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## **Drivers of migration: A synthesis of knowledge**

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### Abstract

Migration drivers are structural elements that have the potential to facilitate, enable, constrain, and trigger migration processes. Migration drivers might increase or decrease the salience of migration, the likelihood of certain migration routes, and the desirability of different destinations. Migration drivers affect migration directly but also, sometimes even more importantly, indirectly as part of a configured migration driver environment. In our assessment of the migration literature we broadly distinguish between nine migration driver dimensions (demographic, economic, environmental, human development, individual, politico-institutional, security, socio-cultural, and supranational) and 24 migration driving factors. The circumstances, ways and modes, but also the extent to which a set of driving factors may influence migration (decision-making) processes are dependent on the functionality of migration drivers, which is a central aspect in understanding the specific role single or combinations of migration drivers may play in migration. We propose to distinguish between predisposing, mediating, proximate, and triggering migration drivers, and beyond the degree of immediacy, drivers of migration can also be characterised by their temporality, elasticity, selectivity, and geography.

**Keywords:** Migration drivers, driver taxonomy, meta-analysis

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## 1 Introduction

Despite global and local inequalities in living standards and the reality of unfulfilled life aspirations of millions if not billions of people around the world, it may be puzzling why not many more people decide to migrate to improve their socio-economic prospects, or why not many more people living in conflict-ridden areas decide to flee, even if they could. Gallup World Poll suggests that more than 750 million adults would like to migrate if they had the chance to do so (Esipova et al. 2018). Hence, globally ‘only’ one in eight people express a desire to migrate. This is a surprisingly small number given the fact that a supposedly much larger (but unknown) number of people do have *good reasons to migrate* in order to realise economic, professional, political or social opportunities. On the other hand, only small fractions of those who aspire migration are actually able to realise it.

However, why exactly do people (want to) migrate? At specific moments in people’s lives a number of factors are coming together and stimulate migration intentions which, given some achievable opportunities, may end up in temporary or permanent migration of individuals and their families. Factors that drive migration intentions (or aspirations) and actual moves are manifold and multifaceted, and migration researchers over the past decades have been identifying and describing factors and contexts that facilitate or constrain migration processes. Researchers studying drivers of migration are asking: how do migration-driving factors operate in time and space? To what extent, and in which ways, do they influence, i.e. trigger or hinder, migration decision-making of some people, but not of others? Moreover, how do multidimensional migration drivers mutually interact and create so-called *driver configurations* that may affect some people more than others in aspiring and realising migration as a viable behavioural option? Accumulating knowledge and research insights on such questions was the ambition of the EU-funded Cross-Migration project<sup>1</sup> and the focus of this paper. Based on a rapid appraisal of a vast amount of scientific studies, this study presents a synthesis and meta-description of the empirical and theoretical literature investigating the drivers of migration.

Drivers of migration have been studied for decades and the scientific literature has identified a number of fundamental dimensions of migration drivers including economic, political, social, cultural, demographic, and ecological factors (for comprehensive reviews see e.g. Ghatak et al. 1996; Hagen-Zanker 2008; King 2012; Massey et al. 1993). In order to synthesize our knowledge of migration processes more profoundly, this study summarizes, categorises and documents key insights and findings from the scientific literature across multiple domains of migration drivers which influence migration decision-making at the individual level or broader migration processes and larger movements at a more structural level. We acknowledge that a majority of the world’s population does *never* migrate. While some of the reasons might be the absence of one or a combination of the migration drivers reviewed in this study, they might not migrate due to drivers of immobility (for a review see Schewel 2019). This review article, however, examines the circumstances under which people *do* migrate or intend to do so.

A term often used in migration studies is “migration determinants”, suggesting a causal relationship between some structural factors and migration. However, this is rather misleading as it ignores not only the role of human agency in the migration process (Carling and Talleraas 2016; de Haas 2011) but also the often indirect or rather mediating role of some contextual factors in migration processes. We therefore prefer the term “drivers” (rather than causes or determinants) of migration as “structural elements that enable and constrain the exercise of agency by social actors” and they work by “[...] making certain decisions, routes or

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<sup>1</sup> <https://crossmigration.eu/>

destinations more likely and bringing them within the orbit of people’s capabilities” (Van Hear et al. 2018, 928).

At a higher level of aggregation, migration drivers are often identified as structural disparities between places (of origin and destination) that create the context in which migration becomes more likely. These spatial disparities may reflect long-standing inequalities – such as gaps in living standards between the global North and South – as well as cyclical or seasonal economic fluctuations. At lower levels of aggregation, i.e. at the meso and micro level, migration drivers facilitate or constrain migration by affecting perceptions about migration opportunities and influencing people’s capacity to realise these opportunities. Consequently, perceptions of spatial ‘opportunity gaps’ seems to be a necessary condition for people ultimately deciding for migration.

Besides structurally embedded and therefore usually slow-changing disparities in opportunities, sometimes very specific events and developments, or targeted state interventions such as recruitment programs may trigger migration. The reality is that complex multidimensional combinations of economic, political, social, and other disparities and events dynamically and heterogeneously change migration opportunities and options for different groups of people. Concisely: time-space-dependent configurations of *complex driver environments* define people’s *capacity to migrate*, i.e. their willingness and ability to change livelihoods and life situations through migration (Czaika and Reinprecht, forthcoming).

The following section identifies and describes key dimensions and features for studying and understanding migration drivers. We provide a comprehensive review of the empirical and theoretical literature identifying and analysing 24 categories of factors influencing migration processes and decision-making. This taxonomy of migration drivers structures the state of knowledge with regard to the specific role and effect of each driver on migration. We further provide a few examples of some more complex configurations, i.e. interactions of two or more migration drivers. We conclude with an outlook for further research identifying a number of research gaps, which may be relevant for future migration research to address for a more profound understanding of the functionings of some single or more complex configurations of migration drivers.

## 2 A migration driver taxonomy

In an attempt to structure this knowledge accumulation on the drivers of migration, we have developed a taxonomy consisting of 24 driving factors, organised in nine so-called driver dimensions, that may all play either a direct or indirect role in (*independently or conjointly*) enabling or constraining migration processes at the micro, meso, and macro levels (Table 1). We identified driving factors both deductively through our and experts’ knowledge of the migration literature and inductively when conducting the rapid evidence assessment. The *dimensionality* of migration drivers refers to the nine societal areas a migration driver may be situated in, each comprising of a number of driving factors further specifying these broadly defined dimensions. Our extensive literature review has revealed that these 24 are not only priority areas of migration driver research but also seem to play a key role for a more fundamental understanding of the dynamics of migration processes. Sets of migration drivers form *driver environments* that affect people in their aspiration formation and actual decision-making process.

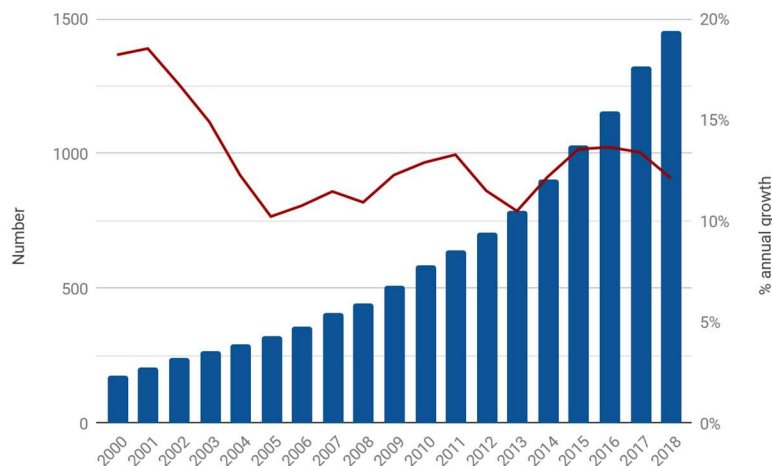
**Table 1:** Migration driver dimensions and factors

<b>DIMENSIONS</b>	<b>FACTORS</b>
<b>DEMOGRAPHIC</b>	POPULATION DYNAMICS
	FAMILY SIZE & STRUCTURE
<b>ECONOMIC</b>	ECONOMIC & BUSINESS CONDITIONS
	LABOUR MARKETS & EMPLOYMENT
	URBAN / RURAL DEVELOPMENT & LIVING STANDARDS
	POVERTY & INEQUALITY
<b>ENVIRONMENTAL</b>	CLIMATE CHANGE & ENVIRONMENTAL CONDITIONS
	NATURAL DISASTERS & ENVIRONMENTAL SHOCKS
<b>HUMAN DEVELOPMENT</b>	EDUCATION SERVICES & TRAINING OPPORTUNITIES
	HEALTH SERVICES & SITUATION
<b>INDIVIDUAL</b>	PERSONAL RESOURCES & MIGRATION EXPERIENCE
	MIGRANT ASPIRATIONS & ATTITUDES
<b>POLITICO- INSTITUTIONAL</b>	PUBLIC INFRASTRUCTURE, SERVICES & PROVISIONS
	MIGRATION GOVERNANCE & INFRASTRUCTURE
	MIGRATION POLICY & OTHER PUBLIC POLICIES
	CIVIL & POLITICAL RIGHTS
<b>SECURITY</b>	CONFLICT, WAR, & VIOLENCE
	POLITICAL SITUATION, REPRESSION & REGIME TRANSITIONS
<b>SOCIO-CULTURAL</b>	MIGRANT COMMUNITIES & NETWORKS
	CULTURAL NORMS & TIES
	GENDER RELATIONS
<b>SUPRANATIONAL</b>	GLOBALISATION & (POST)COLONIALISM
	TRANSNATIONAL TIES
	INTERNATIONAL RELATIONS & GEOPOLITICAL TRANSFORMATIONS

Figure 1 presents the development of the total publications of journal articles covering migration drivers in the Migration Research Hub database (<https://migrationresearch.com/>) since 2000. The total number of studies of migration drivers has increased more than 8-fold with an average annual growth rate of over twelve per cent. Based on a comprehensive (though not exhaustive) review and assessment of several hundred studies, we present a meta-

description of major trends in the research of migration drivers, and also summarise the relevant findings establishing the state of knowledge across the migration drivers taxonomy. Our aim is to assess the relevance and importance of respective drivers of migration, as well as the extent to which combinations of drivers and driver interactions have been explored in the literature.

**Figure 1:** Journal articles of ‘migration drivers’ in the Migration Research Hub (n = 1454)



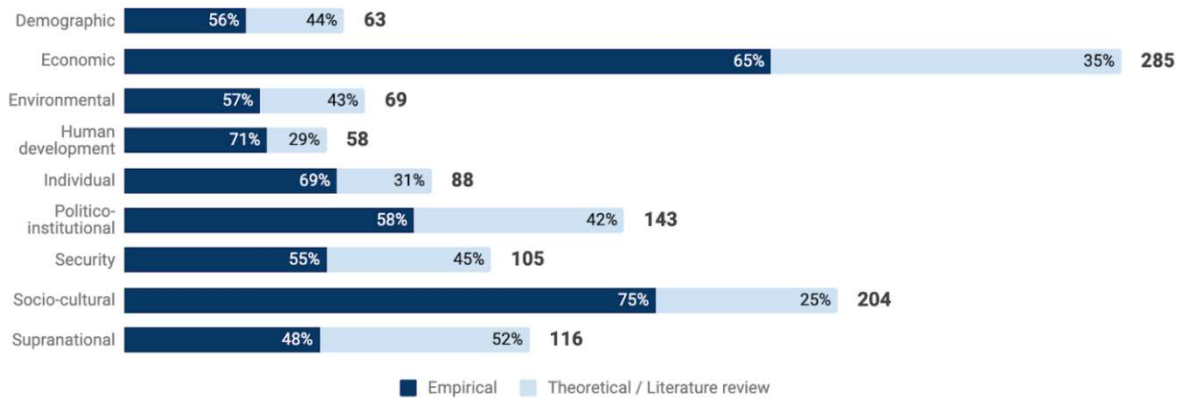
Note: The blue bars represent the cumulative number of journal articles of migration drivers, the red line the 3-year rolling average annual growth rate of journal articles in the Migration Research Hub (<https://migrationresearch.com/>, data extracted 12/07/2019)

### 3 Migration drivers - a synthesis of knowledge

#### 3.1 Methodology

The following synthesis of research on migration drivers is based on a widely organised collection and assessment of over 660 research documents that we have been collating. The compilation of this comprehensive (though not exhaustive) repository of English-language studies includes articles in peer-reviewed journals, particularly empirical ones, but also books, book chapters, reports, and working papers published and indexed. A key selection criterion was that these studies present novel empirical evidence or were influential in the migration studies field and/or come from respected organisations (e.g. King 2012; EASO 2016). Of the 660 studies that we have identified using various search engines (such as Google Scholar and Scopus), authors’ literature databases, documents’ cross-references, and through an expert workshop, about 200 documents have been excluded, as they were considered not relevant or not accessible. As a consequence, we reviewed a sample of 463 studies, of which 293 were empirical studies using original primary and/or secondary data (72 studies employing qualitative methods, 198 studies using quantitative methods, and 23 mixed methods studies). The remaining studies are either of theoretical (64), experimental (3), or qualitative but non-empirical (125) nature.

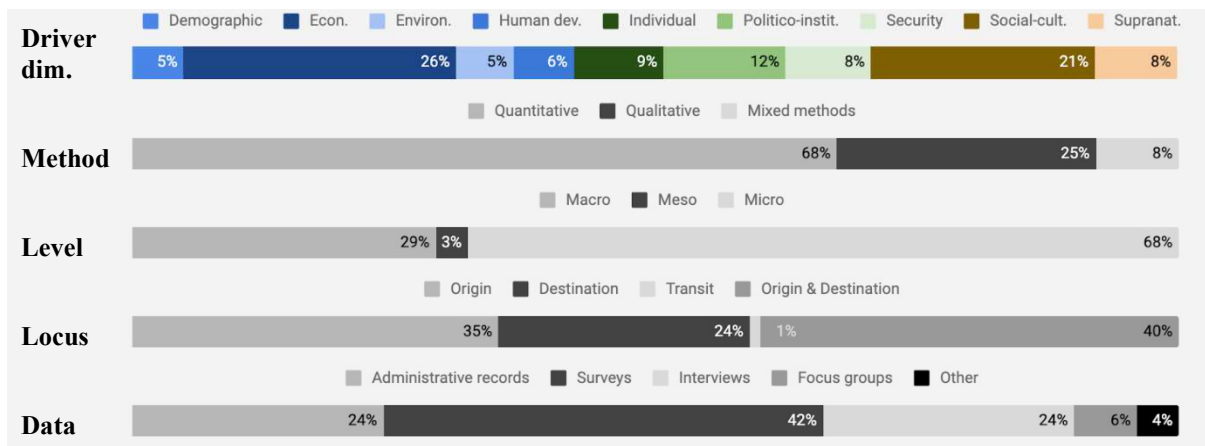
**Figure 2:** Number and distribution of empirical and non-empirical studies, by migration driver dimension (n = 463)



All studies have been coded by their source, year of publication, driver dimensions (9 codes), driving factors (24 codes), methodology, type of data source, migration form addressed, locus of study, level of analysis, observation period, and geographical coverage of study. Besides coding these categories, we have extracted and analysed the main findings of these studies in order to synthesize the state of evidence-based knowledge on migration drivers. Obviously, studies are of different quality in terms of the justification and application of the methodological approaches, but also with regard to their external and internal validity and reliability. We have not attempted to systematically assess these quality criteria but trust that *collectively* these studies are authoritative for understanding the role, effects, and functionalities of this comprehensive set of driving factors in migration processes. Figure 2 displays the share and distribution of reviewed empirical and non-empirical studies by driver dimension. On average, we identified 2.5 migration drivers per empirical study, explaining why the total number of drivers exceeds the total number of studies analysed (463). Economic and socio-cultural drivers outnumber the other driver dimensions while environmental drivers have received relatively less attention (Box 0). While this might reflect a biased selection of the literature, we believe that our extensive selection is broadly representative of the literature on migration drivers. Box 0 gives an overview of the distribution of the reviewed empirical studies according to driver dimension, method and level of analysis, locus of the migration driver, and data sources used. Almost half of all studies evaluate economic and socio-cultural drivers. Two thirds use quantitative methods and only eight per cent mixed methods. Micro level studies dominate in our review, accounting for two thirds of all studies while meso level studies merely represent a small minority of three per cent. The level corresponds to the study, which is not necessarily the same level the driver operates. There is an almost equal proportion of studies that evaluate migration drivers that operate at the origin, destination, or both the origin and destination. Merely one per cent focuses on drivers in transit. Almost half of all studies with administrative records use surveys and interviews account for almost a quarter each. Other methods (e.g. experimental, participant observation) account for four per cent.



**Box 0: Overview of empirical studies (n = 296)**



Henceforth, all graphs refer to empirical studies only. Figure 3 shows the distribution of reviewed quantitative, qualitative, and mixed methods studies. The latter two have gained in relative importance since the 2000s.

**Figure 3: Evaluated empirical studies by methodology, 1990-2018 (n = 293)**

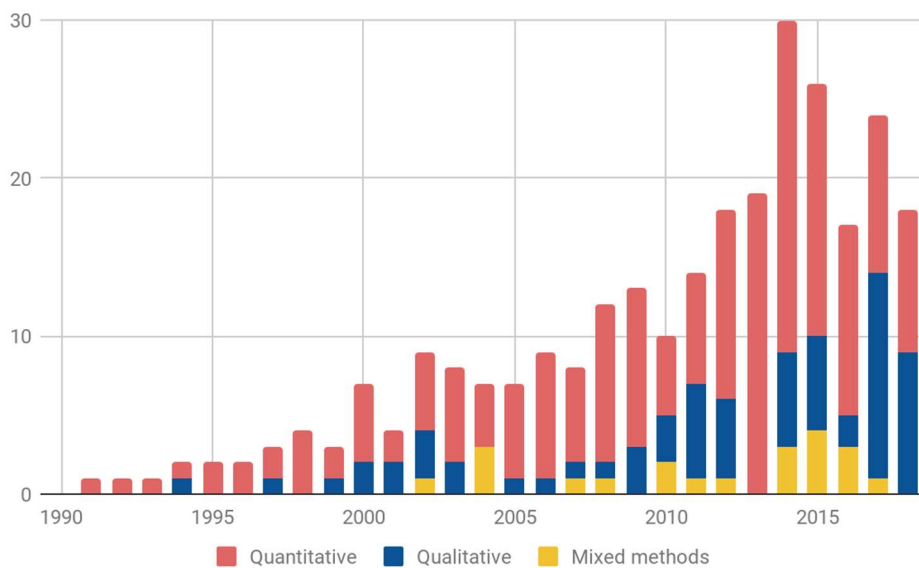
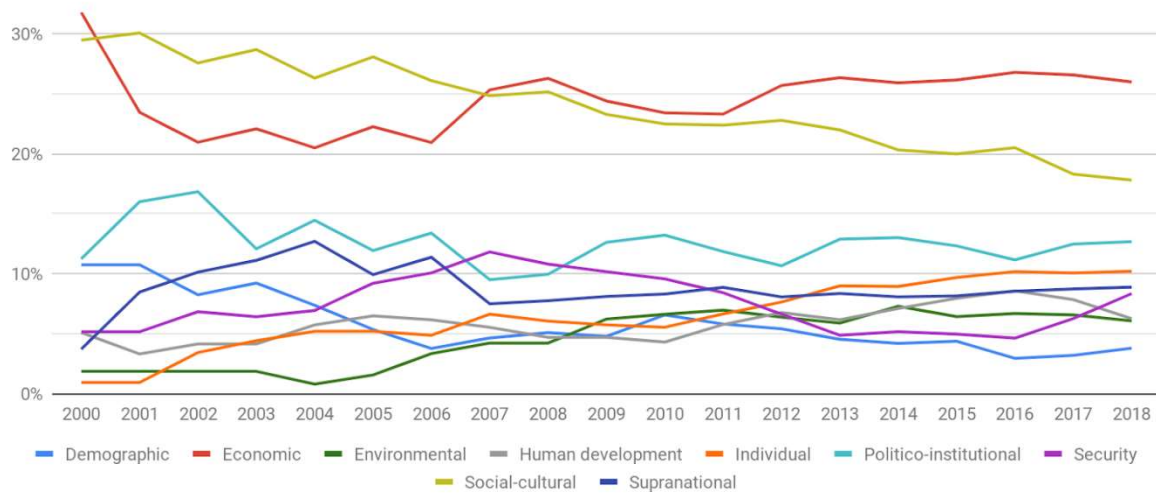


Figure 4 shows that the distribution of migration drivers identified by the empirical literature has remained relatively stable over time with economic drivers accounting for around a quarter of all migration drivers. The relative importance of socio-cultural and demographic drivers has decreased while that of individual and environmental drivers has increased.

**Figure 4:** Distribution of migration drivers in empirical studies, 2000-2018  
(5-year rolling average, n = 271)



### 3.2 State of Knowledge

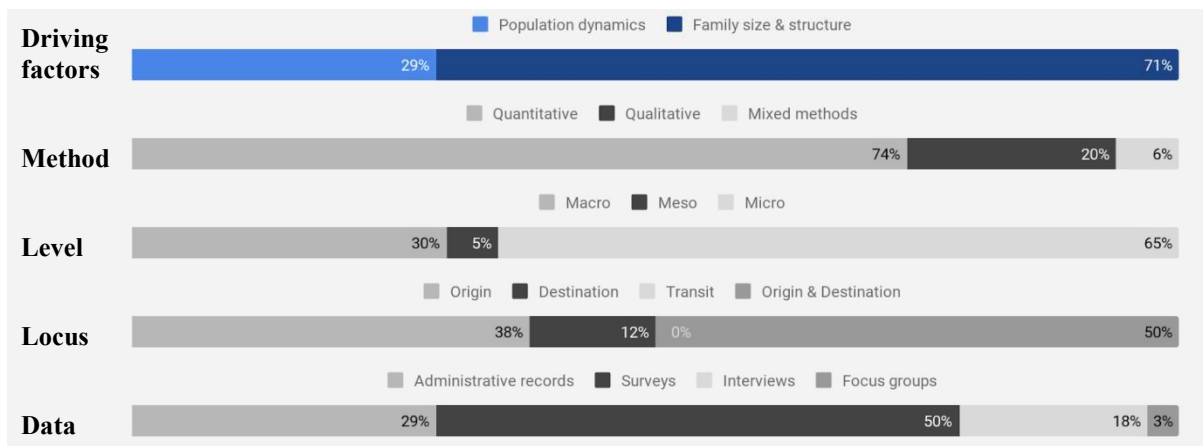
This section summarises the academic literature on migration drivers, supplemented by relevant grey literature. The focal point is empirical studies, complemented by relevant theoretical underpinnings. We highlight cases when certain drivers have been studied disproportionately for certain migration forms or geographical regions. The focus, however, remains a succinct overview of the state of knowledge. Unlike Timmerman et al. (2016), we do not establish a hierarchy of drivers and group them in macro, meso, and micro level drivers. We acknowledge and point out when certain driving factors, such as aspirations and personal resources, overwhelmingly operate at one level only. However, other drivers, such as gender relations, influence migration decisions at all levels and we hence prefer to avoid establishing a hierarchy.

Akin to the summary box above, we present a graphical overview of the empirical studies reviewed for each driver dimension and show the distribution of driving factors, method, level of analysis, locus of the driver, and the data source(s) used.

#### A. Demographic drivers

Family size and structure make up over two thirds of all demographic drivers identified by 35 empirical studies (Box 1). Demographic drivers are mostly studied quantitatively at the micro level involving surveys.

## Box 1: Demographic drivers (n = 35)



### Population dynamics

Demographic transitions help explain the broad development of human mobility in Europe over the last 200 years, such as urbanisation, emigration, and immigration (Zelinsky 1971). In absolute terms, more people migrate from larger origin countries to larger destination countries (DeWaard et al. 2012; Kim and Cohen 2010). Recent empirical research has focused on population size, population growth, and the population age structure as macro-level drivers of migration, mostly from Africa to Europe. The underlying factors connecting these are fertility and mortality. Higher fertility rates increase the future share of the young population and create a so-called ‘youth bulge’ that may –in absolute terms- increase the migration potential in the future (Migali et al. 2018). The larger the young population (both in absolute and relative terms), the more people are likely to emigrate from a country, as confirmed by a variety of quantitative studies of bilateral migration flows (Bell et al. 2015; Hatton and Williamson 2005; Mayda 2010; Péridy 2006). Their potential gains from migration are higher at young age and population pressure, even more when combined with meagre economic prospects at the origin might drive unemployed young people to look for economic opportunities elsewhere, resulting in internal or international migration. Lower fertility and mortality rates at destinations increase the need for international immigration once sources of internal migration have become exhausted (Skeldon 2006). International migration might also be needed to sustain social security and health systems (Lutz et al. 2003).

### Family size & structure

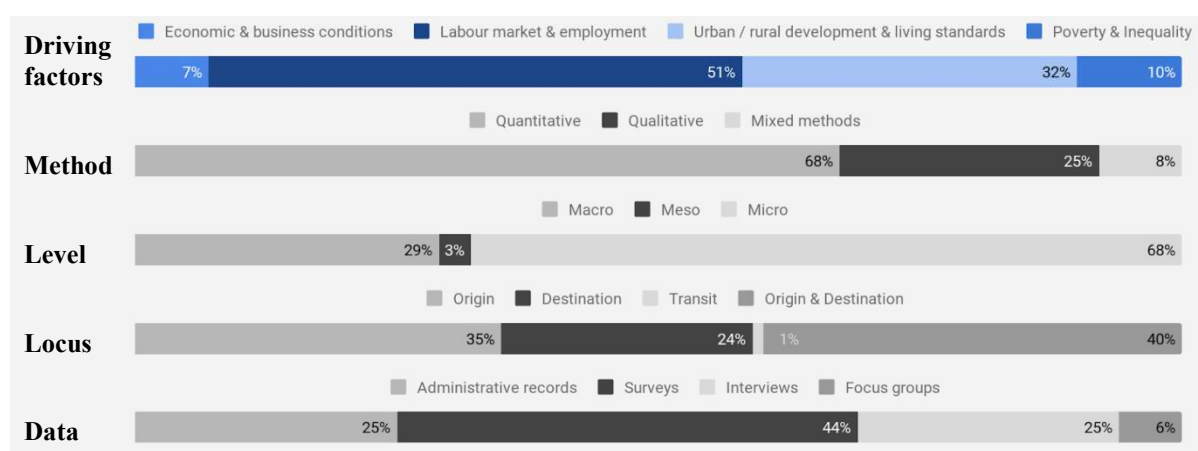
In accordance with the new economics of labour migration (Oded and Levhari 1982), several studies find evidence for the effect of family size and structure on migration patterns as well as the influential role the family plays in migration decisions (Meyer 2018). Household size is associated with internal migration of family members to sometimes different rural or urban areas and into various economic sectors to diversify risk and maximise household income (Gubhaju and De Jong 2009; Rozelle et al. 1993; VanWey 2003). International migration is also driven by the similar goals (Constant and Massey 2002; Maroufof 2017). The presence of children or elderly dependents generally increases male migration while decreasing female migration, highlighting the gendered division of the work-care nexus (Brockerhoff and Eu 1993; De Haan et al. 2002; De Jong 2000). In contrast, the presence of elderly non-dependent family members increases female migration, as they are able to participate in the labour market

(Danzon and Dietz 2014). Life course events, such as retirement or children leaving the household, further drive migration as people are not constrained by employment or educational links (Stockdale 2014). Similarly, being married and in a dual breadwinning household deters migration (Etlung et al. 2018; Mincer 1978). Secondary-earner wives become tied movers and follow their husbands (Geist and McManus 2012).

## B. Economic drivers

More than half of all identified economic drivers in the 182 empirical studies point to the importance of labour market and employment conditions. Quantitative micro level studies using data from surveys are most commonly used. Qualitative studies account for a quarter of all studies (Box 2).

**Box 2: Economic drivers (n = 185)**



### Economic & business conditions

Short- to medium-term changes and fluctuations in macroeconomic conditions, particularly in gross domestic product (GDP) in sending and receiving countries, drive migration (Czaika 2015). Historically, economic downturns in rural areas have led to internal migration to urban areas while national economic downturns have resulted in international migration from Europe to the United States (Massey 1988). Changes in GDP that have been found to drive different migration forms include the destination country's business cycle (Beine et al. 2019) and GDP growth (Czaika and de Haas 2017; Docquier et al. 2014; Flahaux et al. 2013; Naudé 2010). Structural economic shocks or changes, such as those induced by joining or establishing a free trade (e.g. NAFTA) or free movement (e.g. UK immigration after EU enlargement in 2004), can lead to a 'migration hump', which is a sudden increase in migration followed by an intermediate decline and convergence to a long-term level (Martin and Taylor 1996). The empirical studies generally find that GDP growth in sending countries decreases migration while GDP growth in receiving countries increases migration. The effect of negative economic shocks on migration is not necessarily merely the inverse of positive shocks and their magnitudes might differ considerably, in line with a 'migration prospect theory' where potential migrants value losses more than equal-sized gains (Czaika 2015). Deteriorating economic conditions at the current residence might hence outweigh economic conditions in receiving countries and push people to migrate (Kunuroglu et al. 2018). Other economic drivers are recessions, which are usually characterised by a significant rise in unemployment numbers (Jennissen 2003). The 2008 financial and economic crisis and its aftermath caused considerable

macroeconomic disruptions and fluctuations in various Western economies and beyond. Its impact on migration varied with a migrant's main reason for migration and employment status (Beets 2009). For instance, students prefer to study in countries less affected by the crisis; but the desire to emigrate is generally stronger in countries where large parts of the population suffers more from economic decline or stagnation (Cairns 2016; Van Mol and Timmermann 2014). The reviewed empirical studies are mainly quantitative and the majority thereof study intra-European migration or migration to European countries, potentially due to the availability of high quality (panel) data.

## **Labour markets & employment**

Neoclassical migration theory, based on Sjaastad's (1962) cost-benefit model and Lee's (1966) push-pull model of migration, suggests that individuals migrate due to economic opportunities, such as employment, at the destination and/or lack thereof at the origin in order to maximise expected income (or utility). Macro level quantitative studies find that bilateral migration flows respond to unemployment rates and differentials (Hooghe et al. 2008; Migali et al. 2018; Palmer and Pytliková 2015; Geis et al. 2013), job opportunities (Baizán and González-Ferrer 2016), and wages (Beine et al. 2014; Grogger and Hanson 2011; Hatton and Williamson 2005). The magnitudes differ across individuals and countries. For instance, high-skilled migrants respond more strongly to wage differentials than low-skilled ones (Grossa and Schmitt 2012) and higher origin wages decrease emigration from developed countries but not from developing countries (Ruyssen et al. 2014). Micro level studies add that individual unemployment, employment satisfaction, and anticipated career opportunities drive migration (Bartolini et al. 2017; Hoppe and Fujishiro 2015; Zaiceva and Zimmermann 2008). Unemployment is often associated with a decrease in emigration propensity due to poverty constraints (DeWaard et al. 2012). Qualitative empirical studies confirm the explanatory power of the above-mentioned factors in a variety of countries (Afifi 2011; Bal 2014; Robinson and Carey 2000). While employment opportunities are primary drivers for labour migrants, they also affect inter alia asylum seekers, refugees, and irregular migrants, albeit often of secondary importance to other drivers (Dimitriadi 2017; Düvell 2018; Hagen-Zanker and Mallett 2016; Marouf 2017; Van Hear et al. 2018).

## **Regional (rural/urban) development & living standards**

The migration-development nexus has been widely studied with a majority of studies surveying the literature and concluding that development will not stop migration, at least not in the short term (Castles 2009; de Haas 2007). In fact, development - generally proxied by GDP per capita - might initially increase internal migration from rural to urban areas or across international borders, as immobile potential migrants overcome poverty constraints (Czaika and de Haas 2012). This is the migration transition - an inverse U-shaped relation between migration and development (Zelinsky 1971). Higher GDP leads to increased emigration in developing countries, particularly in Asia and Africa, while the opposite is true in more developed countries (Czaika and de Haas 2014; Hatton and Williamson 2005; Sanderson and Kentor 2009). The same logic applies to internal migration (Guriev and Vakulenko 2015). Higher GDP and economic prosperity generally attract migrants (Ortega and Peri 2013; Palmer and Pytliková 2015). This effect seems to be particularly strong for migrants from developing countries (Ruyssen et al. 2014). Living standards, conditions, and costs as well as lifestyle at both origin and destination have further been widely found to drive a wide variety of migration forms, such as internal, international, high-skilled, and irregular migration (Baizán and González-Ferrer 2016; Baláž et al. 2016; de Haas and Fokkema 2011; Péridy 2006). Housing

is another factor and is an important driver of internal migration, as well as retirement and lifestyle migration (Bijker et al. 2012; Clark and Maas 2015; Stockdale 2014; Williams et al. 1997).

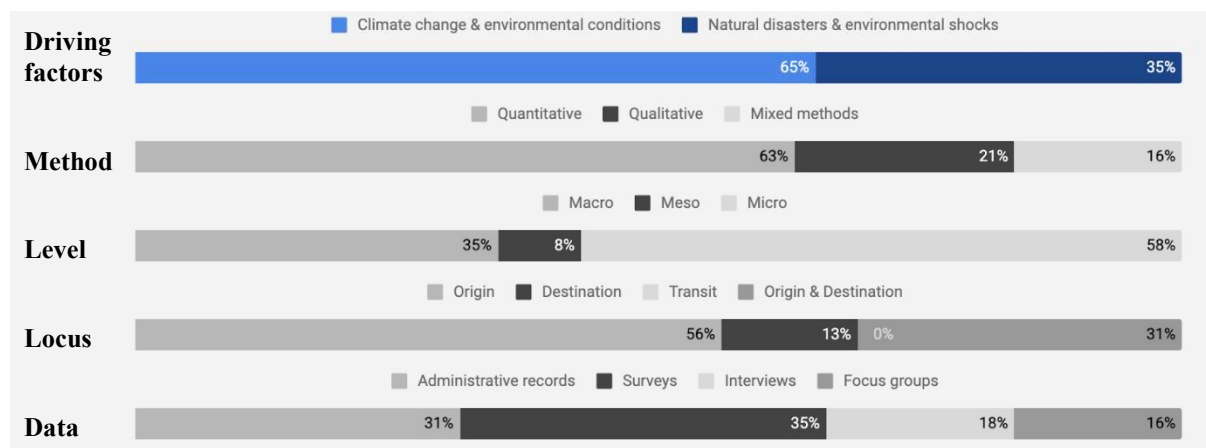
## Poverty & inequality

While there is mixed evidence on the relation between migration and poverty (Black et al. 2006; Skeldon 2002), consensus emerged that it is usually not the poorest who migrate. Similar to the migration-development nexus, poverty and migration are associated in an inverse U-shape relationship (Du et al. 2005). Material and non-material relocation costs are the reason why the poor are constrained to migrate, even in crises (Danzer and Dietz 2014). However, it is not only absolute deprivation that drives, or rather hinders, migration, but also relative deprivation and the more subjective feelings of being poor in comparison to others in one’s reference group (Czaika 2012; Czaika 2013; Stark and Taylor 1989). The relation between relative deprivation, or inequality in general, and migration is ambiguous with studies suggesting that it is positive (Stark et al. 2009), negative (Czaika and de Haas 2012), or, mirroring development, follows an inverse U-shape (Péridy 2006). Lastly, sociotropic concerns about inequality further affect migration decisions from very unequal countries (Labonté et al. 2015; Robins 2018). Internal and international inequality in terms of economic discrepancies between sending and receiving countries have been found to affect the selection of migrants according to Borjas’ (1989) theoretical predictions (Mayda 2010). Higher inequality in receiving countries might attract migrants, as it signals social mobility (Czaika and de Haas 2012) but might deter those who favour social justice and are averse to potential losses in income (Stark and Yitzhaki 1988). While neoclassical theory predicts that migrants will migrate where the returns to their skills and education is highest, some evidence shows that people often migrate *despite* lower returns in receiving countries, suggesting that other drivers might be at play creating broader ‘driver complexes’ (Belot and Hatton 2012; Brücker and Defoort 2009).

## C. Environmental drivers

Quantitative data and methods account for two thirds of the 39 empirical studies on environmental drivers. The locus of the analysis has overwhelmingly been at the origin country (Box 3).

**Box 3: Environmental drivers (n = 39)**



## **Climate change & environmental conditions**

The role of climate change as a predisposing driver of internal and international migration has been studied extensively at the macro and micro levels by qualitative and quantitative research, although almost exclusively for developing countries and the global South (Migali et al. 2018, 109-114). The majority of quantitative studies that we reviewed find that slow-onset changes in temperatures and precipitation are associated with emigration, particularly from more agricultural countries and rural areas (Backhaus et al. 2015; Bohra-Mishra et al. 2014; Cai et al. 2016; Nawrotzki et al. 2015). Review articles support these findings (Berlemann and Steinhardt 2017; Neumann and Hermans 2017). However, extreme climate in some regions is the norm and migration has long been a coping mechanism to reduce environmental stress (Jónsson 2010). Those most adversely affected might be financially constrained and unable to move internally or internationally (Veronis and McLeman 2014). Migration as adaptation is not available to them (Cattaneo et al. 2019). Some studies conclude that climate change does not explain migration intentions and behaviour as such (Abu et al. 2014; Beine and Parsons 2015; Codjoe et al. 2017; Mortreux and Barnett 2009). Studies rather emphasise the indirect effect of climate change on migration through its impact on economic factors, such as incomes, livelihood opportunities, and food security (Black et al. 2014; Khavarian-Garmsir et al. 2019), health-related risks, such as malaria and dengue (Marchiori et al. 2012), or conflict (Abel et al. 2019). The influential Foresight report stresses the interaction between environmental, economic, social, and political factors (Foresight 2011). If climate change is evaluated alongside economic factors, the latter's effects are often stronger (Joseph and Wodon 2013). While individuals state to migrate due to economic motivations, the underlying reasons were of environmental nature (Obokata et al. 2014). Climate is often considered merely at the origin as a push factor but a favourable climate in receiving countries or regions also drives immigration of labour migrants and retirees (Gottlieb and Joseph 2006; Poston et al. 2009; Rodriguez et al. 2004; Sunil et al. 2007; van der Geest 2011).

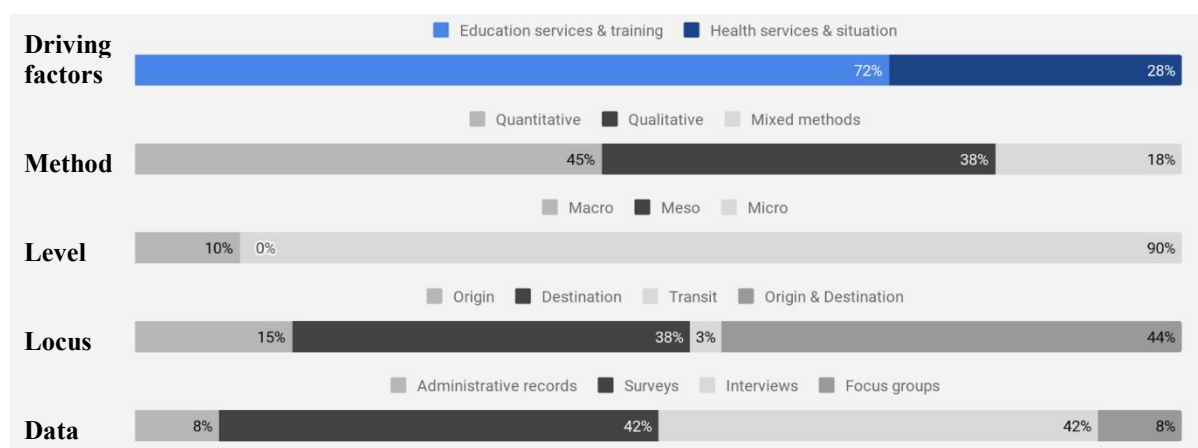
## **Natural disasters & environmental shocks**

Natural disasters and environmental shocks refer to fast-onset concrete and identifiable events, such as floods, storms, droughts, or earthquakes that trigger migration. They further include man-made disasters and accidents. Natural disasters lead to increased internal, particularly rural-to-urban, and some (mostly temporary) international migration (Beine and Parsons 2015; Islam 2018; World Food Program 2017) while frequent natural disasters may discourage immigration (Ruysen and Rayp 2014). However, environmental shocks may reinforce economic drivers, such as lack of employment prospects (Warner et al. 2010; Wodon et al. 2014). While individuals may refer to economic factors (such as joblessness or market inaccessibility) as reasons for migration, the underlying driving factor is often environmental (Afifi 2011; Mora and Taylor 2006). Others find no significant effect of disasters in sending countries on internal permanent migration (Bohra-Mishra et al. 2014) or the number of asylum seekers (Neumayer 2005). Natural disasters might lead to temporary migration and indirectly affect migration through increasing risks of social conflicts (Naudé 2010). Whether disasters lead to migration in the first place, and whether it is temporary or permanent, depends on a number of factors, such as adaptability and the presence or absence of broader socio-economic drivers. As for climate change and natural disasters, the overwhelming majority of studies examine developing countries.

## D. Human development drivers

Almost three quarters of the 41 empirical studies that evaluate human development drivers focus on education services, almost exclusively at the micro level using quantitative but also qualitative methods and survey and interview data (Box 4).

**Box 4: Human development drivers (n = 41)**



### Education services & training opportunities

Higher education of good quality is the primary but not the only driver of student mobility. Students migrate internally or internationally due to the quality and reputation of universities but also due to available scholarship, costs, and future labour market prospects at the destination (Beine et al. 2014; Esau 2005; Findlay et al. 2011; Staniscia 2012). Cities and regions with good universities not only attract students but also retain graduates, potentially due to available jobs and employer-university interactions (Ciriaci 2014). Education opportunities for oneself or one's children in receiving countries and lack thereof in sending countries also drive migration internally (Poertner et al. 2011), internationally (Timmerman et al. 2016), including unaccompanied minors (Correa-Velez et al. 2017; Vervliet et al. 2015), asylum seekers, refugees, and irregular migrants (Day and White 2001; McAuliffe 2017). However, these groups often migrate for other considerations, such as security, labour market factors, or residency/citizenship, and education is rather secondary (Dimitriadi 2017; Tran and Nyland 2011). Professional training and professional education to advance one's career are main driving factors for high-skilled migration, such as health professionals (Awases et al. 2004; Gray and Johnson 2009), and consistently rank among the top reasons for emigration (Bartolini et al. 2017).

### Health services & situation

No reviewed study has concluded that the quality of the healthcare system as such is the sole or main driver of migration. However, there is ample evidence that the situation of the healthcare system acts as a push factor for the emigration of healthcare professionals from developing countries plagued by epidemics, and in particular by the burden and risks of contracting communicable diseases (Aiken et al. 2004; Awases et al. 2004). Health risks in sending countries, such as malaria and dengue, trigger migration from affected countries (Marchiori et al. 2012). Health considerations, often associated with a better climate and the

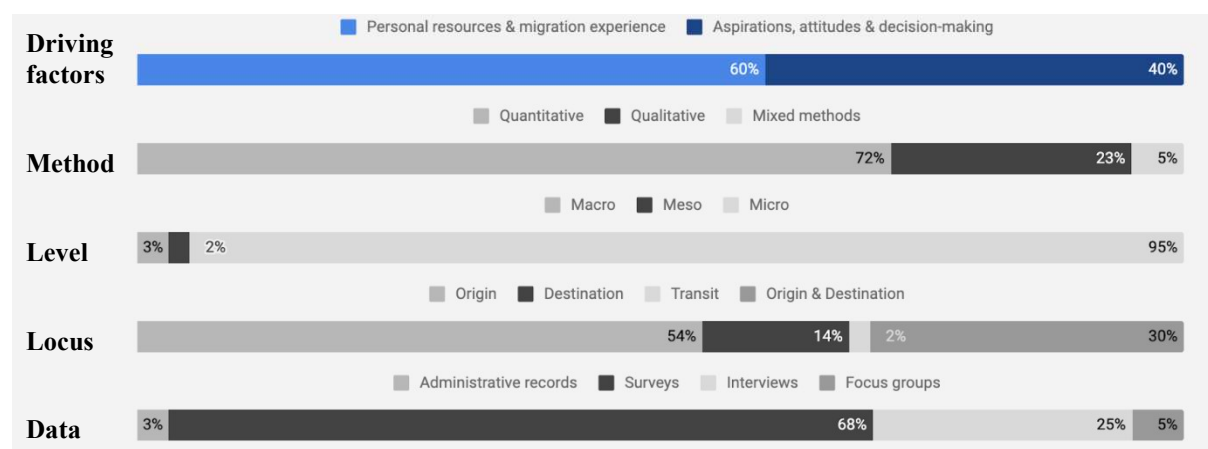


availability of quality healthcare at reasonable cost, are central to retirement migration for residents of developed countries, such as North-South migration in Europe or retirement in Mexico for Americans (Rodriguez et al. 2004; Sunil et al. 2007). Good healthcare systems and healthcare quality differentials can act as a pull factor for various migration forms (Geis et al. 2013; McAuliffe 2017; Narayan and Smyth 2006; REACH 2016). Lastly, healthy people are more likely to follow up on migration intentions (Van Dalen and Henkens 2013).

## E. Individual drivers

Personal (psychological) migration drivers operate at the individual level and are almost exclusively studied at that level using quantitative surveys with a focus on origin countries (Box 5).

**Box 5: Individual drivers (n = 61)**



### Personal resources & migration experience

Personal and household resources include both material and non-material resources that facilitate or constrain migration. Resources that affect migration (intentions and decisions) include information and access to information and communication technologies (ICTs) (Benson-Rae and Rawlinson 2003; Dekker and Engbersen 2016; Farré and Fasani 2013; Muto 2012; Vilhelmson and Thulin 2013) and wealth and property (Kley 2011; Zijlstra and van Liempt 2017). These resources not only affect whether individuals migrate or not, and if so, whether and where they migrate to internally or internationally, and by which means including legal route they migrate. They are also particularly relevant *during* the migration journey. A lack of financial resources constrains the poorest who might not be able to afford relocation costs (De Jong et al. 2005), visas, or a smuggler (Düvell 2018). However, this might not apply to more developed countries where economic progress is rather associated with declining migration (Dustmann and Okatenko 2014; McHenry 2015). Larger household landholdings alleviate financial constraints and increases international migration initially but decreases once landholdings are large enough to sustain a regular income from farming (Oda 2007). Individual or household migration experience, a psychological resource, has widely been found to be central to migration intentions and behaviour for a variety of migration forms by qualitative and quantitative research (Etling et al. 2018; Richter and Taylor 2008; Stark and Taylor 1989; Timmerman et al. 2016; Tsegai 2007; Van Mol 2016). Individuals who have migrated in the past or who have family members with migration experience are more likely to migrate in the future.

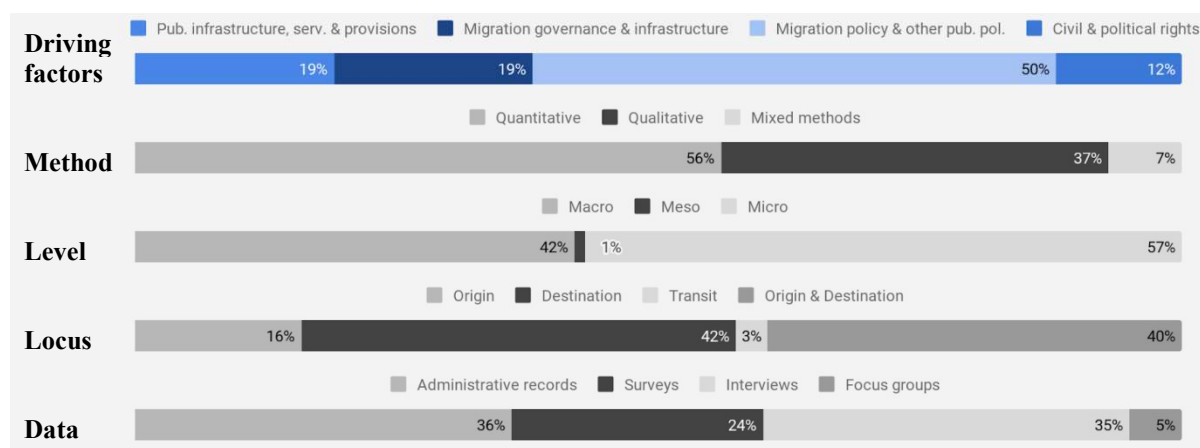
## Aspirations, attitudes & decision-making

Aspirations generally refer to one of three things. First, “the desire for a better life” (Özden et al. 2018) and fulfilment of individuals or collective needs (Cai et al. 2014; Meyer 2018). Individuals who migrate to realise their aspirations might actually see their aspirations increase rather than decrease after migration, as they are exposed to new opportunities and lifestyles. Unfulfilled aspirations (‘aspiration gaps’) are both causes and consequences of migration (Czaika and Vothknecht 2014). Alternatively, migration might decrease aspirations, as migrants are unable to fulfill their aspirations at the destination (Boccagni 2017). Second, attitudes, views, and perceptions about one’s own country and the aspiration to live in another country influence whether and where individuals migrate or intend to do so (Carling et al. 2013; Schapendonk 2012). Individual characteristics, such as personality traits further affect who migrates or intends to do so (Canache et al. 2013; Frieze et al. 2006; Hoppe and Fujishiro 2015; Jokela 2009; Remhof et al. 2014; van Dalen and Henkens 2013). For instance, mental openness to new experiences and adventure has consistently been found to drive migration intentions and behaviour. However, their effects are secondary to individual socio-economic and demographic characteristics. Emotions and feelings, often in conjunction with other drivers, also affect migration (Boccagni and Bladassar 2015).

### F. Politico-institutional drivers

Immigration policy as constraining or facilitating factor appears in about half of the 83 empirical studies that investigate politico-institutional drivers. Around half the studies are quantitative and use micro-level data from surveys or administrative records (Box 6).

**Box 6:** Politico-institutional drivers (n = 83)



### Public infrastructure, services & provisions

The conjecture that welfare services and benefits affect the scale and composition of migration flows (Borjas 1999) has been at the heart of political and academic debates. Generous benefits at destinations may attract low-skilled migrants and deter high-skilled ones due to the implied tax burden. While there is some quantitative evidence for a selection and attraction effect (Belot and Hatton 2012; De Jong et al. 2005; DeWaard et al. 2012; Fafchamps and Shilpi 2013), other studies (Giulietti et al. 2013) and literature reviews (Giulietti 2014; Nannestad 2007) question the centrality of the welfare state and highlight the importance of other economic and socio-cultural drivers. While access to social services at the origin might decrease migration (Ibáñez

and Vélez 2008), it might also increase migration, as it relaxes financial constraints (Hagen-Zanker and Himmelstine 2013). The type and structure of benefits matters, with labour market protection and insurance-style systems generally deterring immigration, as they create insiders and outsiders (Geis et al. 2013). The effects of welfare differ across countries. While higher welfare spending at both origin and destination increases flows from developing to developed countries, as they relax financial constraints and provide a safety net, they decrease migration between affluent countries, due to high implied tax rates (Palmer and Pytliková 2015; Ruysen et al. 2014; Yoo and Koo 2014). The effect of public infrastructure, such as roads, is ambiguous. It might increase migration by decreasing the cost of transportation or decrease migration by improving economic opportunities (Gachassin 2013). Contentment with local public services explains variations in migration intentions in developing countries (Dustmann and Okatenko 2014).

### **Migration governance & infrastructure**

Migration governance and infrastructure refers to the agents that mediate migration processes, often termed the ‘migration industry’. This closely connects to the role of state agents and migrant networks, but is still distinct. The migration industry is of particular importance to irregular migrants who are unable to use legal migration channels. Its existence facilitates migration and smugglers frequently decide ‘on behalf of the migrants’ about migration routes and migrants’ destination (Crawley 2010; Havinga and Böcker 1999; Hugo et al. 2017; Koser 1997; Robinson and Segrott 2002; Vervliet et al. 2015). While there is little empirical evidence on the effect of smugglers on migration (Sanchez 2017), states have increasingly tried to deter the use of smugglers to curb irregular migration (Watkins 2017). An often-overlooked facilitator of international migration are recruitment agencies. Historically, they attracted guestworkers post-WWII and nowadays they focus both on high-skilled individuals, such as nurses, and on low-skilled ones, such as domestic workers and seasonal agricultural workers, mostly from developing countries or poorer countries within the European Union (Massey 1988; Labonté et al. 2015; Spaan and Naerssen 2017).

### **Migration policy & other public policies**

Sceptics hold that migration policies are unable to affect the volume and composition of migration flows, as social dynamics, globalisation and transnationalism, and political systems drive migration processes (Castles 2004a; 2004b). The empirical quantitative literature finds mixed evidence, partly due to difficulties in measuring migration policies (Migali et al. 2018, p. 51-2). Policy restrictiveness indices affect the number of asylum applications (Hatton 2004; Hatton and Moloney 2017; Thielemann 2006) and international migrants (Fitzgerald et al. 2014). However, stricter migration policies have unintended consequences, such as reducing emigration and circular migration and promoting permanent settlement of irregular migrants, thereby resulting in higher net migration (Cornelius 2001; Czaika and de Haas 2017). The deterrence effect might vary with specific policies: restrictive visa requirements deter irregular entries while restrictive visa practices increase attempts of irregular entry (Czaika and Hobolth 2016). Perceived generous treatment of migrants and lenient migration policies might increase immigration (McAuliffe and Jayasuriya 2016). Qualitative research has equally found mixed evidence. Restrictive migration policies, or perceptions thereof, make migration more difficult (Carling 2004) and potentially deflect some migrants to alternative destinations that are deemed more welcoming (Barthel and Neumayer 2005; Crawley and Hagen-Zanker 2019; Hagen-Zanker and Mallett 2016) or merely change the migration route (REACH 2017b) while they are not important for others (Gilbert and Koser 2006). Other public policies might

disproportionately affect (low-skilled) migrants are free movement regimes, such as Schengen (Beine et al. 2019; Brücker and Defoort 2009), and citizenship regulations (Alarian and Goodman 2017; Grossa and Schmitt 2012; Fitzgerald et al. 2014). The effectiveness of information campaigns - generally aimed at deterring irregular migration - is not very clear and rather limited (Browne 2015; Tjaden et al. 2018). Lastly, emigration policies of sending countries might affect migration, even though their impact might be secondary to economic and socio-cultural migration drivers (de Haas and Vezzoli 2011).

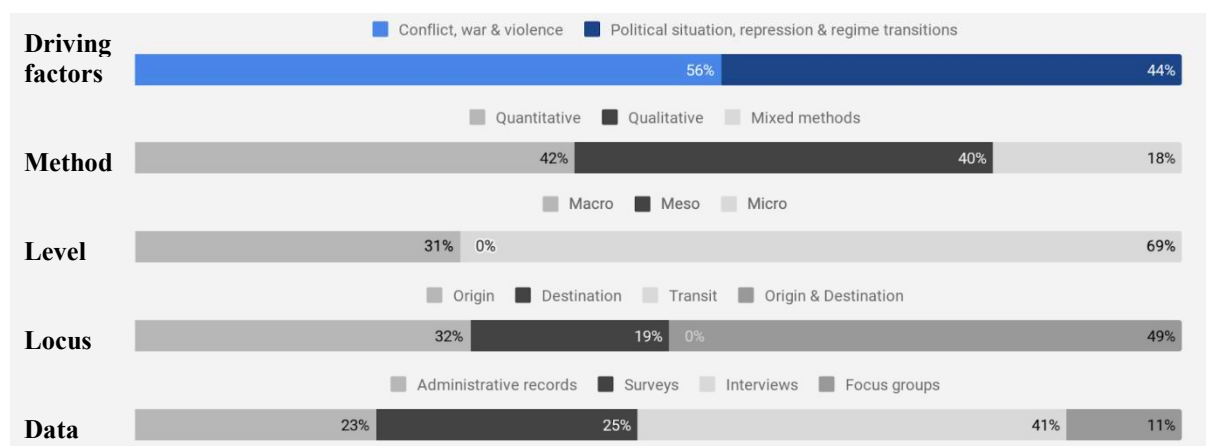
## Civil & political rights

Civil rights establish that individuals should not be subject to unequal treatment due to characteristics such as their gender, race, religion, origin, and sexual orientation. Political rights include the ability to influence the political agenda. Citizenship, or another recognised legal status, is the requirement to be entitled to civil and political rights in origin, transit, and destination countries. Concerns with their legal status have been found to drive emigration of asylum seekers and refugees from host and transit countries to destinations in expectation of (easier) access to refugee and residence status (Crawley and Hagen-Zanker 2019; Düvell 2018). Discrimination and a lack of political and civil rights and liberties in origin countries increases the number of individuals who seek asylum in Australia, the EU, and OECD (Correa-Velez et al. 2017; Erdal and Oeppen 2018; Hatton 2004; Hatton and Moloney 2017; Neumayer 2005; REACH 2017a). Rights of migrants in receiving countries might encourage labour migration (Ruhs 2013). Gender discrimination might constrain or encourage migration (Ruysen and Salomone 2018). Racism, anti-immigrant attitudes, and discrimination in receiving countries deter (high-skilled) migration as potential migrants might anticipate integration problems (Duch et al. 2019; Gorinas and Pytliková 2017).

## G. Security-related drivers

Security-related drivers have been equally analysed by qualitative and quantitative methods, predominantly at the micro level. A relatively large minority (18%) of studies uses mixed methods. The 58 empirical studies have roughly equally analysed conflict, war, and violence and political repression as security-related drivers (Box 7).

**Box 7: Security-related drivers (n = 58)**



## **Conflict, war & violence**

Civil, ethnic and religious conflict and war, as well as torture, persecution and other human rights violations are drivers of migration, triggering flows of migrants as diverse as asylum seekers, refugees, irregular migrants, unaccompanied migrant minors, and internally displaced persons (IDPs). Safety and security concerns might initially decrease migration, as it is unsafe to prepare for migration and individuals might anticipate and hope for an improved security situation, but might increase migration propensity once insecurity or violence levels exceed a certain, personally bearable threshold (Bohra-Mishra and Massey 2011). This is in line with studies that find that insecurity is not a driver of migration desires per se (Kirwin and Anderson 2018) but individuals migrate due to the experience of direct violence (Lundquist and Massey 2005; van Wijk 2010). A plethora of empirical studies confirm the link between insecurity in sending countries and emigration at the micro and macro levels, i.e. for individual migrants and bilateral migration flows (Castles et al. 2003; Correa-Velez et al. 2017; Davenport et al. 2003; Hagen-Zanker and Mallett 2016; Hatton 2004; McAuliffe 2017; Migali et al. 2018; Moore and Shellman 2007; Ruysen and Rayp 2014). War and conflict drive migration often rather indirectly through the effect on infrastructure, economic opportunities, and deprivation in livelihoods (Khavarian-Garmsir et al. 2019). While conflict might trigger migration, environmental or political drivers (Moore and Shellman 2004; Naudé 2010) might cause conflict itself. Most studies have generally focused on countries in Africa and the Middle East, particularly Afghanistan, Iraq, and Syria, with a minority examining European destinations.

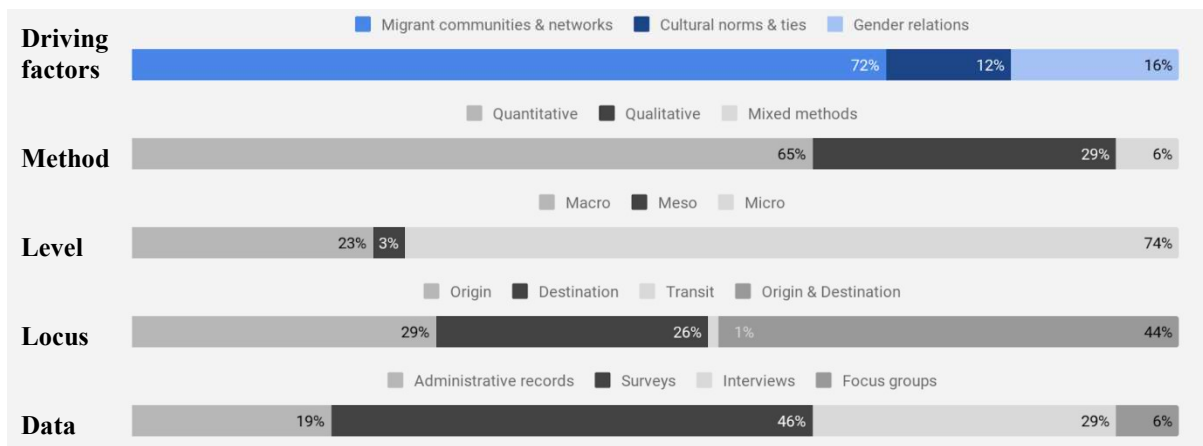
## **Political situation, repression & regime transitions**

The political-institutional situation in sending and receiving countries includes a variety of factors that may drive migration. Such factors include repression, persecution, political terror, and lack of political freedom (Correa-Velez et al. 2017; Hatton and Moloney 2017; McAuliffe 2017; Narayan and Smyth 2006), military conscription (Mallett et al. 2017; World Food Program 2017), political instability (Bal 2014; Naudé 2010). Moreover, lack of and dissatisfaction with democratic and civil rights (Kirwin and Anderson 2018; Moore and Shellman 2004), high corruption (Lapshyna 2014), and unsuccessful regime transitions and political protests (Davenport et al. 2003) may trigger emigration intentions. People migrate because they are directly affected (e.g. through conscription), or fear of being affected in the future, or due to the general insecurity created by political insecurity. Factors more closely linked with conflict and with implications for physical security, such as political terror, and forced military conscription seem to better explain migration intentions and behaviour than democracy deficiencies and open protest. The latter is linked to non-conflict induced migration and might be particularly relevant for the young and high-skilled migrants who face fewer barriers to emigration (Etling et al. 2018; Labonté et al. 2015). Political (deterrence) factors in receiving countries are anti-immigrant climate or restrictive policies, which has been negatively associated with asylum applications (Neumayer 2004) and bilateral migration flows (Fitzgerald et al. 2014).

## **H. Socio-cultural drivers**

Migrant communities and networks account for the vast majority of socio-cultural drivers in the 152 empirical studies reviewed. Interestingly, while migrant networks operate at the meso level, the level of analysis has most often been the micro level, reflecting the centrality of the individual or household in empirical evaluations of migration drivers (Box 8).

### Box 8: Socio-cultural drivers (n = 152)



### Migrant communities & networks

Migrant networks and transnational communities are recognised as important drivers of migration (Arnold 1951; Boyd 1989; Ritchey 1976; Fawcett 1989). They facilitate and sustain migration by providing information and assistance. Their importance is repeatedly confirmed for all migration forms by a large amount of quantitative empirical studies (Beine et al. 2014; Bertoli and Ruysen 2018; Garip 2008; Haug 2008; Massey and España 1987; Migali et al. 2018). Migrant networks are generally measured as the stock of migrants from the same family, town, region, or country at the destination. The flow of migrants, however, also affects migration, as potential migrants follow others (Epstein and Gang 2006). Networks also affect the gender and skill composition of migration flows (Hoang 2011; McKenzie and Rapoport 2010; Richter and Taylor 2008). Qualitative studies generally confirm the importance of networks for a substantial proportion of migrants (Düvell 2018; Maroufof 2017; Havinga and Böcker 1999) but also highlight the importance of other drivers and that migrants move in the absence of networks (Gilbert and Koser 2006; Koser 1997; Sue et al. 2018). The importance of networks might increase with restrictive migration policies, as settled migrants act as gatekeepers and bridgeheads (Carling 2004). However, they might not matter if migration is expected too difficult (Collyer 2005). Networks do not necessarily always increase migration, as new migrants compete for jobs with established migrants (Heitmueller 2006). The relation might hence follow an inverse U-shape and be likely non-linear over time (Bauer et al. 2009; de Haas 2010).

### Cultural norms & ties

As migrant networks grow in prevalence through cumulative causation (cf. Massey 1990), a culture of migration can emerge. Migration of some community members changes the attitudes and perceptions towards migration of those who stay behind. Migration is often embedded in the local culture and a rite of passage (Massey et al. 1993). Emigrants are social role models and individuals migrate due to the inability to fill a social role (Hernández-Carretero and Carling 2012). In a culture of migration, individuals migrate even if they do not have migrant networks or families and friends at destinations. Migration becomes self-perpetuating and ‘the thing to do’. Studies have confirmed the importance of the culture of migration and individuals’ yearning to migrate to conform to cultural norms (Alpes 2012; Castle and Diarra 2003). Individuals migrate even if they would have greater economic opportunities at home (Ali

2007). Those who stay behind are seen as lazy, losers, to have failed, undesirable as potential mates, and face feelings of shame and embarrassment (Bylander 2015; Heering and van der Erf 2004; Kandel and Massey 2002). Men seem to be disproportionately affected by cultural shame, as migration is often linked to masculinity (Maroufof and Kouki 2017). Religion is another factor that influences migratory norms and might make migration more or less likely (Hagan and Ebaugh 2003).

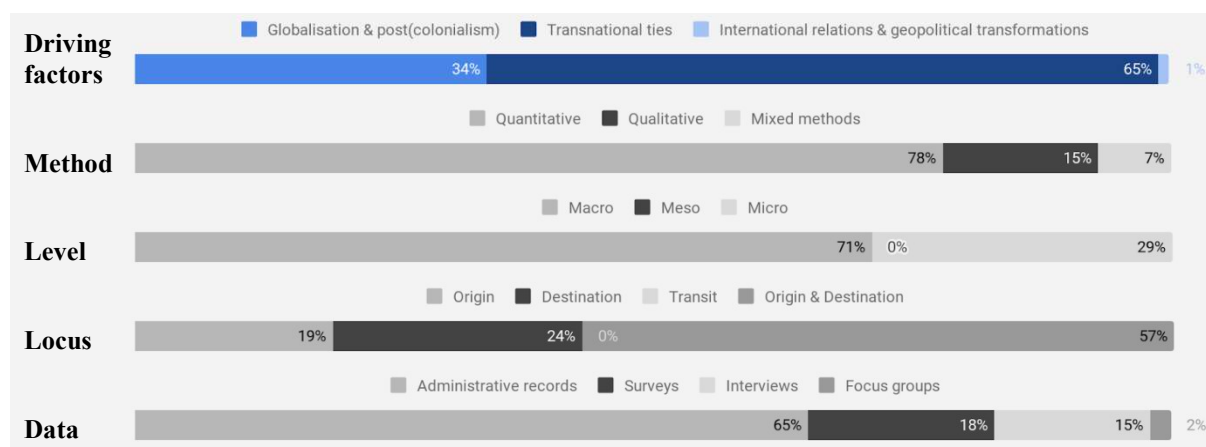
## Gender relations

Gender affects migration at the macro level (differential labour demand, e.g. domestic work vs. construction), meso level (work-care nexus), and micro level (role in the household) (Lutz 2010). Societal gender roles and norms, such as caregiving and breadwinning, affect men and women’s propensities to migrate (Danzner and Dietz 2014; De Jong 2000) as well as the types of migration networks and migration channels available and migrants’ use thereof (Heering et al. 2004; Hoang 2011). People migrate to conform to gendered cultural norms (Bylander 2015; Hernández-Carretero and Carling 2012; Kandel and Massey 2002) or to escape respective norms (Rutten and Verstappen 2014). Gender discrimination might be both an incentive and obstacle to migrate (Ruysen and Salomone 2018). Marriage is another driver of migration. While it has mostly been confined to women to join their spouses (Czaika 2012; Schoorl et al. 2000; Toma and Vause 2014), in countries with distorted sex ratios such as China it is increasingly men migrating to urban areas or abroad to look for wives (Davin 2007). Marriage migration is also used to circumvent barriers to migration, such as poverty, for rural-urban migration (Rao and Finnoff 2015) or migration policies for international migration (Böcker 1994). Family gender norms drive migration with the employment status of wives being a driver of migration only in egalitarian family contexts (Cooke 2008).

## I. Supranational drivers

Transnational ties account for the majority of supranational drivers in the 56 empirical studies reviewed. While international relations as a driver of migration was merely empirically investigated by one study, several theoretical studies and literature reviews engage with this driver. The methods overwhelmingly used are quantitative, the analysis is at the macro level and the locus is both origin and destination country due to the transnationality of supranational drivers (Box 9).

**Box 9: Supranational drivers (n = 56)**



## Globalisation & (Post-)Colonialism

Globalisation and (post)colonial ties are linkages between countries that make migration more likely (Jennissen 2007). A variety of studies confirm that migration flows are up to three times higher between former colonies for different forms of migration (Barthel and Neumayer 2015, Belot and Hatton 2012; DeWaard et al. 2012; Fitzgerald et al. 2014; Kim and Cohen 2010). Emigrants to former colonial powers seem negatively selected, potentially reflecting the ease of migration and less stringent migration policies (Grogger and Hanson 2011). The majority of studies are quantitative and evaluate bilateral migration flows. Qualitative studies, however, also highlight the importance of colonial relations for destination choice (Day and White 2001; Robinson and Carey 2000).

Migration is often seen as structurally driven by the global demand (pull) for cheap and flexible labour to sustain continued economic growth and development in capitalist destination countries (Piore 1979; Sassen 1991). The effects of globalisation on migration manifest themselves in various economic ties and dependencies such as trade relations, foreign direct investment (FDI), exchange rates, and foreign aid. While economic theory holds that trade and migration are substitutes, increased trade in fact seems to increase migration (Campaniello 2014), potentially due to its effect on incomes or cultural linkages between countries. Multinational and transnational corporations are recognised as actors that drive migration, particularly of high-skilled labour migrants (Beaverstock 1994). Total FDI has a negative effect on emigration (Sanderson and Kentor 2009). However, FDI in the primary sector (e.g. mining, farming) accelerates emigration while FDI in the secondary sector (e.g. manufacturing) decreases emigration. This is likely connected to the inverse U-shaped relation between migration and development. Aid, through its effects on incomes and transnational ties, has generally been found to increase emigration (Berthélemy et al. 2009; Parsons and Winters 2014). However, aid might decrease emigration, particularly rural development aid (Gamso and Yuldashev 2018) and aid targeted on health and education, as the improvement of public services outweighs the income effect (Lanati and Thiele 2018a; 2018b). Exchange rates are critical, as remittances are a central aspect for individuals who migrate to diversify household risk.

### Transnational ties

Transnational ties are linguistic, cultural, geographic, and religious factors that transcend national boundaries and connect two or more countries (Jennissen 2007). A common or similar language increases bilateral migration flows (Barthel and Neumayer 2015; Beine and Parsons 2015; Kim and Cohen 2010; Péridy 2006). Other studies find evidence for the importance of English-speaking destinations (Adserà and Pytliková 2015; Cairns 2016; Havinga and Böcker 1999) or discount the importance of language (Nica 2015; Ruysen and Rayp 2014). Geographical distance generally decreases migration flows, as monetary and non-monetary migration costs increase, while a shared border increases migration (Caragliu et al. 2013; Fafchamps and Shilpi 2013; Wang et al. 2016). While transnational ties equally affect all forms of migration, their importance nevertheless differ. Distance is associated with positive skill selection, indicating that high-skilled migrants are able to travel farther while low-skilled migrants mostly migrate rather internally or to neighbouring or proximate countries (Belot and Hatton 2012; Grogger and Hanson 2011). This is in line with findings that asylum seekers and refugees mostly migrate to neighbouring countries (Loschmann et al. 2017; Yoo and Koo 2014). Moreover, cultural factors explain migration *between* developed countries better than traditional economic factors (Belot and Ederveen 2012). While transnational ties have generally been assumed to be constant over time, the effect of culture might be time varying



and asymmetric and increasing cultural proximity usually increases bilateral migration volumes (Lanati and Venturini 2018).

## **International relations & geopolitical transformations**

Major geopolitical shifts have affected the direction and magnitude of migration flows (Czaika and de Haas 2014). Such events include but are not limited to (the end of) World War II, the Cold War, the dissolution of the USSR, the fall of communism, and the breakup of Yugoslavia, or 9/11. While they have been widely acknowledged central to migration flows, they are rarely quantified and the vast majority of reviewed studies are reviews of the theoretical and qualitative literature. International relations also drive migration indirectly. Most obviously, deteriorating international relations might result in war or the breakup of colonial empires or multi-ethnic states and drive migration (Weiner 1996). However, international relations might also influence immigration and emigration policies (Massey 1999; Weiner 1985). For instance, the lifting of the Iron Curtain removed emigration restrictions and resulted in increased emigration (Salt and Clarke 2000). International relations might further affect aid, trade, and investment, all of which driving migration in complex ways.

## **4 Migration driver functions and configurations**

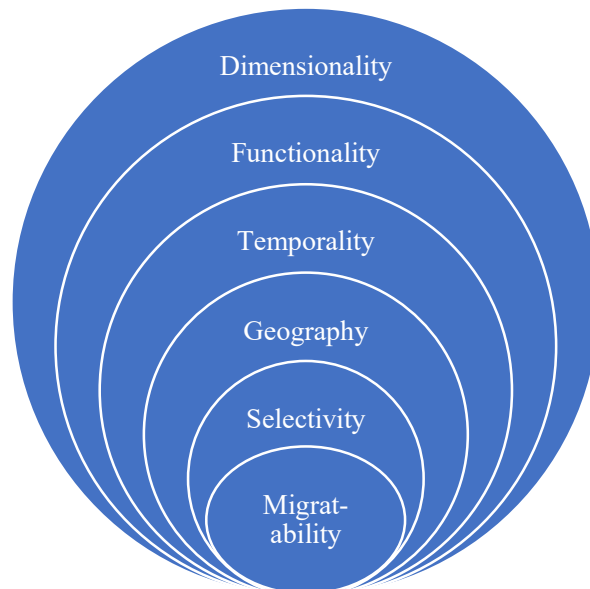
### *4.1 Typology of migration drivers*

The circumstances, the ways and modes, and the extent to which a set of driving factors may influence migration (decision-making) processes are dependent on the *functionality* of migration drivers, which is a central aspect in understanding the specific role single or combinations of migration drivers may play in migration. Migration as a behavioural option is highly context-dependent, and as such, the configuration of complex driver environments is very specific to the time and space within which migration decisions are made. However, context-specific functionalities of specific migration drivers can be generalised and categorised along some key functions (cf. Van Hear et al. 2018). For instance, *predisposing* drivers define fundamental societal structures and structural disparities. As the basic methodological premise, we assume that (potential) migrants, as any other human beings, respond to extrinsic or intrinsic stimuli when deciding about migration (Czaika and Reinprecht, forthcoming). From this perspective, predisposing factors define the broadest, most fundamental layer of *opportunity structures* (see de Haas 2010).

Predisposing factors should not be confused with the often-mentioned ‘root causes’ of migration which are “thought of as the social and political conditions that induce departures—especially poverty, repression, and violent conflict” (Carling and Talleraas 2016, 6). Predisposing factors do not directly (i.e. ‘unfiltered’) affect people’s decision-making but are rather moderated through some *mediating* drivers that facilitate, constrain, accelerate, consolidate, or diminish migration (Van Hear et al. 2018). For instance, cultural norms (e.g. castes, social status) or provisions of political civil rights may mediate deeply embedded structures of economic and social inequalities and may actually ‘absorb’ (neutralise) these inequality structures as stimuli to overcome socio-economic disadvantages through emigration. More *proximate* drivers further “downscale” and localise broader macro-structures bringing them closer to the more immediate ‘sphere’ of a potential migration decision-maker. Disaggregation of macro-level structures and developments translate conceptually and practically into more relevant factors at the meso and micro level while the ultimately *triggering* factors of migration are the actual reasons why people migrate, including unemployment, job offer, marriage, persecution, flooding, recruitment etc.

Beyond the degree of immediacy, drivers of migration can also be characterised and categorised by their temporality, elasticity, selectivity, and geography. While *temporality* is referring to the (semi-)permanent or transitory character of a driver (environment), the *elasticity* rather describes the velocity of change of a driver (environment). For instance, demographic transitions or adaptations of cultural norms are usually rather slow-changing and therefore relatively inelastic (‘resilient’) structural drivers while natural disasters, or a coup d’état, are phenomena resulting in rapidly changing driver environments (“shocks”). *Geography* refers to both the locus and scope of a migration driver. The geographical scope of a macro-structural driver can be anything between local and global, while the locus of a migration driver refers to the geographical context (origin versus destination) a specific driver is operating. The *selectivity* refers to the fact that broader social, economic or political transformations do normally not homogeneously affect all societal groups in the same way and to the same extent. Business cycles, for instance affect societal groups in different ways and to a varying degree depending on the intersection of age, gender, ethnicity, social status, profession etc. Finally, all layers of this migration driver typology affect and condition the *migratability* of people.

**Figure 5:** Typology of migration drivers



#### 4.2 Migration driver configurations

As an indication of multiple driver configurations in existing studies, Table 2 shows the overlap between the nine driver dimensions with darker blue shading reflecting a larger overlap. The values for rows and columns do not add up to 100 percent, as one empirical study is on average associated with 2.5 driver dimensions. For instance, the first row indicates that 69 percent of all empirical studies of demographic drivers also evaluate economic drivers. Demographic studies are almost equally likely to be examined conjointly with socio-cultural drivers (66 percent) but a lot less likely with security (9 percent) or environmental drivers (0 percent). The column on the far right indicates that 9 percent of all studies that examine demographic drivers do so without reference to any of the other 8 driver dimensions.

**Table 2:** Overlap between driver dimensions (n = 296)

	Demog.	Econ.	Envir.	Human dev.	Indiv.	Pol. Instit.	Sec.	Soc.-cult.	Supra-nat.	single driver
Demographic		69%	0%	14%	23%	17%	9%	66%	17%	9%
Economic	13%		13%	18%	17%	31%	23%	54%	21%	10%
Environmental	0%	62%		13%	8%	5%	23%	28%	10%	31%
Human dev.	12%	80%	12%		17%	37%	34%	51%	20%	5%
Individual	13%	51%	5%	11%		11%	11%	48%	3%	25%
Politico-institut.	7%	70%	2%	18%	8%		36%	48%	27%	10%
Security	5%	74%	16%	24%	12%	52%		50%	29%	7%
Socio-cultural	15%	65%	7%	14%	19%	26%	19%		19%	11%
Supranational	11%	70%	7%	14%	4%	39%	30%	52%		11%

Table 2 demonstrates that the dominance of economic drivers stems not from the fact that many studies only examine economic drivers but that they are analysed conjointly with all other migration drivers, ranging from 51 percent of individual drivers to 80 percent of human development drivers (third column). Economic drivers have predominantly been studied with socio-cultural drivers, reflecting a considerable number of quantitative studies that examine the importance of economic factors vs. migrant networks. Environmental factors are often studied in conjunction with economic drivers, reflecting the link between economic opportunities and the environment. Almost a third of studies of environmental drivers examine them in isolation from other drivers. Human development drivers are in four out of five studies examined together with economic drivers, reflecting the interplay between employment, education, and training. Individual drivers are often studied with socio-cultural drivers, as personal migration experience is often linked to migrant networks and cultural ties. The miniscule overlap with supranational drivers (3 percent) highlights the fact that studies generally evaluate either the micro or the macro level but very rarely both. A quarter of studies have evaluated individual aspirations, attitudes, and resources without recourse to other driver dimensions. Politico-institutional drivers are rarely studied in combination with environmental drivers but there is a considerable overlap with security-related drivers.

While the evaluated empirical studies study on average 2.5 driving factors, only very few studies explicitly explore more complex combinations of migration drivers, for instance migration policy and non-policy factors and their complex interactions in shaping migration processes (cf. Düvell 2018; Van Hear et al. 2018). Complex interactions between economic and security-related drivers is another example (Crawley and Skleparis 2018). Interaction effects occur when the effect of one driver depends on the presence and intensity of another factor driving migration. That is, interaction effects indicate that a third factor influences the (causal) relationship between a driver of migration and migration as the outcome. Interaction effects are part of complex configurations of factors establishing a context-specific arrangement of several drivers of migration. Some drivers of a configuration may interact with each other while other drivers may not. Ragin (1987, 25) explains the idea of configuration and intersection of drivers (conditions) as follows:

When a causal argument cites a combination of conditions, it is concerned with their intersection. It is the intersection of a set of conditions in time and space that produces many of the large scale qualitative changes ... that interest social scientists, not the separate or independent effects of these conditions. Such processes exhibit what John Stuart Mill called “chemical causation”. The basic idea is that a phenomenon or change emerges from the intersection of appropriate pre-conditions – the right ingredients for change. In the absence of any one of the essential ingredients, the phenomenon – or the change – does not occur. This conjunctural or combinatorial nature is a key feature of causal complexity.

Identifying and describing migration driver configurations and analysing the ways and extent by which migration drivers intersect and interact is at the heart of more advanced driver analyses. The following examples of some simple configurations shall provide an indication of intersecting and interacting drivers and their hypothesised conjoint effect on migration.

### **Economic recession - public policy - social inequality**

Effects of deteriorating economic situations and rising unemployment on migration are usually mediated by factors including (i) the presence of various compensating or reinforcing policies (such as welfare policies or the ‘social safety net’), (ii) the quality of public infrastructure such as transportation, e.g. in order to commute to more distant work places, or (iii) the quality and flexibility of education services that may absorb surplus labour and qualify for other jobs. Economic recession may also increase the already existent social tensions due to multidimensional (economic, social, political etc.) inequalities which conjointly may trigger people to leave, or if tensions turn violent, to flee to another safe and secure place.

### **Population growth - environmental degradation - conflict**

Population growth may affect migration indirectly through environmental and security-related drivers of migration (Hugo 1996). Population pressures can lead to pressure on agricultural land and result in environmental degradation and subsequent rural-to-urban migration. A declining amount of arable land (e.g. due to land grabbing) further intensifies pressure on remaining agricultural land and might lead to food shortages. The increased rural-urban migration might put strain on the urban labour market (Black et al. 2011). Food shortages and urban unemployment might be the catalyst for conflict and civil unrest. Weather affects wages in countries with large agricultural sectors (Marchiori et al. 2012) and droughts themselves may lead to rural-urban migration, which accelerates urban ecological deterioration, food insecurity and socio-economic instability. These issues affect educated and skilled middle classes that migrate as a result (Veronis and McLeman 2014).

### **Industrialisation - demography - environmental degradation**

Macro developments linked to industrialisation may exacerbate demographic factors, with population growth creating additional pressures on labour markets, increasing scarcity of cultivable land, or creating environmental degradation. In addition, industrialisation may drive social disruptions, which may upset traditional social structures, hereby driving migration (Boswell 2002).

## **Immigration restrictions - economic situation - migration networks**

The effects and effectiveness of immigration restrictions on the scale and composition of migration very much depends on the economic situation in both countries of origin and destination. Nevertheless, even if immigration restrictions are tight and economic opportunities (at destination) are limited, the existence and paradoxical reinforcement of well-established migration networks and a ‘culture of migration’ may be perpetuating migration (Czaika and de Haas 2017).

## **5 Conclusion and Outlook**

This paper illustrates a recurring and growing academic (and political!) interest in drivers and ‘root causes’ of migration. The review of a vast amount of most empirical studies on the broadest range of migration drivers has provided a rather mixed picture of the current state of knowledge. While some (economic) drivers are extensively studied, other driving factors have only received minor attention. For instance, besides a growing research output on environmental drivers, research exploring individual-level factors such as migration aspirations, experience, and decision-making have only gained recent prominence in the literature. While economic and social-cultural drivers are still the focus in a large part of this literature, other factors are still understudied including the role of family ties in migration, or constraining and facilitating effects of various technologies. Different migration drivers affect different societal groups differently. In order to advance our understanding of the relative importance of different migration drivers in certain contexts, future research on migration drivers will have to disaggregate and specify driver analyses along various intersections of age, gender, geography, sector of employment, socio-economic status etc.

Moreover, the empirical and theoretical literature remains relatively silent with regard to more certain driver functionalities and configurations, which are based on more complex interaction and interdependencies. Migration drivers operate within and across locations, but also ‘in between’, i.e. in transit locations and along the individual migration journey, and as such reflect their shifting significance over time and space (Crawley and Skleparis 2018). The empirical literature on migration drivers is also very limited with regard to the changing character of drivers during migration (see e.g., de Haas (2010), on contextual feedback effects). Migration drivers are not static per se but may change dynamically. Some structural drivers are rapidly changing (‘shocks’) while other drivers may change only slowly over time. However, even if drivers are only slow changing, they may be *perceived* very differently during a migration journey or a life cycle. This endogeneity of driver perceptions has hardly been explored so far. Finally, scholarship on complex driver configurations is still in its infancy as most driver analyses - although assessing on average 2.5 drivers per study, as our review has shown - hardly consider interactions and more complex interlinkages between multiple heterogeneous drivers. Future research on ‘driver complexes’ should hereby explore and assess the relevance of the changing nature of drivers as predisposing, mediating, enabling and triggering factors that may change dynamically over time and over the course of a migration journey.

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