



Growing Inequality:
a Novel Integration of
transformations research



Co-funded by the Horizon 2020 programme
of the European Union

D5.1 Migration intentions and inequality

WP5 Migration and impact on skills and inequality

Author:	Milena Nikolova
Associate Work Package:	WP5
Lead Beneficiary:	UPV/EHU
WP leader:	Leire Aldaz

Document Summary

Document type:	<i>Report</i>
Title:	<i>Migration intentions and inequality</i>
Author/s:	<i>Milena Nikolova</i>
Reviewer/s:	<i>Leire Aldaz, Begoña Eguia, Bart Los, and Steven Dhondt</i>
Date:	<i>June 20, 2022</i>
Document status:	<i>Final version</i>
Keywords:	<i>prospective emigration, intentions, inequality, Gallup World Poll</i>
Version:	<i>2.0</i>
Document level:	<i>Public</i>

Contents

Contents.....	3
Summary.....	4
1. Introduction.....	7
2. Theoretical insights.....	10
2.1 The emigration decision.....	10
2.2 Push and pull factors of migration.....	11
2.3 The relationship between inequality and emigration intentions.....	13
2.3.1 Inequality can be negatively associated with emigration intentions.....	13
2.3.2 Inequality and emigration intentions may be positively associated.....	14
2.3.3 Insights about the relationship between inequality and emigration intentions from the Roy-Borjas selection model.....	15
3. Empirical findings of previous studies.....	17
4. Data and variables.....	23
4.1 The Gallup World Poll and information on emigration intentions.....	23
4.2 Inequality data and measures.....	25
4.3 Other data sources.....	26
5. Methods.....	29
5.1 Baseline empirical specification.....	29
5.2 Econometric challenges and causality.....	30
6. Descriptive statistics.....	31
7. Results.....	36
7.1. Results concerning the global sample.....	36
7.2. Results based on geographic region of residence.....	38
7.2 Robustness checks.....	39
8. Emigration intentions to the EU and EU mobility.....	47
9. Mechanisms and explanation.....	51
10. Discussion and policy implications.....	55
11. References.....	57
Appendix A: Additional Tables and Figures.....	64
Appendix B: Instrumental Variables Techniques.....	76
Appendix C: Additional analyses with data on conflict.....	79
Acknowledgements.....	84

Summary

Starting with the first dispersals of humans out of East Africa into other parts of the globe some 70000 years ago, migration has been shaping the course of human history and society. Some scholars have even linked current inequality between countries to the consequences of these past migration patterns and the genetic diversity it generated (Ashraf & Galor, 2013; Galor, 2022).

Fast-forwarding several thousand years to the present-day, most human beings now live in prosperity that seems unprecedented from a historical viewpoint. The powerful forces of globalisation and technological change have decidedly improved living standards across the globe. Yet, they have also led to rising inequalities within countries as economic progress has not lifted all boats. Individuals and groups possessing the “right” skills, technology, and capital have typically gained from globalisation and technology. At the same time, those performing routine tasks or working in jobs negatively affected by trade and offshoring have had a less fortunate fate. Coincidentally, the automatable and offshorable jobs have been concentrated among middle-skilled jobs, thus leading to the hollowing of the middle class in many developed countries. Facing unemployment, job insecurity, and worsened working conditions, these left-behind individuals have been more susceptible to nationalist and populist ideologies that have provided consolation and the promise of redress. In short, while globalisation and automation have provided prosperity overall, they have also brewed social unrest in response to the rising inequality.

Yet, inequality need not be a damaging force for humanity. Societies often tolerate inequality if they view it as a symbol of the possibility of moving ahead in life through hard work. Some inequality can thus be stimulating and incentivizing.

However, inequality can also create a sense of injustice and grievances, especially among those who feel that the rules of the game are rigged and life chances are unequal and unfair. Rising inequality may trigger dissatisfaction in such situations, which can prompt individuals to seek change through the political system, civil disobedience, or, potentially, through “voting with their feet” and emigrating. While the “voice” responses to inequality (i.e. those undertaken through the political system) have been relatively well-explored, there is generally a lack of sufficient understanding of whether and how inequality shapes potential and actual emigration.

This report investigates if inequality triggers potential emigration across individuals living in countries at different levels of economic development around the globe. Specifically, statistical analyses of individual data from the Gallup World Poll, combined with information on country-level income and wealth inequality from the World Inequality Database, reveal that income inequality levels are negatively correlated with emigration intentions and plans. This relationship is robust to alternative specifications and different measures of inequality. We also find similar patterns regarding emigration intentions to the EU and mobility intentions within the EU.

Based on the literature, we explore two potential explanations for our findings. It might be that individuals believe in inequality as a way to get ahead in life, our results may mean that inequality acts as a barrier for individuals and prevents their potential emigration.

Specifically, our results suggest that skills and income can partly cushion some of the thwarting effects of inequality on potential emigration, though not fully offset them. This suggests that inequality imposes a barrier that is larger for those with less financial and human capital. This barrier may arise, for example, because inequality increases the number of poor people in the country who are not able to finance the move. Because migration requires having financial resources to pay for moving costs, visa fees, tickets, and language courses, only those with sufficient incomes can afford to emigrate. Even if the particular individual or their household is not poor, the fact that fewer compatriots migrate means that information- or cost-sharing becomes more difficult, which may limit that individual's emigration aspirations and actual migration.

This explanation is further supported by additional analyses demonstrating that migration networks, i.e. having family and friends abroad, also mitigate some, but not all, of the negative consequences of inequality for potential immigration. Migration networks are a well-known mechanism for reducing migration costs, especially among the low-skilled.

In high-inequality countries, those who believe in hard work to get ahead in life are more likely to want to move abroad than those without such beliefs. However, inequality is still negatively associated with emigration intentions for all. Again, hard work beliefs cushion some of the negative effects of inequality for emigration, though they do not fully offset them. Moreover, belief in hard work as a means to get ahead in life is not simply a measure of optimism. Our analyses show that individuals who expect that their future well-being will be higher than their current one – our measure of optimism—are less likely to want to emigrate, especially in high inequality countries.

Our analyses compare individuals with similar socio-demographic characteristics and living in countries with similar levels of economic development, corruption, health and well-being, and social capital. All in all, our results suggest that inequality discourages emigration. In other words, inequality reduces potential emigration above and beyond any influence it may have on personal characteristics, social and economic development, well-being, and institutions. Our findings suggest these results are especially strong among the low-skilled and those without networks abroad and financial resources. By discouraging emigration, inequality limits the gains from migration for both origin and destination countries. Our discussion section explores the policy implications and significance of our findings.

1. Introduction

Through reorganising the tasks that workers do, ongoing globalisation and automation processes have both fundamentally changed the global economy and the world of work (Acemoglu & Restrepo, 2019; Arntz, Gregory, & Zierahn, 2016, 2017; Autor, Levy, & Murnane, 2003; Grossman & Rossi-Hansberg, 2008; Nedelkoska & Quintini, 2018). These structural changes have generally led to large efficiency, productivity, and prosperity gains (Graetz & Michaels, 2018; Melitz & Trefler, 2012). Nevertheless, participation in the global economy and technological change have also produced winners and losers, leading to rising income inequality and a hollowing of the middle class (Colantone & Stanig, 2019; Jaimovich & Siu, 2019; Moll, Rachel, & Restrepo, 2021).

Inequality need not be a social problem in and of itself. Some inequality may be necessary to incentivize people to work hard. Consequently, societies may differ in their tolerance of inequality depending on their preferences and characteristics and the nature of their social contracts (Alesina, Di Tella, & MacCulloch, 2004; Alesina & Giuliano, 2011). On the one hand, inequality can symbolise prospects of upward mobility by signalling that society values and rewards skills, talents, and hard work (Benabou & Ok, 2001). On the other hand, individuals may perceive inequality as unfair or immoral, especially if they have been left behind by globalisation and automation. If people believe that inequality is a symptom of dysfunction and injustice, their discontent typically takes two forms – migration or protest, or "exit" and "voice," to borrow Hirschman's dichotomy (Hirschman, 1970).

In recent years, across the rich world, there has been rising dissatisfaction with the functioning of capitalist societies and the levels of inequality. Rising inequality has built up anger and popular discontent expressed through the rise of populism and economic nationalism (Colantone & Stanig, 2019; Rodrik, 2018). Events such as the Occupy Wall Street movement, the elections of Donald Trump and Boris Johnson, Brexit, and the Yellow Vests protests, are some examples of the "voice" strategy of showing dissatisfaction.

Against this backdrop, the role, if any, of inequality in triggering or discouraging "exit" (i.e. emigration) has been relatively unexplored, which is a gap that the current report addresses. Instead, much of the work on international migration has focused on the consequences of immigration for the employment for the labour market outcomes of natives. Despite the lack of a unanimous consensus, the overarching evidence of this vast strand of the literature suggests that immigration has either a small negative effect or no effect on the wages of natives in rich and middle-income countries

(Bansak, Simpson, & Zavodny, 2015; Bansak, Simpson, & Zavodny, 2022; Peri, 2014; WorldBank, 2018).

We argue that understanding who migrates and why is a policy-relevant question for both origin and destination countries. Such information can help policymakers design proactive policies that benefit both the origin and host countries and, most importantly, migrants themselves. Furthermore, gleaning insights into how inequality shapes emigration is important to better comprehend the ramification of complex socio-economic processes within societies.

This report focuses on how income and wealth inequality affect *potential* emigration, i.e. individual emigration desires (i.e. aspirations), plans, and preparations. To this end, we utilise individual-level information from the Gallup World Poll and country-level income and wealth inequality from the World Inequality Database. The main focus is on income inequality, while wealth inequality results are supplementary. We find that income inequality is negatively correlated with emigration intentions and plans. These results also hold when we focus on potential emigrants willing to move to the EU and also on EU mobility. In additional specifications, we find that as inequality increases, migrant networks abroad, education, and income cushion some of the negative influence of inequality on potential emigration. Our result implies that income inequality imposes an additional barrier for potential emigrants that factors, such as contacts abroad, and skills and income, can partially offset. By discouraging potential emigration, inequality limits the gains of migration for both origin and destination countries. Origin countries lose out in terms of remittances and the transfer of social norms and technology from abroad. The destination countries miss potential gains from remigration related to reducing skills shortages and the contributions that migrants make to alleviating the consequences of population ageing.

The report builds on and makes several contributions to the extant literature. First, it utilises information on emigration intentions and plans from over 150 countries worldwide that are at different levels of material prosperity. Second, while the vast majority of previous studies have focused on the Gini coefficient as a measure of inequality, this report utilises four income inequality measures: the top 1% share of pre-tax national income, the top 10% share of pre-tax national income, the top 20% share of pre-tax national income, and the Gini coefficient. In additional analyses, we also provide specifications with wealth inequality. Third, it provides analyses of Europe as a migration destination and EU mobility and suggestive explanations behind the key findings.

Naturally, emigration intentions reported in surveys are not about actual but rather about intended behaviour, and some of those expressing such intentions may never move. Nevertheless, as discussed in Section 4.1 below, there is much evidence that emigration intentions correlate well with actual migration behaviour (Adema, Aksoy, & Poutvaara, 2021; Bertoli & Ruysen, 2018; Creighton, 2013; Docquier, Peri, & Ruysen, 2014; Simmons, 1985; Tjaden, Auer, & Laczko, 2019; Van Dalen & Henkens, 2013). Furthermore, analyses of emigration intentions data offer insight into the prospective emigration flows, thus providing policy input for targeted proactive migration policies. This information can be useful to policymakers in the origin countries who can better understand how to manage emigration flows and ensure that their countries gain from migration and mobility. Simultaneously, policymakers in the prospective destination countries can better understand the selection and composition of prospective immigrant flows (Zaiceva & Zimmermann, 2008a).

While most studies in the literature rely on host-country immigrant stocks, such data may provide biased estimates as the immigrant stocks in destination countries are shaped by migration policies, proximity to the destination, and migration networks (Liebig & Sousa-Poza, 2004). As such, immigrant stocks cannot provide fully credible information about the self-selection and emigration decisions of migrants.

To make this research tractable, we focus on voluntary international migration, which mainly concerns labour migration. We do not study and discuss refugee flows and involuntary displacement.¹ Furthermore, the research report deals with the direct and short-run implications of inequality on emigration. Therefore, it does not investigate the long-term consequences of inequality for changing societal, economic, and institutional features and, as such, indirectly affecting emigration. As suggested in Section 10 below, these are opportune avenues for further empirical explorations on the topic. Finally, the result only focuses on income and wealth inequality, but does not consider inequality of opportunity and other types of inequality (e.g., inequality in well-being).

The rest of the report is structured as follows: Section 2 details the theoretical underpinnings, while Section 3 details the empirical results of related studies. Sections 4 and 5 outline the data and methods, respectively, while Sections 6 and 7 present the descriptive statistics and results. In Section 8, we present results related to emigration intentions to the EU and EU mobility, while Section 9

¹ Interested readers are invited to consult Hatton (2013) and Micevska (2021). Appendix C features results related to conflict as an additional explanatory variable.

offers some possible explanations that may underpin our main findings. Finally, Section 10 furnishes a discussion and the policy implications of the main findings and conclusions.

2. Theoretical insights

2.1 The emigration decision

Standard economic models view emigration as an investment decision associated with monetary and non-monetary costs and benefits (Becker, 1962; Sjaastad, 1962). Actual moves occur if the expected utility at the destination exceeds that of the origin, net of migration costs. Expected utility is itself a function of income.

Thus, in a simple framework with two time periods, t and t' , the individual i with utility U will emigrate if the utility after migration in period t' exceeds that of the utility at home at time t , net of migration costs C .

$$U_{it'} - U_{it} > C_i$$

(1)

Conditional on the individual characteristics X , the probability of migration is thus:

$$Pr(M=1|X_i) = Pr(U_{it'} - U_{it} - C_i > 0|X_i)$$

(2)

Migration costs include out-of-pocket expenses, such as fees for visas and passports, plane tickets, and language courses. These costs can be several times higher than the monthly incomes of migrants. In the developing country context, Sharma and Zaman (2013) report that the upfront cost for Bangladeshi emigrants is about five times the country's average GDP per capita. Bertoli, Moraga, and Ortega (2013) find that migration costs for Ecuadoreans moving to the US and Spain are between 3 and 8 times higher for non-college graduates than college graduates. Female non-college graduates to the US face migration costs that are 9.3 times their income.

Furthermore, migration costs can also be of a "psychic" nature (Sjaastad, 1962) and are, for example, related to the pain of separation from family and friends, the loss of social status in the destination, and others. For example, a typical Puerto Rican can increase earnings by 50% by moving to the United States, and there are no migration restrictions as Puerto Ricans are US citizens. Yet, most Puerto Ricans do not leave, which suggests that the psychological costs of moving are very high. Borjas (2014) calculates that the implied non-monetary migration costs are about \$226,000, i.e. ten times the salary of the average Puerto Rican worker. The non-monetary migration costs also relate to the opportunity costs of foregone earnings incurred by travelling and searching for a new job at the destination. Physical distance to the desired destination and migration restrictions amplify migration costs while knowing the host country's language and migrant networks lower them (Bansak et al., 2015).

2.2 Push and pull factors of migration

Building on Lee (1966), migration models have emphasised that *push* and *pull* factors determine emigration decisions. Push and pull factors often work in opposite ways and have similarly-sized effects on the decision to move (Bansak et al., 2015). For example, poor economic conditions in the home country act as a push factor, while favourable economic conditions at the destination act as a factor attracting (i.e. pulling) those who want to move.

More generally, the economics literature has highlighted the role of income differences between countries as a prime driver of emigration. For example, an increase in the average wage differences between origin and 14 OECD destination countries of 1000 USD (at 2000 PPP) increases immigrant flows by 10-11% of their initial levels (Ortega & Peri, 2009).

Additional socio-economic push and pull factors include unemployment, poverty, taxes, public goods and amenities, and institutions. Particular push factors, especially relevant for refugee flows, include climate change, natural disasters, famine, and war.

Studies typically focus on either the push or pull factors of migration. For example, Colussi (2016) finds that economic factors at the destination (i.e. tax rates, average wages, unemployment rates, and GDP growth) are more important than labour market institutions (minimum wages, employment, protection legislation, unions, and unemployment benefits) for both high- and low-skilled migrants. Migrant networks (i.e. compatriots in the destination country) act as another important factor in attracting migrants, lowering migration costs, and helping with assimilation at the

destination (Bertoli & Ruysen, 2018; Massey et al., 1993). Evidence from the US shows that annual migrant inflows increase by about five persons if the migrant stock from a particular origin increases by 1000 people (Clark, Hatton, & Williamson, 2007). As Massey, Goldring, and Durand (1994, p. 1502) explain,

"These communities anchor the networks and further reduce the costs and risks of movement by providing a secure and familiar environment within which new migrants can arrive, find housing and employment, and learn the ropes in the receiving country."

In terms of push factors, satisfaction with the living standard, public services, and security in the area of the respondent lower the likelihood of emigration decisions. At the same time, wealth increases emigration desires in sub-Saharan Africa and Asia, but not Latin America (Dustmann & Okatenko, 2014). Households that can finance migration are typically richer than households not considering emigration (Clemens & Mendola, 2020).

Furthermore, individual unhappiness levels determine emigration decisions (Cai, Esipova, Oppenheimer, & Feng, 2014; Chindarkar, 2014; Graham & Markowitz, 2011; Otrachshenko & Popova, 2014). Country-level unhappiness also determines emigration flows (Polgreen & Simpson, 2011). In addition, country-level macro variables (GDP per capita, inequality, and unemployment) indirectly influence emigration decisions by determining life satisfaction (Otrachshenko & Popova, 2014).

Studies looking at both push and pull factors simultaneously are generally rare. In one exception, Mayda (2010) finds that income conditions at the destination attract immigrants, but GDP per capita at the origin is generally not an important push factor. In other words, GDP per capita in the origin country neither encourages nor hinders emigration. However, Mayda (2010) finds that these effects depend on migration policies. When host countries' policies become less restrictive, the host country's income becomes an even stronger pull factor, and even the home country's income level becomes a push factor. Another paper that simultaneously studies the push and pull factors of migration finds that GDP negatively correlates with emigration rates (while the host country's GDP acts as a pull factor) (Pedersen, Pytlikova, & Smith, 2008). In general, studies find a positive relationship between GDP per capita and emigration in countries at earlier stages of economic development (see a summary of literature in Clemens (2000)).

Recent work focused on GDP per capita as a push factor (Clemens, 2020) demonstrates that emigration increases until country per capita income levels of \$5,000 at PPP, slows between \$5,000-\$10,000, and decreases after that. This suggests that the relationship between GDP per capita at the origin and emigration is non-monotonic.

Despite the work examining push and pull factors of migration, there is a dearth of studies focusing on inequality. Section 3 details the insights from the extant work on the topic.

2.3 The relationship between inequality and emigration intentions

2.3.1 Inequality can be negatively associated with emigration intentions

First, inequality levels may signal prospects of upward mobility and high returns to skill. In other words, the social contract may be such that individuals tolerate inequality as a symbol of the high rewards for hard work and individual talent. In this sense, inequality levels may discourage the emigration of individuals who believe that they can get ahead in life and improve their financial circumstances by working hard in their home country.

Specifically, people tolerate inequality if they believe that they can benefit from inequality now or in the future and that inequality results from individual effort (Alesina & Giuliano, 2011).² Often, societies experiencing economic growth and transformation processes are relatively more tolerant of inequality as they view inequality as a marker of future success (Grosfeld & Senik, 2010; Hirschman & Rothschild, 1973; Senik, 2005). Such findings are related to the notion of the prospect of upward mobility (POUM) (Benabou & Ok, 2001) and Hirschman's tunnel effect (Hirschman & Rothschild, 1973).³ Thus, inequality may be negatively associated with emigration intentions if inequality proxies societal-level rewards for hard work and belief in mobility and opportunity.

²For example, Europeans tend to be relatively inequality-averse, while some research suggests that inequality is unassociated with the subjective well-being of Americans (Alesina et al., 2004). Nevertheless, the results on the relationship between income and happiness for the US diverge across different studies. Like Alesina et al. (2004), Oishi et al. (2011) use data from the United States but show a negative correlation between income and happiness but only for the low-income group.

³According to the POUM hypothesis, poor people oppose high taxation and redistribution if they believe that such policies will hurt them if or when they or their children become rich (Benabou & Ok, 2001). Hirschman's tunnel effect is a metaphor for inequality as a symbol of future mobility and refers to the hypothetical situation in which an individual is sitting in a traffic jam in a two-lane road. When the other lane starts moving, the individual initially feels optimistic that the traffic jam has broken and that it will soon be his/her turn to move on with the journey. Nevertheless, as only the other lane is moving, individuals stuck in the traffic jam feel frustrated and hopeless as their expectations to also leave the traffic jam have not been met in reality (Hirschman & Rothschild, 1973).

Second, at the country level, inequality may also discourage emigration through a mechanical effect (McKenzie, 2017). Holding average income constant, higher inequality entails a greater number of poor individuals. Such individuals often lack access to finance and opportunities to borrow to cover the costs associated with moving to another country. This can translate to fewer emigration intentions at the individual level as well. Even if a particular individual is not liquidity-constrained, the fact that fewer compatriots are emigrating may discourage this individual from emigrating as well. This is because the cohort of potential emigrants decreases, which means that the potential to get information about the move, or share costs (e.g., through traveling together) also decreases, which makes emigration more costly and less likely for the individual, independent of income. Inequality may thus impose a migration cost that acts to discourage potential emigration.

2.3.2 Inequality and emigration intentions may be positively associated

First, high levels of inequality may signal that the system is unfair and inequitable (Oishi, Kesebir, & Diener, 2011) and that the concentration of high incomes at the top of the distribution is the outcome of luck and connections. In such societies, individuals may be inequality-averse, and increasing income disparities may trigger calls for redistribution, protests (i.e. "voice"), demand for nationalist and populist policies, and emigration (i.e. "exit"). In such circumstances, increases in inequality may prompt citizens of all rungs of life, and especially those with below-average incomes, to vote with their feet.

Second, high levels of inequality may accompany low quality of the social fabric and low trust, poor formal and informal institutions, and low-quality public goods. Specifically, in countries with high inequality, the rich prefer private rather than public goods provision, which results in low levels of public investments in education, healthcare, and infrastructure (Anderson, Mellor, & Milyo, 2008; De la Croix & Doepke, 2009; Stiglitz, 2015). Moreover, inequality can lower the incentive to cooperate with fellow citizens (Aksoy, 2019; Rothstein & Uslaner, 2005) and may also jeopardize outcomes, such as economic growth (Brueckner & Lederman, 2015; Cerra, Lama, & Loayza, 2021; Cingano, 2014), health (Pickett & Wilkinson, 2015), and happiness (Ferrer-i-Carbonell & Ramos, 2014; Ferrer-i-Carbonell & Ramos, 2020). In other words, inequality may proxy poor quality of the social fabric and a weak social contract, which individuals may be trying to escape through emigrating.

Finally, according to the New Economics of Labour Migration (NELM), emigration and inequality may be positively associated if inequality is a proxy for relative deprivation (Stark, Byra, & Kosiorowski, 2020). The main idea behind the relative deprivation hypothesis is that individuals are concerned about their relative position in society's income distribution. Income comparisons with peers from relevant reference groups may trigger dissatisfaction and feelings of relative deprivation (Stark, 2006; Stark & Bloom, 1985; Stark et al., 2020; Stark & Taylor, 1989). Migration can therefore be a tool for individuals to change their relative position in the income distribution or change their reference group altogether (Stark & Bloom, 1985). Heightened levels of economic inequality may lead to greater feelings of relative deprivation and trigger emigration. The NELM literature goes as far as claiming that total relative deprivation and not income inequality, is "the true driver of migration behavior" (Stark et al., 2020, p. 3) and that omitting total relative deprivation accounts for the divergent findings (positive and negative) related to the relationship between inequality and migration. Nevertheless, defining and measuring relative deprivation is difficult in practice, as the relevant reference group may itself change with migration (Gelatt, 2013).

2.3.3 Insights about the relationship between inequality and emigration intentions from the Roy-Borjas selection model

In addition to income levels, inequality also shapes the size and the skill composition of migrant flows (Borjas, 1987, 1991).⁴ If inequality reflects returns to skills, high-skilled individuals will have few incentives to migrate to another country, while middle- and low-skilled individuals will have higher incentives to migrate (Borjas, 1987). This is because less-skilled individuals gain from moving to countries with less income inequality than their own: they can benefit from redistribution and higher wages abroad compared to their home countries. At the same time, high-skilled people prefer moving to countries with higher income inequalities than their own because they can earn more

⁴ According to the Roy-Borjas model, the distribution of earnings of the home relative to the destination country determines whether migrants with low or high ability (unobserved) and education/skills (observed) will emigrate. If the earnings potential of prospective emigrants is sufficiently positively correlated in the origin and destination country and the destination country is more equal compared to the origin one, emigrants will tend to be negatively selected – i.e. they will be from the lower ends of the ability/income distribution (Borjas, 1987). Similarly, if the returns to education are higher in the origin than in the destination countries, and if migrants' education and skills are transferable across borders, then migrants will tend to be negatively selected on skills (Borjas, 1991). According to the Roy-Borjas model, emigrants from poor to rich countries will be negatively selected, because developing countries have both higher inequality and higher relative returns to skills. Simply put, immigrants from poor and unequal countries will have lower observable and unobservable skills compared to the average levels of skills in their country. Borjas (2014) also shows that the origin country inequality is negatively related to male immigrants' wages in the United States, which is again consistent with the negative selection predictions of the Roy-Borjas model. Nevertheless, several studies find evidence for the positive selection of migrants (Brücker & Defoort, 2009; Grogger & Hanson, 2011).

abroad. In other words, higher inequality abroad indicates a high return to skills and relatively higher wages compared to staying in the origin country.

If skills are transferable across national borders, high-skilled workers choose whether to stay or leave depending on the returns to skills in their home country and abroad (Borjas, 2014). In this sense, inequality is a measure of the return to skill – the higher the income inequality, the more that high-skilled individuals can earn. When income inequality is higher in the destination country, and talented individuals can earn more abroad than at home, they will (want to) leave. At the same time, less skilled individuals will not find it advantageous to move abroad as their incomes will be even lower in the high-inequality destination country compared to the lower-inequality home country. This is an example of positive selection. When there is positive selection, further increases in income inequality in the host relative to the origin country imply that emigration flows will become larger but less skilled on average (i.e. positive selection declines with increases in inequality). This is because increases in the already high inequality in the destination relative to the origin country attract emigrants whose skill levels were right below the marginal levels to move (Bansak et al., 2015). In the case of positive selection, increases in income inequality in the home country relative to the destination country mean lower emigration flows and even higher levels of positive selection, whereby even more talented individuals will want to emigrate.

Negative selection occurs when migrants have lower skills and are at the lower end of the income distribution in their home and host countries. Negative selection ensues when income inequality and the return to skills are higher in the home relative to the host country. High inequality in the origin country relative to the destination country means that high-skilled individuals can earn higher wages at home, implying that only the low-skilled individuals have an incentive to move. Low-skilled individuals want to move from their high-inequality home country to the lower-inequality destination nation because they may benefit from more redistribution and earn higher wages than staying at home. In the case of negative selection, increases in income inequality at the origin relative to the host country imply that emigration decreases and becomes even more negatively selected. If inequality levels at the origin decrease relative to the destination, emigration will increase and becomes more positively selected.

Consistent with the negative selection prediction of the Roy-Borjas selection model, Borjas (1987) finds the emigration rates of male immigrants from 41 countries in the United States are negatively associated with income inequality. Increases in inequality in the home country imply that the incentives for the high-skilled to migrate decline even further, which lowers the overall

emigration rates, while the lower-skilled will continue to migrate (Borjas, 1987). Nevertheless, as discussed in Section 3, the question of whether the relationship between emigration and inequality is positive or negative is far from settled. The next section explores the different estimates and what underlies them.

3. Empirical findings of previous studies

Very few studies have specifically focused on the relationship between inequality and emigration. Rather, several studies consider inequality as one among several migration determinants (Mayda, 2010; Otrachshenko & Popova, 2014; Zaiceva & Zimmermann, 2008a) or have a different focus of analysis but show additional results featuring inequality (Borjas, 1987; Cooray & Schneider, 2016; Czaika, 2013).⁵

The existing literature on the emigration-inequality nexus offers conflicting results (see Table 1). Several papers find a positive relationship (Liebig & Sousa-Poza, 2004; Zaiceva & Zimmermann, 2008b), others a negative relationship (Borjas, 1987; Czaika, 2013), and still others – no relationship (Fouarge & Ester, 2007; Otrachshenko & Popova, 2014) or a non-linear relationship (Mayda, 2010). One study finds a positive relationship among rich countries but not among poor ones (Mihi-Ramírez, Kumpikaitė-Valiūnienė, & Cuenca-García, 2017). Another one finds a negative relationship that disappears with the inclusion of additional control variables (Maestri, Migali, & Natale, 2017). Yet another report finds a marginally statistically significant positive relationship but only for those with middle levels of education (Fouarge & Ester, 2007).

Part of the explanation for these divergent findings is that the studies use different data, operationalise inequality and emigration (intentions) using different variables, and use distinctive methods and empirical specifications. For example, some studies focus on emigration rates, others on migration stocks, and still others on migration intentions.

⁵ For example, the working paper of Zaiceva and Zimmermann (2008b) features results about the relationship between emigration and inequality, but the published version – not (Zaiceva & Zimmermann, 2008a).

Datasets relying on **immigrant stocks** also lack information on pre-migration characteristics, including migrants' earnings and education levels before leaving. This is problematic because researchers cannot properly address the self-selection of migrants into emigration. For example, analyses that omit information about the emigrants' socio-demographic characteristics may wrongly produce a statistically insignificant relationship between emigration and inequality. Specifically, emigrants tend to be relatively young, high-skilled, and male, and this demographic may be relatively uninformed or insensitive to inequality. For example, research shows that women have stronger preferences for redistribution and are more inequality-averse (Alesina & Giuliano, 2011). As such, approaches that include the pre-migration characteristics of those who leave, such as this report, can produce more credible results regarding the relationship between inequality and emigration.

Among studies that rely on **emigration intentions**, there are large differences in the wording of the migration intentions question. Some papers rely on hypothetical migration aspirations (Liebig & Sousa-Poza, 2004) and others – on moving intentions concerning moving to another city, region, or country in the next five years (Zaiceva & Zimmermann, 2008a, 2008b). To our knowledge, no study to date distinguishes between income inequality and tentative emigration desires (i.e. emigration aspirations in a hypothetical ideal situation), emigration plans, and concrete emigration preparations, which is a gap that the present study fills.

The extant studies in the literature also rely on different econometric techniques. While most studies employ multivariate regressions, one study only relies on bivariate correlations between emigration and inequality (Czaika, 2013), and some authors only summarize but do not fully report their empirical results (Maestri et al., 2017; Mihi-Ramírez et al., 2017).

Additional reasons why there is no consensus on the relationship between inequality and migration are that studies utilise data that do not distinguish between voluntary (e.g. economic vs family-based migrants) and involuntary migrants (i.e. refugees and asylum seekers). Most datasets, including the Gallup World Poll (GWP) used in this report, lack information about the particular motivation behind the emigration decision (Bansak et al., 2015). Inequality levels may be irrelevant or relatively unimportant for family migrants and those escaping climate change. If such groups of migrants dominate the analysis sample, we may wrongly conclude that inequality is not associated with emigration levels. Nevertheless, most international movers are economic migrants (McAuliffe & Triandafyllidou, 2022), which may alleviate such concerns regarding our analysis.

All in all, given the divergence of the findings, it is difficult to draw particular conclusions from the extant literature. This study, therefore, makes several important contributions to the literature.

First, it utilizes the most up-to-date dataset on emigration intentions, plans, and preparations, for over 150 countries worldwide. Importantly, the survey used covers 99% of the world's adult population and countries are at different levels of material prosperity, allowing us to identify global patterns. Second, we offer analyses with four measures of income inequality and also with wealth inequality. Third, we address issues related to EU mobility and migration and fourth, we provide a large battery of robustness checks and unlike previous studies, we attempt to tackle reverse causality issues.

Of course, inequality is one among several factors influencing potential emigration. In this study, we take economic development, institutions, health and life satisfaction, and social cohesion into account in the analyses but we specifically zoom in on inequality. Future studies can expand the analyses presented here to explore whether and how inequality interacts with these other determinants. This study also only focuses on the push factors of migration. This is because with individual level data, we do not have observed “destination-level” information for those who do not wish to migrate. Future research can attempt to integrate the push and pull factors of migration into a single framework with different data on emigration. Finally, we do not consider temporary vs. permanent migration, nor do we distinguish specifically between economic migrants and other types of migrants. Further data collection efforts and datasets can help shed light on these important distinctions.