0.0167	-0.0234	-0.00502	-0.00502	0.381
	(0.0230)	(0.0315)	(0.00926)	(0.00926)	(0.429)
Presence of international actors	0.00922	0.0108*	0.00328	0.00328	0.262***
	(0.00622)	(0.00557)	(0.00216)	(0.00216)	(0.0671)
Other					
Constant	-0.0642	-0.0591			-9.738***
	(0.0798)	(0.0936)			(1.439)
Observations	11,605	11,605	11,605	11,605	11,605
R-squared	0.058				

Appendix table A9. Pooled dataset regressions results for 'Has encouraged someone else in research area to migrate'

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Root causes					
Livelihoods hardships	0.0139*	0.0122	0.0111	0.0111	0.117*
	(0.00733)	(0.00746)	(0.00785)	(0.00785)	(0.0609)
Poverty	0.159***	0.150**	0.0789	0.0789	0.0300
	(0.0404)	(0.0680)	(0.0513)	(0.0513)	(0.211)
Discontent with public services	-0.161***	-0.170***	-0.0800***	-0.0800***	-0.568***
	(0.0226)	(0.0399)	(0.0267)	(0.0267)	(0.141)
Distrust in institutions	0.00176	0.000527	-0.000707	-0.000707	-0.0311
	(0.00328)	(0.00301)	(0.00348)	(0.00348)	(0.0271)
Disapproval of government	0.0170**	0.0225***	0.0164*	0.0164*	0.120*
	(0.00788)	(0.00702)	(0.00850)	(0.00850)	(0.0620)
Corruption experience (%)	0.0105	0.0142*	0.0139**	0.0139**	0.129**
	(0.00675)	(0.00784)	(0.00695)	(0.00695)	(0.0543)
Violence and crime	0.0204**	0.0152*	0.0218**	0.0218**	0.164*
	(0.00796)	(0.00885)	(0.00867)	(0.00867)	(0.0897)
Perception of insecurity	0.413***	0.392**	0.424***	0.424***	3.952***
	(0.0857)	(0.176)	(0.0846)	(0.0846)	(0.585)
Environmental hazards and stresses	0.000802	-0.00104	0.00869	0.00869	0.0273
	(0.0134)	(0.0259)	(0.0141)	(0.0141)	(0.139)
Migration-related factors					
Has lived in high-income country	0.212***	0.223***	0.160***	0.160***	1.350***
	(0.0545)	(0.0602)	(0.0420)	(0.0420)	(0.323)
Knows of failed migration	0.0602***	0.0621***	0.0449***	0.0449***	0.387***
	(0.0120)	(0.0106)	(0.0102)	(0.0102)	(0.0997)
Is aware of migrants	0.0670***	0.0710***	0.108***	0.108***	0.736***
	(0.0121)	(0.0162)	(0.0146)	(0.0146)	(0.0952)
Has ties to high-income country	0.0744***	0.0707***	0.0527***	0.0527***	0.263***
	(0.0142)	(0.0169)	(0.0115)	(0.0115)	(0.0627)
Has received remittances	0.0570***	0.0520***	0.0392***	0.0392***	0.204**
	(0.0152)	(0.0151)	(0.0113)	(0.0113)	(0.0834)
Culture of migration	0.194***	0.201***	0.154***	0.154***	1.319***
	(0.0214)	(0.0309)	(0.0208)	(0.0208)	(0.0943)
Other individual characteristics					
Is female	-0.0693***	-0.0734***	-0.0706***	-0.0706***	-0.519***
	(0.00973)	(0.0153)	(0.00932)	(0.00932)	(0.167)
Age	0.0183***	0.0134*	0.0140**	0.0140**	0.109*
	(0.00667)	(0.00712)	(0.00707)	(0.00707)	(0.0594)
Age (squared)	-0.000278**	-0.000207*	-0.000213*	-0.000213*	-0.00191*
	(0.000115)	(0.000115)	(0.000123)	(0.000123)	(0.000985)
Is married/cohabiting	-0.0351***	-0.0307**	-0.0351***	-0.0351***	-0.100
	(0.0123)	(0.0151)	(0.0121)	(0.0121)	(0.138)
Is a parent	-0.00688	-0.000988	0.00446	0.00446	0.0876
	(0.0106)	(0.0138)	(0.0112)	(0.0112)	(0.120)
Grew up in research area	0.0196*	0.0142	0.0226**	0.0226**	0.0454
	(0.0105)	(0.0131)	(0.0103)	(0.0103)	(0.100)
Linguistic minority status	-0.00415	0.0237	0.0192	0.0192	0.0874
	(0.0231)	(0.0278)	(0.0236)	(0.0236)	(0.230)

Appendix table A9. *Continued*

	LPM	Mixed	Logit Mg	Melogit Mg	GLLAMM
Household Wealth	-0.00102	-0.000207	0.000737	0.000737	-0.00932
	(0.00102)	(0.00132)	(0.00119)	(0.00119)	(0.0155)
Household Wealth (squared)	2.03e-05**	1.03e-05	2.65e-08	2.65e-08	0.000122
	(9.56e-06)	(1.09e-05)	(1.02e-05)	(1.02e-05)	(0.000126)
Is unemployed	0.0141	0.0172	0.00427	0.00427	0.164
	(0.0142)	(0.0188)	(0.0133)	(0.0133)	(0.103)
Is not in the workforce	0.00271	0.00492	-0.00798	-0.00798	0.0281
	(0.0103)	(0.0142)	(0.0110)	(0.0110)	(0.136)
Years of completed education	0.00677***	0.00331	0.0108***	0.0108***	0.0591**
	(0.00257)	(0.00301)	(0.00324)	(0.00324)	(0.0242)
Years of completed education (squared)	-0.000110	5.82e-05	-0.000274	-0.000274	-0.00108
	(0.000160)	(0.000186)	(0.000174)	(0.000174)	(0.00122)
Perceived relative wealth	-0.0108	-0.00792	-0.0126	-0.0126	0.0410
	(0.00770)	(0.00863)	(0.00856)	(0.00856)	(0.0834)
Has experienced hunger	0.0220**	0.0227	0.0225**	0.0225**	0.0690
	(0.0106)	(0.0165)	(0.0113)	(0.0113)	(0.150)
Life satisfaction	-0.00680	-0.00870	-0.00790	-0.00790	-0.124**
	(0.00651)	(0.00701)	(0.00700)	(0.00700)	(0.0504)
Was negatively affected by Covid-19	-0.00212	0.00677	0.00286	0.00286	0.118
	(0.0102)	(0.0127)	(0.0111)	(0.0111)	(0.0938)
Has experienced violence	0.0600***	0.0647***	0.0565***	0.0565***	0.376***
	(0.0168)	(0.0201)	(0.0142)	(0.0142)	(0.117)
Affected by environmental problem	0.0140	0.0153*	0.0128	0.0128	0.136
	(0.0108)	(0.00910)	(0.0105)	(0.0105)	(0.0883)
Has received social protection support	0.0540***	0.0521***	0.0480***	0.0480***	0.374***
	(0.0105)	(0.0115)	(0.0106)	(0.0106)	(0.0712)
Acceptance of uncertainty	0.0122***	0.0127***	0.0119**	0.0119**	0.0809**
	(0.00450)	(0.00399)	(0.00472)	(0.00472)	(0.0339)
Thinks most people can be trusted	0.00745	0.00586	0.00873	0.00873	-0.0699
	(0.00940)	(0.00798)	(0.00976)	(0.00976)	(0.0581)
Conservative gender norms	-0.00438	-0.00478	-0.0104	-0.0104	-0.0631
	(0.00548)	(0.00695)	(0.00633)	(0.00633)	(0.0648)
Other research area characteristics					
Gini index	-0.210***	-0.205	-0.350***	-0.350***	-3.324***
	(0.0733)	(0.150)	(0.0935)	(0.0935)	(0.384)
Linguistic fractionalisation	-0.0460	-0.0580	-0.0323	-0.0323	0.183
	(0.0391)	(0.0545)	(0.0370)	(0.0370)	(0.242)
Presence of international actors	-0.0236**	-0.0307	-0.0205**	-0.0205**	-0.219***
	(0.0119)	(0.0236)	(0.00976)	(0.00976)	(0.0507)
Other					
Constant	-0.824***	-0.718***			-7.365***
	(0.142)	(0.203)			(1.285)
Observations	11,726	11,726	11,726	11,726	11,726
R-squared	0.215				

Appendix table B1. Pooled dataset regressions with research area fixed effects results for 'Prefers to leave country (next 5 years)'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	0.0312***	0.0417***
	(0.00867)	(0.0118)
Discontent with public services	0.0445***	0.0601***
	(0.00913)	(0.0125)
Distrust in institutions	0.0296***	0.0381***
	(0.00818)	(0.0111)
Disapproval of government	0.0170**	0.0232**
	(0.00852)	(0.0115)
Perception of insecurity	-0.00721**	-0.00890*
	(0.00357)	(0.00475)
Migration-related factors		
Has lived in high-income country	0.0863	0.100
	(0.0533)	(0.0653)
Knows of failed migration	0.0444***	0.0527***
	(0.0140)	(0.0177)
Is aware of migrants	0.0898***	0.120***
	(0.0147)	(0.0194)
Has ties to high-income country	0.0426***	0.0489***
	(0.0145)	(0.0180)
Has received remittances	0.0478***	0.0587***
	(0.0149)	(0.0185)
Other individual characteristics		
Is female	-0.0775***	-0.102***
	(0.0125)	(0.0165)
Age	-0.000133	0.000612
	(0.00775)	(0.0104)
Age (squared)	-8.14e-05	-0.000125
	(0.000133)	(0.000179)
Is married/cohabiting	-0.0632***	-0.0795***
	(0.0150)	(0.0189)
Is a parent	-0.0322**	-0.0379**
	(0.0142)	(0.0189)
Grew up in research area	-0.00309	-0.00737
	(0.0120)	(0.0158)
Linguistic minority status	0.0287	0.0333
	(0.0272)	(0.0340)
Household Wealth	0.00525***	0.00730***
	(0.00137)	(0.00190)
Household Wealth (squared)	-5.74e-05***	-7.80e-05***
	(1.28e-05)	(1.75e-05)
Is unemployed	0.0553***	0.0672***
	(0.0154)	(0.0195)
Is not in the workforce	0.0432***	0.0514***
	(0.0128)	(0.0174)
Years of completed education	0.00849***	0.0110**
	(0.00323)	(0.00448)
Years of completed education (squared)	-9.25e-05	-0.000128
	(0.000186)	(0.000253)
Perceived relative wealth	0.00249	0.00366
	(0.00985)	(0.0136)
Has experienced hunger	0.00693	0.00844
	(0.0127)	(0.0175)
Life satisfaction	-0.0372***	-0.0484***
	(0.00733)	(0.0101)
Was negatively affected by Covid-19	0.0333***	0.0453***
	(0.0119)	(0.0165)
Has experienced violence	0.0326**	0.0440**
	(0.0162)	(0.0213)
Affected by environmental problem	-0.00146	-0.00111
	(0.0120)	(0.0154)

Appendix table B1. *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	-0.0110	-0.0144
	(0.0129)	(0.0176)
Acceptance of uncertainty	0.0156***	0.0196***
	(0.00514)	(0.00716)
Thinks most people can be trusted	-0.00835	-0.0112
	(0.0113)	(0.0148)
Conservative gender norms	-0.00871	-0.0138
	(0.00712)	(0.00978)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	-0.0429	-0.0458
	(0.0408)	(0.0450)
Fixed effect: Boffa (GIN1)	-0.00689	0.00127
	(0.0403)	(0.0477)
Fixed effect: Dialakoro (GIN2)	-0.124***	-0.114**
	(0.0474)	(0.0559)
Fixed effect: Gbane (GHA1)	0.159***	0.201***
	(0.0497)	(0.0536)
Fixed effect: Golf City (GHA2)	0.0745*	0.0910*
	(0.0441)	(0.0510)
Fixed effect: New Takoradi (GHA3)	0.172***	0.208***
	(0.0383)	(0.0445)
Fixed effect: Down Quarters (NGA1)	0.258***	0.298***
	(0.0440)	(0.0485)
Fixed effect: Awe (NGA2)	0.0442	0.0846
	(0.0481)	(0.0554)
Fixed effect: Ekpoma (NGA3)	0.194***	0.259***
	(0.0425)	(0.0545)
Fixed effect: Batu (ETH2)	-0.0783*	-0.0753
	(0.0458)	(0.0514)
Fixed effect: Moyale (ETH3)	-0.264***	-0.283***
	(0.0453)	(0.0494)
Fixed effect: Erigavo (SOM1)	-0.0663	-0.0521
	(0.0520)	(0.0606)
Fixed effect: Baidoa (SOM2)	0.00410	0.0447
	(0.0627)	(0.0732)
Fixed effect: Enfidha (TUN1)	0.138***	0.168***
	(0.0380)	(0.0452)
Fixed effect: Redeyef (TUN2)	0.0249	0.0291
	(0.0360)	(0.0430)
Fixed effect: Hopa (TUR1)	0.00423	0.0127
	(0.0489)	(0.0568)
Fixed effect: Yenice (TUR2)	-0.0997**	-0.0961*
	(0.0415)	(0.0495)
Fixed effect: Kilis (TUR3)	-0.221***	-0.242***
	(0.0409)	(0.0470)
Fixed effect: Shahrake Jabrael (AFG1)	-0.124***	-0.133**
	(0.0475)	(0.0532)
Fixed effect: Behsud (AFG2)	-0.205***	-0.218***
	(0.0461)	(0.0499)
Fixed effect: Shahrake Mahdia (AFG3)	-0.00916	-0.0200
	(0.0417)	(0.0504)
Fixed effect: Chot Dheeran (PAK1)	-0.249***	-0.277***
	(0.0444)	(0.0532)
Fixed effect: Youhanabad (PAK2)	-0.291***	-0.315***
	(0.0465)	(0.0524)
Fixed effect: Keti Bandar (PAK3)	-0.292***	-0.406***
	(0.0437)	(0.0452)
Other		
Constant	0.149	
	(0.135)	
Observations	11,562	11,562
R-squared	0.251	

Appendix table B2. Pooled dataset regressions with research area fixed effects results for 'Has seriously considered international migration (past year)'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	0.0265***	0.0306***
	(0.00812)	(0.00920)
Discontent with public services	0.0429***	0.0466***
	(0.00827)	(0.00910)
Distrust in institutions	0.0263***	0.0275***
	(0.00747)	(0.00811)
Disapproval of government	-0.00681	-0.00718
	(0.00786)	(0.00893)
Perception of insecurity	-0.000417	-0.000317
	(0.00342)	(0.00379)
Migration-related factors		
Has lived in high-income country	0.149***	0.135***
	(0.0558)	(0.0508)
Knows of failed migration	0.0684***	0.0651***
	(0.0128)	(0.0127)
Is aware of migrants	0.0743***	0.0956***
	(0.0137)	(0.0158)
Has ties to high-income country	0.0750***	0.0653***
	(0.0152)	(0.0141)
Has received remittances	0.0846***	0.0764***
	(0.0154)	(0.0138)
Other individual characteristics		
Is female	-0.0847***	-0.0915***
	(0.0115)	(0.0120)
Age	0.0122*	0.00899
	(0.00706)	(0.00786)
Age (squared)	-0.000231*	-0.000188
	(0.000120)	(0.000135)
Is married/cohabiting	-0.0398***	-0.0424***
	(0.0139)	(0.0147)
Is a parent	-0.0135	-0.0112
	(0.0128)	(0.0146)
Grew up in research area	-0.0143	-0.0129
	(0.0122)	(0.0130)
Linguistic minority status	0.0632**	0.0712***
	(0.0259)	(0.0261)
Household Wealth	-0.000797	-0.000902
	(0.00121)	(0.00140)
Household Wealth (squared)	3.36e-06	3.88e-06
	(1.22e-05)	(1.32e-05)
Is unemployed	0.0450***	0.0364**
	(0.0155)	(0.0152)
Is not in the workforce	-0.0471***	-0.0637***
	(0.0120)	(0.0135)
Years of completed education	0.00682**	0.0108***
	(0.00290)	(0.00355)
Years of completed education (squared)	-0.000171	-0.000310
	(0.000174)	(0.000197)
Perceived relative wealth	0.00194	0.00205
	(0.00895)	(0.0103)
Has experienced hunger	0.0199	0.0222
	(0.0131)	(0.0148)
Life satisfaction	-0.0358***	-0.0378***
	(0.00704)	(0.00811)
Was negatively affected by Covid-19	0.0153	0.0187
	(0.0114)	(0.0131)
Has experienced violence	0.0498***	0.0471***
	(0.0160)	(0.0154)
Affected by environmental problem	0.0172	0.0168
	(0.0111)	(0.0118)

Appendix table B2. *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	0.000464	0.00243
	(0.0125)	(0.0139)
Acceptance of uncertainty	0.0250***	0.0273***
	(0.00503)	(0.00560)
Thinks most people can be trusted	-0.0145	-0.0190
	(0.0105)	(0.0115)
Conservative gender norms	0.00185	0.000935
	(0.00620)	(0.00736)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	-0.0180	-0.0184
	(0.0447)	(0.0399)
Fixed effect: Boffa (GIN1)	0.189***	0.196***
	(0.0513)	(0.0525)
Fixed effect: Dialakoro (GIN2)	0.0420	0.0608
	(0.0520)	(0.0542)
Fixed effect: Gbane (GHA1)	0.113**	0.135**
	(0.0550)	(0.0582)
Fixed effect: Golf City (GHA2)	0.0995*	0.0837
	(0.0552)	(0.0543)
Fixed effect: New Takoradi (GHA3)	0.137***	0.129***
	(0.0467)	(0.0451)
Fixed effect: Down Quarters (NGA1)	0.0458	0.0372
	(0.0547)	(0.0534)
Fixed effect: Awe (NGA2)	-0.0801*	-0.117**
	(0.0465)	(0.0459)
Fixed effect: Ekpoma (NGA3)	0.149***	0.132**
	(0.0545)	(0.0555)
Fixed effect: Batu (ETH2)	-0.0436	-0.0502
	(0.0494)	(0.0455)
Fixed effect: Moyale (ETH3)	-0.115**	-0.125***
	(0.0475)	(0.0424)
Fixed effect: Erigavo (SOM1)	-0.0348	-0.0471
	(0.0487)	(0.0490)
Fixed effect: Baidoa (SOM2)	-0.0862*	-0.115**
	(0.0454)	(0.0453)
Fixed effect: Enfidha (TUN1)	0.164***	0.156***
	(0.0518)	(0.0526)
Fixed effect: Redeyef (TUN2)	0.0484	0.0352
	(0.0504)	(0.0481)
Fixed effect: Hopa (TUR1)	0.0993*	0.101*
	(0.0550)	(0.0561)
Fixed effect: Yenice (TUR2)	0.0597	0.0586
	(0.0483)	(0.0507)
Fixed effect: Kilis (TUR3)	0.0149	0.00415
	(0.0501)	(0.0511)
Fixed effect: Shahrake Jabrael (AFG1)	-0.00238	-0.00509
	(0.0504)	(0.0484)
Fixed effect: Behsud (AFG2)	-0.0957*	-0.0907*
	(0.0537)	(0.0468)
Fixed effect: Shahrake Mahdia (AFG3)	-0.0942*	-0.0926**
	(0.0524)	(0.0453)
Fixed effect: Chot Dheeran (PAK1)	-0.0336	-0.0799
	(0.0478)	(0.0503)
Fixed effect: Youhanabad (PAK2)	-0.0894*	-0.137***
	(0.0485)	(0.0483)
Fixed effect: Keti Bandar (PAK3)	-0.143***	-0.178***
	(0.0477)	(0.0428)
Constant	-0.111	
	(0.119)	
Observations	11,716	11,716
R-squared	0.176	

Appendix table B3. Pooled dataset regressions with research area fixed effects results for 'Would migrate to richer country if given papers'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	0.0341***	0.0389***
	(0.00837)	(0.00967)
Discontent with public services	0.0323***	0.0366***
	(0.00946)	(0.0112)
Distrust in institutions	0.0306***	0.0351***
	(0.00760)	(0.00926)
Disapproval of government	0.0216**	0.0216**
	(0.00844)	(0.00980)
Perception of insecurity	-0.00586	-0.00652
	(0.00362)	(0.00419)
Migration-related factors		
Has lived in high-income country	-0.00143	-0.00755
	(0.0519)	(0.0585)
Knows of failed migration	0.0514***	0.0620***
	(0.0124)	(0.0152)
Is aware of migrants	0.0846***	0.0897***
	(0.0137)	(0.0156)
Has ties to high-income country	0.0321**	0.0406**
	(0.0124)	(0.0159)
Has received remittances	0.00875	0.0171
	(0.0133)	(0.0178)
Other individual characteristics		
Is female	-0.0606***	-0.0768***
	(0.0114)	(0.0141)
Age	-0.00373	-0.00228
	(0.00756)	(0.00900)
Age (squared)	-1.58e-05	-4.49e-05
	(0.000132)	(0.000156)
Is married/cohabiting	-0.0353**	-0.0430**
	(0.0146)	(0.0172)
Is a parent	-0.0226*	-0.0294*
	(0.0137)	(0.0163)
Grew up in research area	0.00521	0.00193
	(0.0113)	(0.0136)
Linguistic minority status	0.0272	0.0261
	(0.0242)	(0.0303)
Household Wealth	0.00360***	0.00444***
	(0.00139)	(0.00162)
Household Wealth (squared)	-4.55e-05***	-5.53e-05***
	(1.28e-05)	(1.48e-05)
Is unemployed	0.0328**	0.0453**
	(0.0145)	(0.0181)
Is not in the workforce	0.0258**	0.0407***
	(0.0118)	(0.0145)
Years of completed education	0.00644*	0.00640*
	(0.00340)	(0.00381)
Years of completed education (squared)	9.20e-07	2.62e-05
	(0.000183)	(0.000212)
Perceived relative wealth	-0.00265	-0.00372
	(0.00924)	(0.0108)
Has experienced hunger	0.0189	0.0243
	(0.0130)	(0.0164)
Life satisfaction	-0.0356***	-0.0419***
	(0.00717)	(0.00836)
Was negatively affected by Covid-19	0.0375***	0.0414***
	(0.0117)	(0.0136)
Has experienced violence	0.0375***	0.0551***
	(0.0140)	(0.0195)
Affected by environmental problem	0.00370	0.00235
	(0.0112)	(0.0132)

Appendix table B3. *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	0.0167	0.0205
	(0.0128)	(0.0153)
Acceptance of uncertainty	0.0203***	0.0239***
	(0.00516)	(0.00622)
Thinks most people can be trusted	0.00446	0.00723
	(0.0104)	(0.0123)
Conservative gender norms	0.00300	0.00400
	(0.00707)	(0.00815)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	-0.141***	-0.154***
	(0.0382)	(0.0416)
Fixed effect: Boffa (GIN1)	-0.0158	0.000936
	(0.0315)	(0.0336)
Fixed effect: Dialakoro (GIN2)	-0.144***	-0.146***
	(0.0456)	(0.0476)
Fixed effect: Gbane (GHA1)	0.108***	0.0843***
	(0.0329)	(0.0300)
Fixed effect: Golf City (GHA2)	-0.0286	-0.0287
	(0.0392)	(0.0404)
Fixed effect: New Takoradi (GHA3)	0.0220	0.0390
	(0.0311)	(0.0340)
Fixed effect: Down Quarters (NGA1)	0.0512	0.0632*
	(0.0367)	(0.0349)
Fixed effect: Awe (NGA2)	-0.0963**	-0.0901*
	(0.0480)	(0.0466)
Fixed effect: Ekpoma (NGA3)	0.0127	0.0656
	(0.0371)	(0.0417)
Fixed effect: Batu (ETH2)	-0.162***	-0.170***
	(0.0396)	(0.0434)
Fixed effect: Moyale (ETH3)	-0.310***	-0.324***
	(0.0448)	(0.0495)
Fixed effect: Erigavo (SOM1)	-0.203***	-0.203***
	(0.0505)	(0.0538)
Fixed effect: Baidoa (SOM2)	-0.0163	-0.0182
	(0.0431)	(0.0394)
Fixed effect: Enfidha (TUN1)	-0.0316	-0.0208
	(0.0347)	(0.0364)
Fixed effect: Redeyef (TUN2)	-0.113***	-0.112***
	(0.0360)	(0.0401)
Fixed effect: Hopa (TUR1)	-0.127***	-0.121***
	(0.0413)	(0.0435)
Fixed effect: Yenice (TUR2)	-0.202***	-0.179***
	(0.0406)	(0.0428)
Fixed effect: Kilis (TUR3)	-0.281***	-0.277***
	(0.0405)	(0.0458)
Fixed effect: Shahrake Jabrael (AFG1)	-0.197***	-0.217***
	(0.0470)	(0.0535)
Fixed effect: Behsud (AFG2)	-0.188***	-0.210***
	(0.0418)	(0.0498)
Fixed effect: Shahrake Mahdia (AFG3)	-0.128***	-0.130***
	(0.0372)	(0.0445)
Fixed effect: Chot Dheeran (PAK1)	-0.321***	-0.323***
	(0.0572)	(0.0637)
Fixed effect: Youhanabad (PAK2)	-0.463***	-0.487***
	(0.0532)	(0.0614)
Fixed effect: Keti Bandar (PAK3)	-0.463***	-0.486***
	(0.0501)	(0.0585)
Constant	0.490***	
	(0.129)	
Observations	11,617	11,617
R-squared	0.215	

Appendix table B4. Pooled dataset regressions with research area fixed effects results for 'Resolute migration aspirations'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	0.0303***	0.0303***
	(0.00719)	(0.00729)
Discontent with public services	0.0343***	0.0332***
	(0.00797)	(0.00781)
Distrust in institutions	0.0262***	0.0240***
	(0.00698)	(0.00655)
Disapproval of government	-0.000863	0.00111
	(0.00754)	(0.00769)
Perception of insecurity	-0.00320	-0.00290
	(0.00317)	(0.00309)
Migration-related factors		
Has lived in high-income country	0.100*	0.0773*
	(0.0582)	(0.0412)
Knows of failed migration	0.0520***	0.0420***
	(0.0115)	(0.00992)
Is aware of migrants	0.0678***	0.0844***
	(0.0124)	(0.0135)
Has ties to high-income country	0.0671***	0.0488***
	(0.0147)	(0.0115)
Has received remittances	0.0671***	0.0483***
	(0.0149)	(0.0107)
Other individual characteristics		
Is female	-0.0717***	-0.0668***
	(0.0112)	(0.0101)
Age	0.0117*	0.00649
	(0.00670)	(0.00661)
Age (squared)	-0.000228**	-0.000149
	(0.000115)	(0.000115)
Is married/cohabiting	-0.0337***	-0.0302**
	(0.0129)	(0.0121)
Is a parent	-0.0242**	-0.0203*
	(0.0110)	(0.0111)
Grew up in research area	-0.00382	-0.000835
	(0.0116)	(0.0108)
Linguistic minority status	0.0529**	0.0515**
	(0.0255)	(0.0216)
Household Wealth	0.000527	0.000580
	(0.00110)	(0.00115)
Household Wealth (squared)	-8.57e-06	-8.57e-06
	(1.12e-05)	(1.08e-05)
Is unemployed	0.0386***	0.0237*
	(0.0149)	(0.0123)
Is not in the workforce	-0.0202*	-0.0317***
	(0.0113)	(0.0111)
Years of completed education	0.00388	0.00743**
	(0.00266)	(0.00303)
Years of completed education (squared)	-0.000107	-0.000225
	(0.000162)	(0.000164)
Perceived relative wealth	0.00516	0.00495
	(0.00846)	(0.00868)
Has experienced hunger	0.0107	0.0102
	(0.0123)	(0.0122)
Life satisfaction	-0.0416***	-0.0394***
	(0.00661)	(0.00679)
Was negatively affected by Covid-19	0.0258**	0.0286***
	(0.0104)	(0.0107)
Has experienced violence	0.0322**	0.0245**
	(0.0147)	(0.0119)
Affected by environmental problem	0.00615	0.00469
	(0.0103)	(0.00957)

Appendix table B4. *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	0.00109	0.00174
	(0.0121)	(0.0119)
Acceptance of uncertainty	0.0179***	0.0166***
	(0.00477)	(0.00472)
Thinks most people can be trusted	-0.00623	-0.00847
	(0.00969)	(0.00944)
Conservative gender norms	0.000662	-0.000615
	(0.00564)	(0.00598)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	0.000176	0.000899
	(0.0380)	(0.0311)
Fixed effect: Boffa (GIN1)	0.120***	0.100***
	(0.0422)	(0.0386)
Fixed effect: Dialakoro (GIN2)	-0.00469	0.00449
	(0.0410)	(0.0393)
Fixed effect: Gbane (GHA1)	0.135***	0.165***
	(0.0495)	(0.0548)
Fixed effect: Golf City (GHA2)	0.134***	0.111**
	(0.0499)	(0.0474)
Fixed effect: New Takoradi (GHA3)	0.162***	0.138***
	(0.0383)	(0.0351)
Fixed effect: Down Quarters (NGA1)	0.104**	0.0877*
	(0.0483)	(0.0455)
Fixed effect: Awe (NGA2)	-0.0384	-0.0683*
	(0.0396)	(0.0390)
Fixed effect: Ekpoma (NGA3)	0.168***	0.123**
	(0.0520)	(0.0499)
Fixed effect: Batu (ETH2)	-0.0559	-0.0591*
	(0.0427)	(0.0347)
Fixed effect: Moyale (ETH3)	-0.123***	-0.125***
	(0.0403)	(0.0309)
Fixed effect: Erigavo (SOM1)	-0.0361	-0.0537
	(0.0378)	(0.0343)
Fixed effect: Baidoa (SOM2)	-0.0581	-0.0854**
	(0.0375)	(0.0348)
Fixed effect: Enfidha (TUN1)	0.191***	0.154***
	(0.0437)	(0.0435)
Fixed effect: Redeyef (TUN2)	0.0846**	0.0529
	(0.0411)	(0.0370)
Fixed effect: Hopa (TUR1)	0.0979**	0.0832*
	(0.0488)	(0.0482)
Fixed effect: Yenice (TUR2)	0.0534	0.0350
	(0.0384)	(0.0388)
Fixed effect: Kilis (TUR3)	-0.0345	-0.0638*
	(0.0411)	(0.0366)
Fixed effect: Shahrake Jabrael (AFG1)	-0.0453	-0.0474
	(0.0410)	(0.0343)
Fixed effect: Behsud (AFG2)	-0.0879**	-0.0754**
	(0.0436)	(0.0334)
Fixed effect: Shahrake Mahdia (AFG3)	-0.0802*	-0.0747**
	(0.0428)	(0.0324)
Fixed effect: Chot Dheeran (PAK1)	-0.0116	-0.0520
	(0.0425)	(0.0468)
Fixed effect: Youhanabad (PAK2)	-0.0739**	-0.120***
	(0.0370)	(0.0320)
Fixed effect: Keti Bandar (PAK3)	-0.106***	-0.159***
	(0.0389)	(0.0304)
Constant	-0.176	
	(0.113)	
Observations	11,727	11,727
R-squared	0.171	

Appendix table B5. Pooled dataset regressions with research area fixed effects results for 'No migration aspirations'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	-0.0312***	-0.0344***
	(0.00797)	(0.00895)
Discontent with public services	-0.0319***	-0.0348***
	(0.00909)	(0.0104)
Distrust in institutions	-0.0291***	-0.0328***
	(0.00748)	(0.00887)
Disapproval of government	-0.0214***	-0.0203**
	(0.00816)	(0.00918)
Perception of insecurity	0.00351	0.00369
	(0.00348)	(0.00391)
Migration-related factors		
Has lived in high-income country	-0.00403	0.00185
	(0.0490)	(0.0548)
Knows of failed migration	-0.0488***	-0.0590***
	(0.0119)	(0.0145)
Is aware of migrants	-0.0879***	-0.0886***
	(0.0136)	(0.0150)
Has ties to high-income country	-0.0285**	-0.0374**
	(0.0122)	(0.0156)
Has received remittances	-0.0143	-0.0247
	(0.0124)	(0.0168)
Other individual characteristics		
Is female	0.0610***	0.0767***
	(0.0111)	(0.0134)
Age	0.00559	0.00432
	(0.00745)	(0.00867)
Age (squared)	-2.28e-05	-9.85e-07
	(0.000130)	(0.000150)
Is married/cohabiting	0.0159	0.0211
	(0.0132)	(0.0153)
Is a parent	0.00123	0.00583
	(0.0112)	(0.0131)
Grew up in research area	-0.00910	-0.00388
	(0.0238)	(0.0290)
Linguistic minority status	0.0465***	0.0551***
	(0.0141)	(0.0163)
Household Wealth	-0.00396***	-0.00472***
	(0.00137)	(0.00155)
Household Wealth (squared)	4.99e-05***	5.92e-05***
	(1.27e-05)	(1.42e-05)
Is unemployed	-0.0327**	-0.0456***
	(0.0143)	(0.0176)
Is not in the workforce	-0.0302***	-0.0469***
	(0.0111)	(0.0133)
Years of completed education	-0.00706**	-0.00659*
	(0.00325)	(0.00347)
Years of completed education (squared)	5.19e-06	-3.72e-05
	(0.000173)	(0.000193)
Perceived relative wealth	-0.00328	-0.00296
	(0.00934)	(0.0106)
Has experienced hunger	-0.0224*	-0.0282*
	(0.0125)	(0.0154)
Life satisfaction	0.0312***	0.0359***
	(0.00699)	(0.00789)
Was negatively affected by Covid-19	-0.0431***	-0.0462***
	(0.0116)	(0.0131)
Has experienced violence	-0.0322**	-0.0488**
	(0.0136)	(0.0189)
Affected by environmental problem	0.00147	0.00407
	(0.0107)	(0.0124)

Appendix table B5 *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	-0.0157	-0.0190
	(0.0123)	(0.0142)
Acceptance of uncertainty	-0.0184***	-0.0212***
	(0.00523)	(0.00611)
Thinks most people can be trusted	0.000723	-0.00109
	(0.00990)	(0.0114)
Conservative gender norms	-0.000935	-0.00170
	(0.00696)	(0.00771)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	0.103***	0.115***
	(0.0386)	(0.0420)
Fixed effect: Boffa (GIN1)	0.00339	-0.0141
	(0.0295)	(0.0306)
Fixed effect: Dialakoro (GIN2)	0.105**	0.103**
	(0.0464)	(0.0466)
Fixed effect: Gbane (GHA1)	-0.121***	-0.0901***
	(0.0330)	(0.0296)
Fixed effect: Golf City (GHA2)	0.0239	0.0231
	(0.0380)	(0.0390)
Fixed effect: New Takoradi (GHA3)	-0.0245	-0.0429
	(0.0303)	(0.0333)
Fixed effect: Down Quarters (NGA1)	-0.0567	-0.0688**
	(0.0353)	(0.0328)
Fixed effect: Awe (NGA2)	0.0635	0.0582
	(0.0437)	(0.0413)
Fixed effect: Ekpoma (NGA3)	-0.0107	-0.0704*
	(0.0360)	(0.0402)
Fixed effect: Batu (ETH2)	0.140***	0.144***
	(0.0371)	(0.0406)
Fixed effect: Moyale (ETH3)	0.289***	0.299***
	(0.0468)	(0.0523)
Fixed effect: Erigavo (SOM1)	0.201***	0.201***
	(0.0491)	(0.0527)
Fixed effect: Baidoa (SOM2)	0.0216	0.0204
	(0.0424)	(0.0386)
Fixed effect: Enfidha (TUN1)	0.0306	0.0186
	(0.0340)	(0.0356)
Fixed effect: Redeyef (TUN2)	0.0845**	0.0785**
	(0.0348)	(0.0383)
Fixed effect: Hopa (TUR1)	0.107***	0.0971**
	(0.0395)	(0.0410)
Fixed effect: Yenice (TUR2)	0.176***	0.146***
	(0.0418)	(0.0429)
Fixed effect: Kilis (TUR3)	0.236***	0.221***
	(0.0391)	(0.0435)
Fixed effect: Shahrake Jabrael (AFG1)	0.161***	0.176***
	(0.0470)	(0.0545)
Fixed effect: Behsud (AFG2)	0.180***	0.203***
	(0.0411)	(0.0499)
Fixed effect: Shahrake Mahdia (AFG3)	0.110***	0.103**
	(0.0350)	(0.0421)
Fixed effect: Chot Dheeran (PAK1)	0.321***	0.323***
	(0.0556)	(0.0613)
Fixed effect: Youhanabad (PAK2)	0.419***	0.431***
	(0.0533)	(0.0619)
Fixed effect: Keti Bandar (PAK3)	0.450***	0.465***
	(0.0500)	(0.0602)
Constant	0.487***	
	(0.127)	
Observations	11,727	11,727
R-squared	0.214	

Appendix table B6. Pooled dataset regressions with research area fixed effects results for 'Has prepared but was unable to migrate (past 5 years)'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	0.0182***	0.0170***
	(0.00687)	(0.00658)
Discontent with public services	0.0101	0.00998
	(0.00755)	(0.00695)
Distrust in institutions	0.0241***	0.0219***
	(0.00669)	(0.00590)
Disapproval of government	-0.000804	-0.000798
	(0.00633)	(0.00590)
Perception of insecurity	-0.00397	-0.00319
	(0.00311)	(0.00283)
Migration-related factors		
Has lived in high-income country	0.160***	0.0956***
	(0.0466)	(0.0274)
Knows of failed migration	0.0796***	0.0500***
	(0.0123)	(0.00857)
Is aware of migrants	0.0454***	0.0709***
	(0.0112)	(0.0126)
Has ties to high-income country	0.0700***	0.0482***
	(0.0141)	(0.00977)
Has received remittances	0.0742***	0.0464***
	(0.0146)	(0.00929)
Other individual characteristics		
Is female	-0.0631***	-0.0557***
	(0.00934)	(0.00808)
Age	0.0185***	0.0155**
	(0.00658)	(0.00611)
Age (squared)	-0.000308***	-0.000259**
	(0.000111)	(0.000103)
Is married/cohabiting	0.00703	0.00704
	(0.0133)	(0.0114)
Is a parent	-0.0189*	-0.0164*
	(0.0103)	(0.00930)
Grew up in research area	-0.00713	-0.00485
	(0.0105)	(0.00930)
Linguistic minority status	0.0590**	0.0591***
	(0.0240)	(0.0191)
Household Wealth	-0.00142	-0.00129
	(0.00105)	(0.000992)
Household Wealth (squared)	1.38e-05	1.20e-05
	(1.07e-05)	(9.35e-06)
Is unemployed	0.0159	0.00748
	(0.0143)	(0.0105)
Is not in the workforce	-0.0553***	-0.0548***
	(0.0102)	(0.0101)
Years of completed education	0.0103***	0.00877***
	(0.00263)	(0.00252)
Years of completed education (squared)	-0.000471***	-0.000379***
	(0.000155)	(0.000139)
Perceived relative wealth	0.00819	0.00884
	(0.00831)	(0.00776)
Has experienced hunger	0.0405***	0.0397***
	(0.0106)	(0.00927)
Life satisfaction	-0.0148**	-0.0113**
	(0.00586)	(0.00536)
Was negatively affected by Covid-19	0.00592	0.00715
	(0.00985)	(0.00919)
Has experienced violence	0.0518***	0.0343***
	(0.0151)	(0.0103)
Affected by environmental problem	0.00908	0.00567
	(0.00986)	(0.00836)

Appendix table B6. *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	0.0128	0.0123
	(0.0109)	(0.0101)
Acceptance of uncertainty	0.00821*	0.00742**
	(0.00434)	(0.00375)
Thinks most people can be trusted	-0.0120	-0.0142*
	(0.00952)	(0.00838)
Conservative gender norms	0.00971*	0.00739
	(0.00542)	(0.00526)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	-0.0151	-0.0141
	(0.0363)	(0.0249)
Fixed effect: Boffa (GIN1)	-0.0338	-0.0361
	(0.0407)	(0.0280)
Fixed effect: Dialakoro (GIN2)	0.0688	0.0621
	(0.0475)	(0.0446)
Fixed effect: Gbane (GHA1)	-0.0106	-0.0333
	(0.0413)	(0.0312)
Fixed effect: Golf City (GHA2)	0.0157	-0.00850
	(0.0480)	(0.0328)
Fixed effect: New Takoradi (GHA3)	0.0422	0.0168
	(0.0447)	(0.0319)
Fixed effect: Down Quarters (NGA1)	0.00889	-0.00980
	(0.0468)	(0.0354)
Fixed effect: Awe (NGA2)	-0.0461	-0.0812***
	(0.0404)	(0.0313)
Fixed effect: Ekpoma (NGA3)	0.0493	0.0187
	(0.0458)	(0.0337)
Fixed effect: Batu (ETH2)	0.0280	0.00597
	(0.0435)	(0.0321)
Fixed effect: Moyale (ETH3)	0.0454	0.0237
	(0.0482)	(0.0396)
Fixed effect: Erigavo (SOM1)	0.0769*	0.0613*
	(0.0400)	(0.0349)
Fixed effect: Baidoa (SOM2)	0.0269	0.00287
	(0.0405)	(0.0339)
Fixed effect: Enfidha (TUN1)	0.135***	0.0911***
	(0.0431)	(0.0345)
Fixed effect: Redeyef (TUN2)	0.118***	0.0825**
	(0.0403)	(0.0327)
Fixed effect: Hopa (TUR1)	0.0375	0.0110
	(0.0448)	(0.0390)
Fixed effect: Yenice (TUR2)	-0.0101	-0.0706***
	(0.0340)	(0.0272)
Fixed effect: Kilis (TUR3)	-0.0273	-0.0720**
	(0.0392)	(0.0280)
Fixed effect: Shahrake Jabrael (AFG1)	0.268***	0.263***
	(0.0451)	(0.0443)
Fixed effect: Behsud (AFG2)	0.110**	0.0688*
	(0.0500)	(0.0402)
Fixed effect: Shahrake Mahdia (AFG3)	0.170***	0.138***
	(0.0448)	(0.0398)
Fixed effect: Chot Dheeran (PAK1)	0.0780*	0.0461
	(0.0427)	(0.0476)
Fixed effect: Youhanabad (PAK2)	0.0106	-0.0378
	(0.0416)	(0.0386)
Fixed effect: Keti Bandar (PAK3)	-0.0153	-0.0428
	(0.0444)	(0.0350)
Constant	-0.352***	
	(0.107)	
Observations	11,719	11,719
R-squared	0.147	

Appendix table B7. Pooled dataset regressions with research area fixed effects results for 'Has valid passport and would migrate to richer country if given papers'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	0.0103*	0.00528
	(0.00552)	(0.00349)
Discontent with public services	-0.00468*	-0.00215
	(0.00242)	(0.00160)
Distrust in institutions	0.00113	0.000126
	(0.00645)	(0.00455)
Disapproval of government	0.00539	0.00531
	(0.00568)	(0.00335)
Perception of insecurity	-4.30e-05	-0.00110
	(0.00501)	(0.00340)
Migration-related factors		
Has lived in high-income country	0.195***	0.0483***
	(0.0502)	(0.0139)
Knows of failed migration	-0.00933	-0.00638
	(0.00856)	(0.00419)
Is aware of migrants	0.00405	0.0271***
	(0.00693)	(0.00756)
Has ties to high-income country	0.0531***	0.0245***
	(0.0115)	(0.00576)
Has received remittances	0.0942***	0.0327***
	(0.0139)	(0.00518)
Other individual characteristics		
Is female	-0.0211**	-0.0144***
	(0.00835)	(0.00483)
Age	0.0158***	0.00808**
	(0.00524)	(0.00345)
Age (squared)	-0.000231**	-0.000111*
	(9.07e-05)	(5.93e-05)
Is married/cohabiting	-0.0248**	-0.0151**
	(0.0104)	(0.00611)
Is a parent	-0.000648	0.00125*
	(0.000824)	(0.000702)
Grew up in research area	2.12e-05**	-3.93e-06
	(9.29e-06)	(5.83e-06)
Linguistic minority status	-0.0258***	-0.0136**
	(0.00895)	(0.00551)
Household Wealth	-0.00312	0.000198
	(0.00201)	(0.00155)
Household Wealth (squared)	0.000378***	0.000114
	(0.000132)	(8.02e-05)
Is unemployed	-0.0154*	-0.00991*
	(0.00860)	(0.00546)
Is not in the workforce	0.0459**	0.0354***
	(0.0198)	(0.0122)
Years of completed education	-0.0124	-0.00512
	(0.0115)	(0.00586)
Years of completed education (squared)	-0.0153*	-0.0112**
	(0.00810)	(0.00523)
Perceived relative wealth	0.0252***	0.0125**
	(0.00798)	(0.00540)
Has experienced hunger	-0.00420	-0.00356
	(0.00617)	(0.00428)
Life satisfaction	-0.0145**	-0.00993
	(0.00717)	(0.00637)
Was negatively affected by Covid-19	0.0358***	0.0183**
	(0.0128)	(0.00716)
Has experienced violence	-0.00624	-0.00319
	(0.00877)	(0.00483)
Affected by environmental problem	0.00998	0.00614
	(0.00981)	(0.00603)

Appendix table B7. *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	0.00270	0.000892
	(0.00349)	(0.00202)
Acceptance of uncertainty	0.0114	0.00458
	(0.00755)	(0.00446)
Thinks most people can be trusted	0.00473	0.00112
	(0.00428)	(0.00302)
Conservative gender norms	-0.00591	-0.00322
	(0.00452)	(0.00290)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	-0.00268	-0.00806
	(0.0380)	(0.0241)
Fixed effect: Boffa (GIN1)	-0.150***	-0.0969***
	(0.0358)	(0.0256)
Fixed effect: Dialakoro (GIN2)	-0.0963***	-0.0993***
	(0.0352)	(0.0274)
Fixed effect: Gbane (GHA1)	-0.0749**	-0.0744**
	(0.0370)	(0.0306)
Fixed effect: Golf City (GHA2)	-0.0594	-0.0618**
	(0.0451)	(0.0279)
Fixed effect: New Takoradi (GHA3)	-0.0744**	-0.0553**
	(0.0377)	(0.0254)
Fixed effect: Down Quarters (NGA1)	-0.147***	-0.0964***
	(0.0386)	(0.0263)
Fixed effect: Awe (NGA2)	-0.104***	-0.0883***
	(0.0365)	(0.0300)
Fixed effect: Ekpoma (NGA3)	-0.158***	-0.0931***
	(0.0395)	(0.0263)
Fixed effect: Batu (ETH2)	-0.115***	-0.0788***
	(0.0388)	(0.0268)
Fixed effect: Moyale (ETH3)	-0.0906**	-0.0819***
	(0.0376)	(0.0275)
Fixed effect: Erigavo (SOM1)	-0.0883**	-0.0597**
	(0.0361)	(0.0263)
Fixed effect: Baidoa (SOM2)	0.1000**	0.221***
	(0.0481)	(0.0553)
Fixed effect: Enfidha (TUN1)	-0.0392	-0.0274
	(0.0424)	(0.0272)
Fixed effect: Redeyef (TUN2)	-0.0295	-0.0179
	(0.0414)	(0.0292)
Fixed effect: Hopa (TUR1)	-0.124***	-0.0675**
	(0.0425)	(0.0270)
Fixed effect: Yenice (TUR2)	-0.145***	-0.0774***
	(0.0360)	(0.0248)
Fixed effect: Kilis (TUR3)	-0.150***	-0.0899***
	(0.0396)	(0.0270)
Fixed effect: Shahrake Jabrael (AFG1)	-0.0350	-0.00743
	(0.0397)	(0.0318)
Fixed effect: Behsud (AFG2)	-0.0328	-0.00274
	(0.0404)	(0.0351)
Fixed effect: Shahrake Mahdia (AFG3)	-0.0474	-0.0220
	(0.0407)	(0.0332)
Fixed effect: Chot Dheeran (PAK1)	-0.0808**	-0.0519
	(0.0401)	(0.0355)
Fixed effect: Youhanabad (PAK2)	-0.140***	-0.0959***
	(0.0368)	(0.0267)
Fixed effect: Keti Bandar (PAK3)	-0.0908**	
	(0.0364)	
Constant	-0.155*	
	(0.0868)	
Observations	11,601	11,126
R-squared	0.152	

Appendix table B8. Pooled dataset regressions with research area fixed effects results for 'Has applied for visa and would migrate for richer country if given papers'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	0.00802**	0.00351**
	(0.00356)	(0.00169)
Discontent with public services	-0.00365**	-0.00164**
	(0.00169)	(0.000759)
Distrust in institutions	-0.00422	-0.00209
	(0.00451)	(0.00233)
Disapproval of government	0.00759*	0.00352**
	(0.00422)	(0.00173)
Perception of insecurity	0.00226	0.000691
	(0.00350)	(0.00179)
Migration-related factors		
Has lived in high-income country	0.121**	0.0167***
	(0.0471)	(0.00586)
Knows of failed migration	0.0113*	0.00329
	(0.00594)	(0.00220)
Is aware of migrants	0.000236	0.0111**
	(0.00477)	(0.00461)
Has ties to high-income country	0.0189**	0.00687**
	(0.00834)	(0.00313)
Has received remittances	0.0413***	0.0117***
	(0.00900)	(0.00246)
Other individual characteristics		
Is female	-0.0118*	-0.00659**
	(0.00627)	(0.00289)
Age	0.000668	-0.000287
	(0.00313)	(0.00151)
Age (squared)	-2.19e-06	9.53e-06
	(5.35e-05)	(2.54e-05)
Is married/cohabiting	-0.00310	-0.00137
	(0.00773)	(0.00335)
Is a parent	-0.00176***	-0.000294
	(0.000608)	(0.000321)
Grew up in research area	2.51e-05***	5.47e-06**
	(7.11e-06)	(2.66e-06)
Linguistic minority status	-0.00789	-0.00373
	(0.00613)	(0.00293)
Household Wealth	0.00180	0.00152*
	(0.00132)	(0.000793)
Household Wealth (squared)	-9.90e-05	-7.06e-05*
	(8.73e-05)	(4.24e-05)
Is unemployed	-0.00928	-0.00444
	(0.00684)	(0.00271)
Is not in the workforce	0.0240*	0.0128**
	(0.0137)	(0.00521)
Years of completed education	-0.0104	-0.00467
	(0.00781)	(0.00299)
Years of completed education (squared)	-0.0228***	-0.0133***
	(0.00650)	(0.00309)
Perceived relative wealth	0.000793	0.000454
	(0.00586)	(0.00287)
Has experienced hunger	0.00289	0.00139
	(0.00427)	(0.00223)
Life satisfaction	0.00269	0.00229
	(0.00536)	(0.00310)
Was negatively affected by Covid-19	0.0197**	0.00702**
	(0.00904)	(0.00303)
Has experienced violence	-0.00212	-0.000934
	(0.00569)	(0.00223)
Affected by environmental problem	0.00650	0.00288
	(0.00765)	(0.00302)

Appendix table B8. *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	0.00424**	0.00189**
	(0.00209)	(0.000874)
Acceptance of uncertainty	-0.00811	-0.00432*
	(0.00525)	(0.00240)
Thinks most people can be trusted	0.000143	-0.000554
	(0.00287)	(0.00173)
Conservative gender norms	-0.00441	-0.00230
	(0.00334)	(0.00157)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	0.00604	-0.000588
	(0.0255)	(0.00897)
Fixed effect: Boffa (GIN1)	-0.0298	-0.0141
	(0.0233)	(0.0104)
Fixed effect: Dialakoro (GIN2)	-0.0161	-0.0186
	(0.0237)	(0.0117)
Fixed effect: Gbane (GHA1)	-0.0289	
	(0.0217)	
Fixed effect: Golf City (GHA2)	-0.00431	-0.0115
	(0.0284)	(0.00967)
Fixed effect: New Takoradi (GHA3)	-0.0307	-0.0142
	(0.0231)	(0.00917)
Fixed effect: Down Quarters (NGA1)	-0.0216	-0.0132
	(0.0253)	(0.0110)
Fixed effect: Awe (NGA2)	-0.0135	-0.00721
	(0.0249)	(0.0186)
Fixed effect: Ekpoma (NGA3)	-0.0248	-0.0133
	(0.0261)	(0.0106)
Fixed effect: Batu (ETH2)	-0.00284	-0.00267
	(0.0247)	(0.0108)
Fixed effect: Moyale (ETH3)	-0.0174	-0.0160
	(0.0235)	(0.0108)
Fixed effect: Erigavo (SOM1)	0.00104	-0.00274
	(0.0231)	(0.0119)
Fixed effect: Baidoa (SOM2)	-0.00144	-0.000287
	(0.0238)	(0.0152)
Fixed effect: Enfidha (TUN1)	-0.0220	-0.00848
	(0.0277)	(0.00970)
Fixed effect: Redeyef (TUN2)	-0.0169	-0.00489
	(0.0263)	(0.0107)
Fixed effect: Hopa (TUR1)	-0.0126	-0.00403
	(0.0313)	(0.0119)
Fixed effect: Yenice (TUR2)	-0.0371*	-0.0164*
	(0.0209)	(0.00950)
Fixed effect: Kilis (TUR3)	-0.0375*	-0.0202**
	(0.0223)	(0.00974)
Fixed effect: Shahrake Jabrael (AFG1)	0.0313	0.0271
	(0.0272)	(0.0187)
Fixed effect: Behsud (AFG2)	0.0274	0.0256
	(0.0273)	(0.0189)
Fixed effect: Shahrake Mahdia (AFG3)	-0.0111	-0.00912
	(0.0250)	(0.0130)
Fixed effect: Chot Dheeran (PAK1)	0.0208	0.0340
	(0.0315)	(0.0412)
Fixed effect: Youhanabad (PAK2)	-0.0237	-0.0165
	(0.0226)	(0.0104)
Fixed effect: Keti Bandar (PAK3)	-0.0162	-0.0141
	(0.0242)	(0.0136)
Constant	0.00704	
	(0.0543)	
Observations	11,605	11,138
R-squared	0.063	

Appendix table B9. Pooled dataset regressions with research area fixed effects results for 'Has encouraged someone else in research area to migrate'

	LPM-FE	Logit-FE Mg
Root causes		
Livelihoods hardships	0.0138*	0.0139*
	(0.00742)	(0.00779)
Discontent with public services	0.0246***	0.0279***
	(0.00838)	(0.00892)
Distrust in institutions	0.0140**	0.0129*
	(0.00697)	(0.00694)
Disapproval of government	0.0130	0.0163*
	(0.00815)	(0.00876)
Perception of insecurity	0.000573	0.000344
	(0.00323)	(0.00338)
Migration-related factors		
Has lived in high-income country	0.215***	0.158***
	(0.0548)	(0.0422)
Knows of failed migration	0.0655***	0.0495***
	(0.0122)	(0.0103)
Is aware of migrants	0.0745***	0.114***
	(0.0121)	(0.0145)
Has ties to high-income country	0.0703***	0.0482***
	(0.0140)	(0.0112)
Has received remittances	0.0519***	0.0349***
	(0.0152)	(0.0110)
Other individual characteristics		
Is female	-0.0748***	-0.0740***
	(0.00967)	(0.00918)
Age	0.0141**	0.0109
	(0.00654)	(0.00687)
Age (squared)	-0.000218*	-0.000166
	(0.000113)	(0.000120)
Is married/cohabiting	-0.0315**	-0.0323***
	(0.0123)	(0.0118)
Is a parent	0.00103	0.00502
	(0.0106)	(0.0110)
Grew up in research area	0.00965	0.0115
	(0.0109)	(0.0108)
Linguistic minority status	0.0251	0.0295
	(0.0246)	(0.0242)
Household Wealth	2.28e-05	0.000814
	(0.00103)	(0.00121)
Household Wealth (squared)	7.93e-06	1.28e-07
	(1.03e-05)	(1.07e-05)
Is unemployed	0.0191	0.0124
	(0.0143)	(0.0132)
Is not in the workforce	0.00443	-0.00145
	(0.0107)	(0.0111)
Years of completed education	0.00294	0.00874***
	(0.00269)	(0.00336)
Years of completed education (squared)	8.06e-05	-0.000168
	(0.000164)	(0.000175)
Perceived relative wealth	-0.00637	-0.00752
	(0.00758)	(0.00817)
Has experienced hunger	0.0214**	0.0223**
	(0.0108)	(0.0113)
Life satisfaction	-0.00760	-0.00567
	(0.00629)	(0.00651)
Was negatively affected by Covid-19	0.0104	0.0157
	(0.0101)	(0.0109)
Has experienced violence	0.0665***	0.0570***
	(0.0168)	(0.0139)
Affected by environmental problem	0.0171	0.0152
	(0.0108)	(0.0104)

Appendix table B9. *Continued*

	LPM-FE	Logit-FE Mg
Has received social protection support	0.0506***	0.0501***
	(0.0109)	(0.0111)
Acceptance of uncertainty	0.0130***	0.0137***
	(0.00446)	(0.00455)
Thinks most people can be trusted	0.00675	0.00529
	(0.00969)	(0.00995)
Conservative gender norms	-0.00331	-0.00326
	(0.00560)	(0.00645)
Research area fixed effects		
Fixed effect: Boa Vista (CPV2)	-0.00534	-0.00603
	(0.0466)	(0.0435)
Fixed effect: Boffa (GIN1)	0.0544	0.0897
	(0.0504)	(0.0548)
Fixed effect: Dialakoro (GIN2)	-0.144***	-0.105**
	(0.0476)	(0.0518)
Fixed effect: Gbane (GHA1)	-0.187***	-0.164***
	(0.0462)	(0.0465)
Fixed effect: Golf City (GHA2)	-0.0997*	-0.0988**
	(0.0527)	(0.0496)
Fixed effect: New Takoradi (GHA3)	0.00283	-0.000754
	(0.0466)	(0.0445)
Fixed effect: Down Quarters (NGA1)	-0.00831	0.0207
	(0.0553)	(0.0596)
Fixed effect: Awe (NGA2)	-0.165***	-0.155***
	(0.0454)	(0.0489)
Fixed effect: Ekpoma (NGA3)	-0.00785	-0.00862
	(0.0502)	(0.0524)
Fixed effect: Batu (ETH2)	-0.142***	-0.124***
	(0.0450)	(0.0431)
Fixed effect: Moyale (ETH3)	-0.207***	-0.201***
	(0.0471)	(0.0454)
Fixed effect: Erigavo (SOM1)	-0.195***	-0.185***
	(0.0438)	(0.0428)
Fixed effect: Baidoa (SOM2)	-0.226***	-0.247***
	(0.0420)	(0.0409)
Fixed effect: Enfidha (TUN1)	0.102**	0.0731
	(0.0459)	(0.0474)
Fixed effect: Redeyef (TUN2)	0.153***	0.129***
	(0.0432)	(0.0464)
Fixed effect: Hopa (TUR1)	-0.189***	-0.167***
	(0.0440)	(0.0404)
Fixed effect: Yenice (TUR2)	-0.185***	-0.171***
	(0.0502)	(0.0490)
Fixed effect: Kilis (TUR3)	-0.235***	-0.234***
	(0.0460)	(0.0422)
Fixed effect: Shahrake Jabrael (AFG1)	-0.154***	-0.133***
	(0.0474)	(0.0451)
Fixed effect: Behsud (AFG2)	-0.235***	-0.194***
	(0.0482)	(0.0435)
Fixed effect: Shahrake Mahdia (AFG3)	-0.147***	-0.131***
	(0.0467)	(0.0439)
Fixed effect: Chot Dheeran (PAK1)	-0.125**	-0.106*
	(0.0496)	(0.0556)
Fixed effect: Youhanabad (PAK2)	-0.216***	-0.227***
	(0.0446)	(0.0438)
Fixed effect: Keti Bandar (PAK3)	-0.238***	-0.252***
	(0.0459)	(0.0422)
Constant	-0.173	
	(0.112)	
Observations	11,726	11,726
R-squared	0.227	