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Abstract

This paper examines gender differentials in the international migration of professionals, and how this varies by country, industry, age, and years of experience. We leverage data from LinkedIn, the largest professional networking website, to construct immigrant and emigrant Gender Gap Indexes (iGGI and eGGI). These indexes measure inflows and openness to international relocation. The findings indicate that, among LinkedIn users, the global population of immigrant professionals is at gender parity. The professional migrant population is majority-female in key destination countries like the U.S., U.K., Australia and France, as well as emerging destinations like South Korea and Singapore. Our results show that the mobility of women migrants is driven by industries like finance, healthcare, and real estate. We find evidence of positive selection among women migrant professionals in key destination countries and industries. Our results indicate that men are more open to international relocation than women, suggesting that men express higher migration aspirations, but men and women have similar rates of observed mobility. The paper makes novel contributions to the literature on migration aspirations, behavior, and selectivity. Methodologically, we develop a new data set and appropriate measures to complement existing sources to study professional migration across a wide range of countries.

The global migration of high-skilled professionals is an important and increasingly large component of international migration. The number of highly educated migrants grew three times faster than less-educated groups between 1990 and 2010, and continues to increase (Kerr et al. 2016). By 2020, most migrants in OECD countries had a tertiary degree (d'Aiglepierre et al. 2020). Professional migration is an important source of labor for countries with advanced skills shortages and shrinking native-born workforces, and is consequential for economic development, innovation and the global circulation of knowledge in both sending and receiving countries (Docquier and Rapoport 2012; Czaika 2018).

Despite its importance, many dynamics related to skilled migration remain poorly understood. In particular, gender differentials in migration aspirations and flows have not been systematically analyzed at a macro-level scale (Kofman 2014; Donato and Gabaccia 2015). This is in part due to data limitations with administrative sources that lack disaggregation by gender and skill level. Indeed, the first global population projection of migrant educational attainment disaggregated by age and gender was not published until 2014 (Lutz, Butz and KC 2014). Recent work has documented a feminization of migration, with an increasing share of women among international migrants across all skill levels (Ehrenreich and Hochschild 2003; Docquier et al. 2009; Yildiz and Abel 2024).

Yet it is unclear whether, or to what extent, these trends also apply to high-skilled migrants. Because of the unique dynamics of gender inequality across occupations, professional recruitment and labor migration networks, the gender composition and selectivity of skilled migrants might differ considerably from less-skilled groups, especially with respect to age, industry and country (Walton-Roberts 2022; Kofman and Raghuram 2022; Morellini and Block 2024). Systematic, detailed analysis of gender gaps in skilled migrant aspirations and behavior are still in their infancy, relatively speaking, and require development of new methods as well as production and curation of new data sources.

This paper offers a new approach to examine gender gaps in the international migration of professionals. We use data from LinkedIn, which is the largest international platform for professional networking, with over 1 billion users. More specifically, we access novel data sources via the Advertising and Recruiter platforms, which provide timely, aggregate-level information about professional migrants on LinkedIn at a richer level of detail than is available in survey data. We construct an immigrant and emigrant Gender Gap Index (iGGI and eGGI) to measure these differentials through inflows (recent arrivals) and potential outflows (openness to international relocation), and consider how these patterns vary across countries by age, industry and years of experience. As women increasingly migrate as individuals for work, rather than trailing spouses, the paper documents gender differences in the composition and aspirations of professional migrants, as well as gendered selectivity in the migrant pool (Donato and Gabaccia 2015).

We ask three main questions. First, what is the extent of the gender gap in professional migrant aspirations and observed behavior? Second, how does the gender composition of professional immigrants and emigrants vary across sending and receiving countries, and by industry, age, and years of work experience? Finally, what is the selectivity of women migrants in specific industries?

The findings indicate that, among LinkedIn users, the global population of immigrant professionals is at gender parity. Professional migrants are majority-female in key destination countries such as the United States, the United Kingdom, Australia and France, as well as emerging destination countries such as South Korea and Singapore. In contrast, the population of those who express openness to international migration is largely male. Thus, our results suggest that while men express higher migration aspirations, men and women have similar rates of observed mobility.

We find that the global mobility of women professionals is driven by key industries like finance, healthcare, manufacturing/supply chain/logistics and real estate. At the same time, migrant women are overrepresented in consulting, technology and finance, suggesting there may be positive

selection among women migrant professionals in key destination countries like the United States, United Kingdom, Australia, France and Germany.

The paper contributes to the growing body of research using digital data sources to complement limitations in conventional migration data to study global migration patterns (Zagheni, et al. 2017; Alexander et al. 2019; Leasure et al. 2023; Gil-Clavel et al. 2023; Coimbra Vieira et al. 2024; Rampazzo et al. 2024; Wycoff et al. 2024). In particular, we use LinkedIn data as a timely, dynamic and detailed complementary source to study professional mobility (Breschi et al. 2022; Jacobs 2022; Perrotta et al. 2023; Heo et al. 2024). Leveraging the strengths of LinkedIn data, we contribute to the literature on gender gaps in migration aspirations and behavior, and enrich prior work on the selectivity of women professional across a range of countries and industries.

Background

The International Mobility of Professionals

Labor migration has long been a primary driver of international migration, and skilled migration is an increasingly central component of this process (Czaika 2018). Skilled migration is one of the fastest-growing migrant streams for destination countries, and the emigration rate of skilled migrants in sending countries is higher than the overall emigration rate, due to the larger availability of human and financial capital to migrate (Docquier and Rapoport 2012; d'Aiglepierre 2020; Walton-Roberts 2022). Thus, skilled migration is a crucial dynamic for both origin and destination countries.

The international growth of skilled professional migration is driven by labor demand, the expansion of global higher education, global economic integration and migration policies designed to attract highly skilled migrants (Czaika and Parsons 2017; Czaika 2018). As universities and labor markets globalize, human capital facilitates international mobility (Walton-Roberts 2022). Demand for specialized labor in sectors like technology and business drives skilled migration (Kerr et al.

2016). Further, migration policies around the world are increasingly prioritizing skilled entry pathways (Czaika and Parsons 2018).

The majority of skilled migrants (with a tertiary degree) live in OECD countries (Czaika and Parsons 2018; d'Aiglepierre et al. 2020). The United States, Canada, United Kingdom, Australia and Israel are the top five migrant receiving countries in the OECD, and France and Germany are growing in significance as well (Czaika and Parsons 2018). Due to data limitations, we know less about recent patterns, or destinations in non-OECD countries, though there are indicators that China, Japan, South Korea, Brazil, Argentina, Singapore and Korea are also important destinations for skilled migrants (Yildiz and Abel 2024; World Bank and LinkedIn Corporation 2024).

Amid growing interest from policymakers in skilled migration, there has been an increase in data sources on professional migrants, mostly from the OECD using occupation-specific datasets (Arslan et al. 2015; Czaika and Parsons 2017; Bhargava et al. 2011). This has contributed to a recent expansion in research in this area, but these data have several limitations.

First, these studies use varied definitions of "skilled migrant," based on educational attainment, occupation, or skill level (Parsons et al. 2020, Table A.1 in particular).[i] These inconsistent definitions can produce different estimates and make it difficult to generate comparisons across countries and over time. Relatedly, these data often lack a level of detail that would allow to look at multiple dimensions of skilled migration simultaneously. For example, measures of gender, age, and industry are rarely available, and it can be difficult to disaggregate the data across multiple characteristics. These measures would provide important insights into changes in the migrant composition in younger age groups, as well as industry pathways for labor migration. Finally, the most reliable data on skilled migration focuses on surveys on OECD countries and are only made available at large time intervals. For example, the most recent data used in a large number of studies was published in 2015/2016. This misses important dynamics in recent years, as well as different political-economic dynamics from non-OECD countries like China and India that

play an increasingly important role as both origin and destination countries for skilled migrants (Kerr et al. 2016; d'Aiglepierre et al. 2020). Thus, there are many outstanding questions about skilled migration to non-OECD countries, industry-specific dynamics across multiple settings, and gender and age differences in professional international migration (Kerr et al. 2017).

Gender patterns in professional migration

Despite the growth of skilled migration and its increasing political and economic importance, there is still much to be understood about gender differentials among skilled migrant professionals (Boucher 2018). Women migrants were long conceptualized as dependent partners, trailing men as "wives, mothers, or daughters of male migrants" (Docquier et al. 2009). In light of scholarly calls to "bring gender in" to labor migration research, recent work has documented the "feminization of migration" as women comprise an increasing share of labor migrants (Morokvasic 1984; Ehrenreich and Hochschild 2004; Docquier et al. 2009; Donato et al. 2017; Bailey and Mulder 2017; Yildiz and Abel 2024).

Among OECD countries, women made up 52% of all migrants in 2016, and the share of highly educated immigrant women was only three percentage points below that of men (OECD 2016; d'Aiglepierre et al. 2020). The leading destination countries for highly educated migrant women are the United States, United Kingdom, Canada, New Zealand, Ireland and Israel, with the main origin countries being Philippines, China and India (IOM 2014). These destination countries have relatively high levels of female labor force participation, female educational attainment and gender egalitarianism (Faggian et al. 2007; Donato and Gabaccia 2015; Malakhov 2019; Kofman and Raghuram 2022).

Women are increasingly moving as individuals for work and study rather than trailing family members (Ehrenreich and Hochschild 2004; Donato and Gabaccia 2015; Morellini and Block 2024). The primary pathways for skilled migrant women are education and employment in specific industries (Kofman and Raghuram 2022; Walton-Roberts 2022). Women might also

migrate abroad to compensate for gender inequality in origin-country education and labor markets. For example, Docquier et al. (2009) show that the gender gap in highly skilled emigration is strongly related to the gender gap in educational attainment in the home country. Faggian et al. (2007) find that women university graduates in the United Kingdom are more migratory upon labor market entry than men because they are moving to more egalitarian labor markets, and Kalhor et al. (2024) find similar relocation dynamics among women professionals seeking promotions.

Given this "feminization" of skilled migration, we expect (H_1) the global immigrant population to be near parity in its gender composition. In the destination country, we expect (H_{1a}) women-majority immigrant populations in more gender-egalitarian countries with more employment opportunities for women. With respect to patterns of potential out-migration, we expect (H_{1b}) higher rates of female professionals open to emigration from less gender-egalitarian origin countries, as a response to limited employment opportunities and constrained gender norms for women.

Despite the growing overall share of women migrants, industry-specific gender inequality might constrain opportunities in unique ways for migrant professionals. Gender gaps in employment across different industries can influence the gender composition of the professional migrant population (Kofman and Raghuram 2022). For example, STEM fields tend to be male-majority, while nursing and carework tends to be female-majority (Walton-Roberts 2022).

With respect to industry-specific dynamics, we expect (H_{1c}) to see women-majority migrant populations in more feminized industries like healthcare and education. Further, we expect (H_{1d}) to see women-majority migrant populations in younger age groups and for migrants in earlier career stages. This compositional change should reflect national and global trends towards more gender equality in more recent age and employment cohorts. With respect to patterns of potential out-migration, we expect (H_{1e}) to see higher rates of female potential emigration within female-majority industries, because these are the primary mobility pathways for women migrants.

Gender inequalities influencing the composition of the migrant pool might also have important implications for the gendered selectivity of skilled migrants. Immigrant selectivity describes the ways in which migrants systematically differ from non-migrants with respect to characteristics like educational attainment, wealth and health (see Feliciano 2020 for a comprehensive review). For example, skilled migrants are positively selected on educational characteristics and socio-economic class relative to non-migrants in their sending country, which contributes to positive labor market outcomes in destination countries (Chakravorty et al. 2016).

While gender is often incorporated as a variable in models of the effects of immigrant educational selectivity, it has not received much attention as a discrete category for analysis (Ichou 2014; Schmidt, Kristen and Mühlau 2022; Reichl Luthra and Platt 2023). There is some emergent work on selectivity and gender ideology showing that women migrants come from more egalitarian households, but given the myriad ways gender intersects with employment outcomes, we should expect selectivity processes to differ for men and women migrants along multiple dimensions (Hofmann 2014; He and Gerber 2020). If migrant women are overrepresented relative to native-born women in male-majority industries, that would suggest women migrants have unique characteristics contributing to their entry and persistence in these industries. In this paper, we interpret overrepresentation of migrant women in male-majority industries as an indicator of positive unobserved characteristics contributing to their success in these fields and invite future analysis with individual-level characteristics to study this further.

It is also important to note that there may be gender differences in migration aspirations and capabilities that influence the composition and selectivity of skilled migrants. For reasons related to cost, family dynamics, infrastructure, government policies and employment opportunities, not everyone who aspires to migrate is able to do so (Betts and Collier 2017; Carling and Schewel 2018; de Haas 2021; Aslany et al. 2021). The aspiration-capability framework developed by Carling (2002) and colleagues is useful for understanding the conditions driving skilled migration,

and scenarios when economic opportunities or migration policy facilitate or impede migration (Carling and Schewel 2018; de Haas 2021; Aslany et al. 2021). Gender dynamics are embedded in this framework with attention to family dynamics motivating migration such as remittances, family reunification and permission for educational attainment. However, there is little macro-level empirical analysis measuring gender differences in migrant aspirations across country contexts, or how this compares to observed behavior across age or industry. Given that gendered social expectations about labor migration emphasize male migration, we expect (H_2) men to demonstrate higher migration aspirations than women.

Digital Trace Data for Migration Studies

This paper builds on an emergent research stream using digital trace data for the study of international migration with the aim of addressing long-standing data limitations on migration data (Zagheni et al. 2017; Alexander et al. 2019; Drouhot et al. 2023). Migration data are often coarse-grained, inconsistent across countries, cross-sectional, and constrained to a single country, making it difficult to conduct dynamic analysis across countries and over time. However, new technologies have produced an explosion in digital data generated by social media, cell phones, mobile applications, and web browsers that leave "digital traces" (Latour 2007). These digital data sources offer information at more detailed temporal and spatial scales than conventional data sources and can include hard-to-reach populations that may be excluded from traditional data sources. They have much potential to offer insights about displacement and migration flows, and other processes such as integration and policy effects (Flores 2017; Perrotta et al. 2023; Gil-Clavel et al. 2023; Wycoff et al. 2023; Rampazzo et al. 2023; Coimbra Vieira et al. 2024).

To complement existing work on the international migration of professionals, we consider LinkedIn as a data source that can provide timely and detailed information about the international movement of skilled migrants (State et al. 2014). LinkedIn offers an opportunity to analyze trends

in a timely manner, with data collected in 2023, and the potential for ongoing data collection to allow for more continuous analysis of skilled migration trends in more countries. Further, it captures a broad population of professional migrants that does not rely on a specific definition based on educational attainment, occupation, or skill category, and offers information about a wider range of countries than is available in OECD data. LinkedIn has been used as a source to study the flows of professional migrants with openness to relocate indicators on the Recruiter platform (Perrotta et al. 2023), the spatial distribution of university graduates (Heo, Chang and Abel 2023) and the labor market incorporation of skilled migrants (Breschi et al. 2021; Jacobs 2022). In this study, consistent with prior work, we define a professional migrant as someone who has moved internationally, as indicated by a change in their country of employment.

The LinkedIn Advertising platform is particularly useful for examining gender differentials. Using this data source, Kashyap and Verkroost (2021) document the female-to-male ratio of LinkedIn users and show that gender gaps are highly correlated with overall patterns in gender inequality among professionals documented by the International Organization of Labor. Kalhor et al. (2024) find evidence of gender differences in network connectivity on LinkedIn. Our paper builds on these studies, extending these dynamics to professional migrants. Ours is among the first studies to leverage the gender information on the Advertising platform to conduct a timely and detailed analysis of migrant professionals across industries, age, and employment cohorts.

Digital data offer valuable complements to traditional migration data but are not without limitations. Social media data were not designed for scientific research and are not representative of general populations (Drouhot et al. 2023). For example, the population on LinkedIn is younger and more male than the underlying population, and the platform is most widely used in technology and business sectors in the Global North (Kashyap and Verkroost 2021; Dixon 2023). However, following in demography's long tradition of using statistical techniques to address limitations with imperfect data (Kashyap 2021), Zagheni and Weber (2015) offer a framework for assessing bias in

non-representative internet data. This approach calibrates online populations with administrative "ground truth" data to account for systematic differences between social media users and the general population.

Recent work indicates that LinkedIn usership largely reflects ground truth data and is a useful predictor of gender gaps in professional populations (Kashyap and Verkroost 2021). Additional studies by the World Bank (2018) and World Economic Forum (2023) have recently used LinkedIn advertising data to supplement their own survey data and have found similar confluence in professional migration and gender gaps reflected on LinkedIn and in the general population. We take these studies as a foundation establishing the validity of LinkedIn data for gender analysis among professionals. In this spirit, we compare our findings to the most comparable data from the World Bank, as well as relevant studies, to contextualize our findings with ground truth data and existing literature.

Our study offers an analysis of LinkedIn users and the findings should be interpreted within this context, rather than for the underlying population in a country. That said, these data capture information about more than one billion LinkedIn users around the world, and provide important insights into international job search and relocation behavior among professionals moving internationally. LinkedIn is an important job seeking tool and is the most used professional networking platform globally (Smith and Watkins 2020; Dixon 2023). In many industries central to international professional migration like technology and business, it is considered standard practice to create and maintain a LinkedIn profile (Hosain and Liu 2020). Further, LinkedIn is widely used in the largest skilled migrant receiving countries; thus, job seekers from sending countries are likely to be more active on the platform than the average person in those countries (Dixon 2023). As such, the findings of this study reflect important dynamics about the employment and migration of professionals on an important online platform that acts as a key mechanism in the international job search process. For the purposes of this study, we assume that migrants behave similarly to native-

born populations on LinkedIn when searching for jobs in destination countries to conform to the hiring practices in their target labor market, though further work about the online behavior of job-seeking migrants would be informative (Hosain and Liu 2020).

Data and Methods: LinkedIn Dataset

LinkedIn Data. This article improves our understanding of gender gaps in professional migration by analyzing aggregate-level information about migrant professionals on LinkedIn. LinkedIn is a professional networking site with over one billion registered users (LinkedIn 2024). It is used by employment recruiters and job seekers who report their past employment and education in an online resumé. This includes information about employment location, which allows for the study of spatial mobility through past jobs. Thus, LinkedIn is especially valuable for studying professional migrants, who are highly mobile and often not captured in administrative and survey data sources (Breschi et al. 2021; Jacobs 2022; Perrotta et al. 2023). LinkedIn offers a rich complement to standard data on skilled migration, which are often costly, coarse-grained, and inconsistent across countries and categories (Drouhout et al. 2023). These data also provide more timely estimates across a wider range of countries.

We access these data through the LinkedIn Advertising and Recruiter platforms. The Advertising platform provides an estimate of LinkedIn audience size with demographic and employment traits like gender, age, and industry. It indicates whether a user recently relocated internationally for work, which allows us to measure the recently arrived professional migrant stock in different countries. The platform also includes information about the number of people open to relocating internationally, giving us a measure of the potential emigrant outflow of professionals.

The Recruiter platform enables employers to identify job candidates through user characteristics like education, industry and years of experience. It includes rich information about users open to job-related relocation to specific countries, which allows us to identify potential

migrant in-flows to destination countries (Perrotta et al. 2023). However, this platform does not report age or gender, to avoid discriminatory hiring practices. We thus combine data from the Advertising and Recruiter platforms to leverage information from both data sources. This is, to our knowledge, the first paper to analyze these data in tandem.

We collected audience counts of LinkedIn users from the Advertising platform API in August and September 2023. We collected the aggregate number of LinkedIn users in each country and the number who had recently relocated or were open to relocation, along with demographic and employment characteristics. On the Recruiter platform, we collected data every two weeks from January through November 2022. Due to some level of stochasticity, we use median country-level flows across all dates of data collection. See Perrotta et al. (2023) for more on data processing from the Recruiter platform.

On both platforms, we collect anonymous, aggregate-level data, from which it is not possible to identify individuals. The Advertising platform provides information above a threshold of 300 users to protect individual identifiers; targeted queries below this threshold do not return results (LinkedIn API). There are some tradeoffs between the level of detail and data sparsity in aggregate-level data (Kashyap and Verkroost 2021). In our study, this is most pronounced in specific industry categories and for countries with smaller population sizes.

To manage computational loads and maximize audience counts to meet the aggregated threshold, this study focuses on the 50 largest skilled migrant sending and receiving countries, as measured by the size of the population with a tertiary degree.[ii] We also collect information at the continent-level to increase audience sizes and report regional patterns, which can then be broken down by the country-level reported data.[iii] Finally, we group industries, age groups and employment-tenure cohorts for ease of interpreting the results and to increase audience sizes.

Measures

We include the following measures in our analysis, based on the definitions provided by the LinkedIn Advertising platform. As others using digital data have noted, social media platforms are often opaque with regards to the specific ways they infer measures provided to researchers (Stewart et al. 2019). Some of the measures provided by the platform are vague; for example, LinkedIn does not provide a time frame for its definition of "recently" relocated, or how it infers user age and gender (Lockhart, King and Munsch 2023). We recognize these limitations, and to the extent possible, have compared our data with analysis conducted by the World Bank on talent migration trends on LinkedIn and industry composition on LinkedIn (Zhu, Fritzler and Orlowski 2018; World Bank Group & LinkedIn Corporation 2024; Kalhor et al. 2024). We found consistent patterns, increasing our confidence in the present dataset.

Recently relocated (international). Members who recently relocated to another country, based on a country change in the location of employment between two job titles. This provides information on the destination country where they relocated. We interpret this as an estimate of recently arrived migrant stock in destination countries.

Open to international relocation. Members who are seeking jobs in a different country, based on job search behavior in a country outside of a user's current location. The Advertising platform provides information about openness to relocate from an origin country, which we use as a measure of potential emigrant outflows from a sending country. The Recruiter platform provides the specific country of potential relocation, which we use to estimate potential immigrant in-flows to a destination (see Perrotta et al. 2023 for more on the use of Recruiter platform data for studying potential flows).

We also consider openness to international relocation to be an indicator of migration aspirations. We recognize that this is not a direct measure of aspirations, because this indicator captures job search behavior, which is a more concrete step migration planning than the expression

of aspirations. (Betts and Collier 2015; Aslany et al. 2021). However, the search behavior has not yet converted an international move. Thus, we use this as an indicator of aspirations but acknowledge that, because it measures a more advanced stage in the migration process, it might underestimate the volume of migrant aspirations.

Member age. LinkedIn estimates user age based on profile information such as years since college graduation and years in the labor force. We construct three age groups for our analysis: 18-24 year olds; 25-34 year olds; 34-55 year olds. We also collected information on users over 55, but due to consistently low audience sizes across all categories, and the fact that labor migration after 55 is quite rare, we do not report this group in our analysis due to high variability and missingness in the data.

Member gender. LinkedIn infers whether a user is male or female based on profile information such as user name, self-reported pronouns, and profile picture. When inference is not possible, LinkedIn does not assign a gender to all users; on average, 75 percent of LinkedIn users are labeled as male or female on the Advertising platform.[iv] We analyze the two gender categories provided by LinkedIn (male and female) but recognize the need for future research on nonbinary users if this measure becomes available (Lagos 2022;).

Years of experience. Accumulated years of professional experience, excluding gaps in employment. Overlapping positions are not double-counted. We group the years of experience into three employment cohorts (1-3 years; 4-7-years; 8+) to capture initial labor market entry, mid-career stage, and more senior levels.

Company industry. The primary industry of the company where the member is employed, as stated by the company. Additional industries may be inferred by LinkedIn. We group the 20 industry categories on LinkedIn into ten groups for ease of interpretation, and to manage computational load and increase audience count sizes in our data collection. The categories are: Construction and Agriculture; Education; Finance; Government; Healthcare; Manufacturing, Supply Chains and

Logistics; Oil, Gas and Mining; Consulting; Real Estate; Tech, Information Technology and Media; and "other."

Methods

We construct an Immigrant and Emigrant Gender Gap Index (iGGI and eGGI) that measures the gender composition of migrant professionals. It calculates women as a share of migrant professionals in each country, as shown in Equations 1 and 2. We also calculate an Overall Gender Gap Index (oGGI) as a reference for the combined migrant and non-migrant LinkedIn population in each country (Equation 3). The iGGI measures the gender composition of recent immigrant arrivals in destination countries; the eGGI measures potential emigrant departures of professionals open to relocate from origin countries. A GGI value above 50 percent indicates that women comprise a larger share of the migrant pool than men; a value lower than 50 percent indicates that the migrant professional population is more male. A GGI of 50 percent indicates parity.

Our approach builds on prior work modeling digital gender gaps on social media that defines a gender gap as a female-to-male ratio (Fatehkia, and Weber 2018; World Economic Forum 2020; Kashyap and Verkroost 2021). Here, we construct an index that measures the gender composition of the migrant population, i.e., women as a percent of all migrant professionals. This allows for simpler interpretation of the gender composition of migrants on a consistent scale and addresses issues that arise from asymmetrical values in the calculation of ratios (Darin 2024).[v]

We calculate the share of women among recently arrived immigrants (iGGI) through the stock of LinkedIn users on the Advertising platform who recently relocated internationally, given by:

$$iGGI = \frac{Recently\ relocated\ women}{Recently\ relocated\ men + women} * 100 \qquad (1)$$

We calculate the share of women among potential emigrant outflows (eGGI) through the stock of LinkedIn users on the Advertising platform who have indicated that they are open to relocate internationally:

$$eGGI = \frac{Women\ open\ to\ relocate\ internationally}{Men + women\ open\ to\ relocate\ internationally} * 100 \quad (2)$$

Finally, to provide a baseline for gender gaps in the overall population of LinkedIn users in each country, we calculate the share of women in the audience size on the LinkedIn advertising platform (oGGI) through the total stock of LinkedIn users on the Advertising platform:

$$oGGI = \frac{Women\ audience\ size\ on\ LinkedIn\ Advertising\ Platform}{Men + women\ audience\ size\ on\ LinkedIn\ Advertising\ Platform} * 100 \quad (3)$$

We also calculate a relocation-to-aspiration gap as the number of people who recently relocated to a destination country as a share of the total number of migrants who indicated they were open to relocate to that country. These results should be interpreted as population-level estimates of aspirations and relocations, rather than individual-level conversion of migration aspirations into migration behavior.

To calculate the gap between migration aspirations and relocation behavior, we combine data from the Advertising and Recruiter platforms. As shown in Equation 4, we calculate the behavior-aspiration gap as the number of recently relocated migrants in a destination country (from the Advertising platform) as a share of the total number of migrants who indicated they were open to relocate to that country (from the Recruiter platform).

The Advertising platform provides population estimates that are on average 20 percent higher than the Recruiter platform, so we employ a standard weighting approach to adjust for rounding differences in the user numbers reported on the two platforms. This "platform adjustment

factor" calculates the ratio of the Advertising/Recruiter platform population. Thus, to calculate the migration behavior-to-aspiration gap, we use the formula:

$$Relocation - Aspiration\ Gap = \frac{Recently\ relocated\ to\ country * Platform\ adjustment\ factor}{Open\ to\ relocate\ to\ country} \quad (4)$$

Results

Gender Gaps in Recent Migrant Arrivals

We begin our analysis with an examination of the gender composition of recently relocated migrant professionals. Figure 1 Panel A shows a matrix of the Immigrant GGI (iGGI) for the global migrant population, five regions, and the 48 largest skilled migrant receiving countries. The matrix disaggregates the iGGI by industry, age and years of experience. Values above 50% indicate that the population of migrant professionals is women-majority. Figure 1 Panel B visualizes these iGGI values spatially.

At the global level, the iGGI is 50%, meaning that the overall population of men and women immigrants on LinkedIn worldwide is at parity. We hypothesized that the global professional immigrant population would be near gender parity (H_1), and this result supports our expectations.

Immigrant gender gaps across countries

We find considerable variation in the gender composition of recently arrived migrant professionals across countries. We classify host countries into three categories, based on the share of women migrants. First, we observe countries at parity or with women-majority migrant stocks (iGGI≥50%). This includes the United States, South Korea and France, as examples. The second category includes countries close to parity with slightly male-majority migrant stock (45%<iGGI<50%). For example, this includes Italy, China and Canada. Finally, we identify countries with largely male-majority migrant stocks (iGGI<44%) such as India, Mexico, Japan and Saudi Arabia.

As discussed in the background section, the gender composition of the professional immigrant population is influenced by political-economic factors that vary across different countries. Using Pearson correlations, we find a moderate positive relationship between iGGI and gender egalitarianism and migration policy openness. This provides support to $H_{1a,}$ where we expected the gender composition of the migrant population to be more female in more gender-egalitarian countries. We report the full results in Appendix Table A.

Immigrant gender gaps across industries

Figure 1 indicates that the gender composition of the migrant population also varies across industries. Globally, construction/agriculture and oil/gas/mining are male-majority, with iGGIs of 28% and 25%, respectively. In contrast, healthcare, finance and real estate are primarily comprised of female migrants, with iGGI values of 63%, 57% and 56%, respectively. Other industries were close to parity but slightly female-majority: education (iGGI=53%), government (iGGI=52%) and consulting (iGGI=51%), or close to parity but slightly male-majority: manufacturing/supply chain/logistics (iGGI=49%). Finally, tech/IT/media had an iGGI of 45%, meaning the industry employs more men, but with a smaller gap than construction/agriculture and oil/gas/mining. This is consistent with our hypothesis (H_{1c}) that feminized industries like healthcare and education would have a larger share of women migrants.

Most of the largest skilled migrant host countries echo these patterns. Australia and the United Kingdom are close to parity in most industries, but construction/agriculture, and oil/gas/mining are largely male and finance, manufacturing and tech are slightly male-majority. Conversely, education, government, healthcare, consulting, and real-estate are slightly female-majority. France follows similar patterns, for finance, which is female-majority. Though Canada and Germany are two major skilled migrant destination countries, they are slightly more male-majority than the other top destination countries, and key industries like technology and finance have a larger share of men.

The United States is a notable exception to these patterns: all industries except oil/gas/mining and construction have female-majority immigrant professional populations. For example, education, finance, healthcare, manufacturing, consulting, real estate and technology are considerably female-majority, with iGGI>55%. Singapore also has a considerable female-majority workforce in education, manufacturing/supply chain/logistics and consulting. In contrast, other countries like India, Saudi Arabia and UAE are male-majority in all industries with available data.

Immigrant gender gaps across age and years of work experience

Figure 1 shows that the gender composition of the migrant population follows a V-shaped pattern with respect to age and years of work experience. Women outnumber men in the youngest (18-24 years old) and oldest (35-54 years old) age groups globally, but men outnumber women in the mid-range age group (25-34 years old). This indicates that men are highly mobile in their mid-20s, while women move at younger ages, perhaps capturing some dynamics of international students aged 18-24 who are simultaneously studying and working.

At the country level, shifting dynamics in the age composition of migrants might give insights into future trends in the gender composition of the professional migrant population. The migrant population is more female in younger cohorts in emerging skilled migrant destination countries like Chile and South Korea, as well as countries with relatively low overall iGGI like India and Saudi Arabia.

Conversely, the trends have stabilized or reversed in established destination countries. France and the United Kingdom have relatively consistent gender compositions across age cohorts, while the United States and Australia follow the V-shaped pattern. These dynamics capture a snapshot of current recently arrived cohorts, but a larger share of women in younger cohorts might lead to higher rates of long-term settlement.

Years of experience follows the opposite pattern globally, with slightly male-majority migrant populations in the most junior (1-3 years) and senior (8+ years) employment cohorts, but

female-majority migrant populations in the middle cohort (4-7 years). This indicates that male professionals are more internationally mobile at the earliest career stages, while women move internationally slightly later in their careers. A separate cohort of men are more internationally mobile in more advanced career stages, possibly capturing gender inequality in more senior positions.

These results challenge our hypothesis (H_{1d}) that women would be more internationally mobile in younger age groups and earlier career stages (Ehrenreich and Hochschild 2004; Walton-Roberts 2022; Kofman and Raghuram 2022). Instead, we find that these patterns are not linear. In particular, men are more internationally mobile at earlier career stages, while women are more mobile at younger and older ages. This might reflect higher levels of career flexibility for men with fewer family-care obligations, temporary patterns of male labor migration at earlier career stages, and longer-term settlement among women migrants in contrast with higher rates of male return migration (Faggian et al. 2007; Depew, Norlander and Sorensen 2017).

Gendered Patterns in Immigrant Selectivity

To better understand how the professional immigrant population differs from the overall population of professionals on LinkedIn for a given country, we compare the oGGI with the iGGI.[vi] The oGGI helps us understand underlying gender imbalances in each country, and this comparison helps us identify whether the migrant population has a higher share of women compared to the overall population in a destination country.

Forty-four percent of all migrant and non-migrant users on LinkedIn are women, meaning that men use LinkedIn at higher rates than women globally. Comparing the global iGGI (50%) and oGGI indicates that immigrant women professionals are overrepresented compared to the global population of LinkedIn users by six percentage points. This suggests that migrant women professionals may be a highly selected group, given their overrepresentation in the workforce relative to larger gender inequality in the overall population of professionals on LinkedIn.

Figure 2 Panel A analyzes these dynamics by host country. It shows the oGGI on the x-axis and the iGGI on the y-axis, with a green 45-degree line to illustrate gender parity (GGI=50%). First, the figure shows that the regression line closely fits the 45º line, suggesting that the gender composition of all migrant and non-migrant professionals globally is close to parity, echoing the indicators from the iGGI matrix.

We find that migrant women are overrepresented relative to the overall population of professionals in key skilled migrant destination countries. The figure shows that in the United States, United Kingdom, France and Germany, the iGGI is higher than the oGGI, indicating that the immigrant population is more female than the overall population. For example, the iGGI in Germany is eight percentage points higher than the oGGI, and six percentage points higher in the UK and France. The gap is even wider in the United States, where the iGGI is 16 percentage points higher than the oGGI. This suggests that women immigrant professionals might be highly selected on certain employment characteristics.

We further disaggregate these dynamics by industry, as shown in Figure 2 Panel B. We find that women are employed in healthcare, education and government at similar rates to the overall population. However, women are overrepresented in consulting, manufacturing/supply chain/logistics, technology, finance, oil/gas/mining and construction. Notably, these are male-majority industries in the overall professional population, suggesting that that women immigrant professionals might be highly selected on certain characteristics relative to the total professional workforce in these countries. These dynamics hold globally, as well as in key destination countries like the United States, United Kingdom France, Australia, Germany. In particular, immigrant women are overrepresented by at least 15 percentage points in these industries in the U.S., and by at least four percentage points in the U.K., France, Australia and Germany.[vii] Canada is a notable exception among key destination countries, where the share of migrant women is similar to the overall population across industries.

Gender Gaps in Potential Migrant Outflows

We now turn our analysis to potential outflows of professionals open to relocate from an origin country for employment abroad. Figure 3 Panel A shows the Emigrant GGI (eGGI) by sending country, industry, age, and years of employment. This includes the 43 largest migrant sending and receiving countries[viii] to look at potential emigration from both origin and destination contexts, including contexts of displacement like Ukraine and Venezuela.

The results show a markedly different picture of the gender composition of potential emigrant outflows, compared to the recently arrived immigrant stock in the prior analysis. Globally, regionally and at the country level, all potential emigrant outflows are predominantly male, with an eGGI less than 45%. These dynamics are visualized in Figure 3 Panel B, which shows the spatial distribution of the emigrant gender gap and underscores the male-majority eGGI across all countries.

These results run counter to our expectation in (H_{1b}) that openness to relocation would have a female-majority eGGI in countries with higher levels of gender inequality. Instead, the results suggest that more gender unequal countries have higher levels of potential male emigration, perhaps due to greater opportunities for men to migrate or higher levels of male labor market participation in the origin country.[ix]

Figure 3, Panel A shows that globally, all industries are male-majority, though there is some country-level variation in education, government and healthcare. This provides some credence to our expectation in H_{1e} that rates of female potential emigration would be higher in female-majority industries. With respect to age and years of experience, all cohorts are male-majority, but are moving towards parity in more junior and younger cohorts, though the gap is still large.

Similar to our analysis for recent migrant arrivals, we consider the relationship between the gender composition of potential emigrants and country-level political economic factors. We find a significant negative relationship between skilled wages and potential outmigration, suggesting that

low wages can function as a push factor for professional migrants. We report the full results of this analysis in Appendix Table A.

Migration Aspirations and Behavior

This paper offers a window into gender gaps in migration aspirations and behavior by measuring LinkedIn users' openness to migrate internationally and recent international relocation behavior. As shown in Figure 3, the global eGGI is 30%, indicating that men have significantly higher migration aspirations than women. As shown in Figure 1, the global iGGI is 50%, indicating that men and women demonstrate equal levels of international mobility.

We close our analysis with a brief exploration of the gap between aspiration and relocation to lay a foundation for future work. We calculate a relocation-to-aspiration gap as the number of people who recently relocated to a country for work as a share of the number of people who indicated that they are open to relocate to that country for work.[x] This analysis combines information about the recently relocated immigrant stock from the Advertising platform and the population open to relocating to a destination from the Recruiter platform.

Because the Recruiter platform does not collect information on gender to avoid discriminatory hiring practices, we focus our analysis on the gap between aspirations and relocation among all migrant professionals. Figure 4 shows the results for the 39 destination countries with available data. The table shows a large gap between professionals on LinkedIn who are open to relocate internationally and professionals on LinkedIn who actually move. The median relocation-aspiration score across the 39 countries with available data was 22 percent. This indicates that the recently arrived immigrant sock in destination countries is about 1/5 the size of the population of people demonstrating migration aspirations.

There is considerable variation in the relocation-to-aspiration ratio across countries. In India, the recently relocated population was more than half (60%) of the aspiring migrant

population. In six countries, (Pakistan, Philippines, Poland, Brazil, United States, Egypt and France), the gap ranged from 47% to 33%. In the remaining 32 countries, the relocated population of migrant professionals represented less than a third of professionals open to relocate to that country. Future work can build on these findings to directly measure the individual conversion of aspirations into behavior. Survey data is well-suited to this question (Aslany et al. 2021), but it could also be observed on LinkedIn through measuring the timing of initial international job-searching to international relocation event, which will be the focus of a future paper.

Discussion

This paper charts new patterns in the feminization of labor migration and provides fresh insights into the growing share of women migrant professionals in key and emerging destination countries (Ehrenreich and Hochschild 2003; Kofman and Raghuram 2022; Yildiz and Abel 2024). We utilize an emergent digital data source to take a close look at international immigration and potential emigration of professionals, and dig deep into how gender differentials vary across countries, industries, age, and years of experience. In particular, we offer LinkedIn data as a timely, dynamic and detailed complement to study global patterns of professional mobility (State et al. 2014; Breschi et al. 2022; Jacobs 2022; Perrotta et al. 2023; Kalhor et al. 2024). Our results offer new detail into the aspirations, behavior and selectivity of women migrant professionals moving for employment, rather than trailing men as wives, mothers and daughters (Docquier et al. 2009; Donato and Gabaccia 2015).

Among LinkedIn users, our results indicate that the global immigrant population is at gender parity. The professional migrant population is majority-female in key destination countries like the United States, United Kingdom, Australia and France, as well as emerging destination countries like South Korea and Singapore. We find that the global mobility of women professionals is driven by key industries like finance, healthcare, manufacturing/supply chain/logistics and real estate.

These results are in line with recent work indicating that female labor migration is increasingly driven by flows in the largest migration corridors (Morellini and Block 2024).

Our results also reveal a considerable gap between migration aspirations and behavior. Among LinkedIn users, the global immigrant population is at gender parity, while the population of those open to relocate internationally is largely male. Thus, while men have considerably higher migration aspirations, globally, men and women have similar rates of mobility (Carling 2002). Overall, we find that the population of people expressing migration aspirations is about five times larger than the population of recently relocated migrants.

The findings suggest women migrants might be positively selected in key destination countries like the United States, Australia, the United Kingdom, France and Germany, especially in industries including consulting, finance and technology. Migrant women are overrepresented relative to the overall professional migrant population in male-majority industries like consulting, technology, finance and manufacturing/supply chain/logistics.[xi] In the United States, for example, 59% of migrant professionals working in technology are women, compared to 44% of the overall population on LinkedIn. This is surprising, given prior work that has emphasized how male-majority industries drive gender imbalances in migration patterns (Malakhov 2019; Kofman and Raghuram 2022**).** These findings suggest instead that more women are migrating for work in these industries than in past decades. They might be positively selected in these industries, and might also be moving to compensate for inequalities in origin settings (Faggian et al. 2007; Docquier et al. 2009; Kalhor et al. 2024).

With respect to age and employment, our analysis reveals that younger and more junior migrant cohorts are more female in most regions. The migrant population is more female in younger cohorts in emergent skilled migrant receiving countries like Chile and South Korea. Conversely, the trends have stabilized or reversed in established destination countries. This might capture temporary patterns of male labor migration at earlier career stages before eventually

returning to their country of origin, with longer patterns of settlement for women professional migrants (Depew, Norlander and Sorensen 2017).

These results are consistent with recent work demonstrating the growing share of skilled women migrants (d'Aiglepierre et al. 2020; Morellini and Block 2024; Yildiz and Abel 2024). Our paper builds on this analysis and provides new insights into country-specific industry, age and employment dynamics. Taken together, the growing share of women migrants in key industries, and increasingly female migrant populations in younger and more junior cohorts in emerging destination countries might reveal insights into future trends in the gender composition of professional immigrants. Further, we find that women-majority migrant populations on LinkedIn are positively associated with gender equality, welcoming migration policy and higher wages, highlighting some factors driving these shifts.

Our findings lay the groundwork for further analysis with these data. As we collect these data across multiple time points, they lend themselves to longitudinal studies of shifting gender dynamics over time. Further, more detailed country-specific analysis might reveal useful insights into the gender patterns of professional migration from countries such as Ukraine and Venezuela to countries like Poland and Colombia, where large populations are being displaced amid violent conflicts and economic collapse while detailed, timely data are scarce. For example, our results detect some of the female-majority migration in and out of Ukraine after the Russian military invasion in 2022 due to military draft restrictions on male emigration.

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[i] In this study, we use a broad definition of professional migration, which captures a wide range of skilled occupations that typically require advanced education.

[ii] This focus on larger populations likely captures migration to and within countries in the Global North, which are more common destinations for skilled migrants. We focus on these countries as the primary sites of skilled labor migration but future work focusing on South-South migration among professional migrants would enrich our overall understanding of global labor migration dynamics.

[iii] It was not possible to collect data from Russia and Syria due to limited access to the platforms in these countries amidst ongoing violent conflict. Thus, we present data on 48 countries. We exclude Oceania in our regional analysis because we report Australia and New Zealand at the country-level.

[iv] Because we do not have access to LinkedIn's gender assignment algorithm, we are not able to test for systematic bias in the algorithmic assignment of men and women. However, we can examine gender assignment by country, and its implications for the assigned gender composition of users on LinkedIn. We find that countries in East Asia and Southeast Asia have lower rates of gender assignment for all LinkedIn users, at 41 percent and 65 percent respectively. This is consistent with prior work showing that demographic inference using algorithms is less effective at ascribing demographic characteristics to racial minorities (Lockhart, King and Munsch 2023) and highlights a need for improved techniques across race and nationality categories. This gap in gender assignment among Asian LinkedIn users might introduce some bias in the findings of this paper because Asian-origin labor migration streams from countries such as the Philippines, Indonesia, China and

Thailand are female-majority (Terrazas and Batalova 2010; Abel 2022). As such, the findings of this paper might be underestimating the share of women migrants. Other Asian countries like India with more male-majority labor migration streams have a higher rate of gender assignment in our dataset, at 84 percent of all users in India, for example (Abel 2022).

[v] As a robustness check and for comparability with prior studies, we conducted supplemental analysis calculating the gender gap as a female-to-male ratio and logged female-to-male ratios. We also calculated the index as the difference between women and men as a share of the total population. In all three approaches, the results are consistent in the magnitude and direction of the gender differentials with the percentage results reported in the paper (available upon request).

[vi] Appendix Table A reports the full results of oGGI values.

[vii] One exception is finance in Germany. See Figure 1 and Appendix Figure A for specific iGGI and oGGI values by country and industry.

[viii] Belgium, Denmark, Hong Kong, Iceland, Jamaica, Philippines and Singapore are excluded from the Emigrant GGI analysis because of insufficient audience counts.

[ix] This persistent male-majority gap in eGGI may also be explained by gender differences in job search behavior on LinkedIn. Men may actively pursue jobs in other countries at higher rates than women, reflecting broader gender differences in both online behavior (Hassan 2019) and job-seeking behavior (Obukhova and Kleinbaum 2022). This difference in online networking may also reflect gender inequality in professional networks (Kalhor et al. 2024).

[x] As discussed in the methods section, this measure captures job search behavior abroad. This is more concrete than migration aspirations, but less complete than an actual move. As such, this measure might underestimate the amount of migration aspiration but is the closest indicator of future migration goals available in these data.

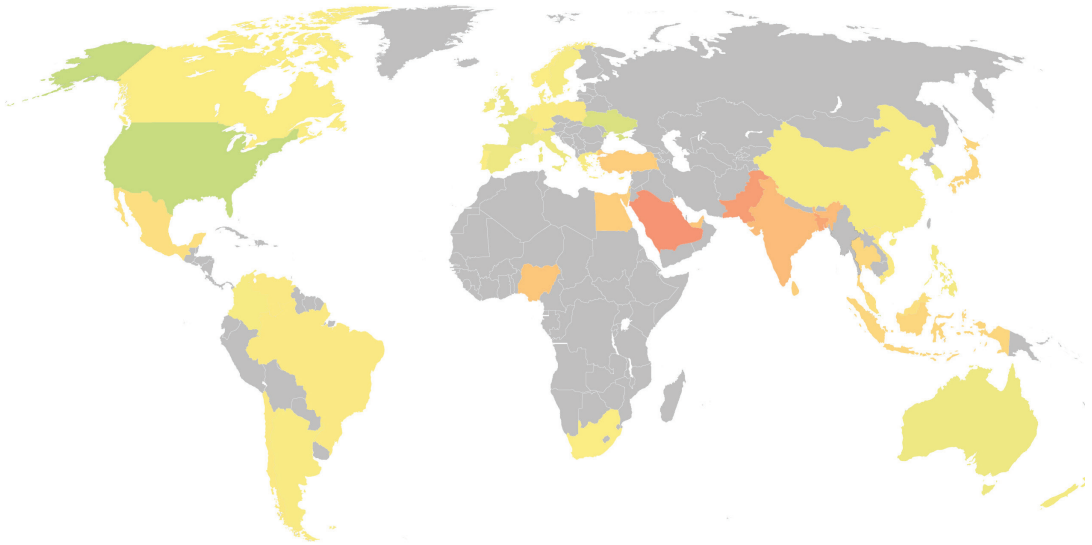
[xi] This is consistent with recent analysis by Kalhor et al. 2024 about overall LinkedIn populations, and our comparison with migrants allows for exploration of potential selectivity.

Figure 1

Panel A. Immigrant Gender Gap Index (iGGI) (% women)

	iGGI	INDUSTRY											AGE			YEARS OF EXPERIENCE		
	Immigrant GGI	Construction and Agriculture	Education	Finance	Government	Healthcare	Mfg., Supply Chain, Logistics	Oil, Gas and Mining	Consulting	Real Estate	Tech, IT and Media	Other	18-24	25-34	35-54	1-3	4-7	8+
Global	50	28	53	57	52	63	49	25	51	56	45	51	52	47	53	49	52	48
North America	61	43	54	71	53	71	63	38	58	73	55	56	60	57	66	53	63	61
Europe	49	28	55	46	58	64	45	28	50	53	42	53	51	49	47	52	52	45
South America	44	29	53	38	58	65	39	18	46		34	52	48	48	39	49	48	39
Africa	35	17	43	39	41	48	29	19	38		28	40	42	35	29	39	36	28
Asia	35	15	46	37	43	49	32	14	39	34	34	36	39	36	32	38	38	30
United States	66	50	56	75	53	71	69	43	62	77	59	59	64	60	71	58	69	66
Singapore	60	37	62	48			61		67		55	64	59	59	63	55	65	58
Ukraine	60								62		51		69	61	55		65	53
France	54	24	56	52	57	63	52	44	52		46	57	52	57	51	58	58	48
South Korea	51						46		54				60	54	42	59	56	44
Australia	51	30	55	49	57	67	46	29	57	56	50	53	51	50	54	50	56	50
United Kingdom	50	29	54	45	54	62	50	28	52	52	46	52	51	49	52	51	54	48
Italy	50		56	45	55		46		54		46	60	53	52	46	54	57	46
Spain	49	36	61	44	61	67	44		52	49	39	54	54	52	45	54	54	45
Philppines	49			51			41		55		48	52	54	53	43	54	56	43
New Zealand	49			50			45		50		41	51	57	50	45	54	55	44
Belgium	49		57		42		48		41	54			43			38	48	
Ireland	48		59	45		61	43		49		41	54	50	48	46	52	51	44
China	48		41	54			52		46		45	49	54	49	42	52	50	41
Sweden	47						41		48		47	51	53	47	43	50	50	43
Colombia	47						43		49		26	51	50	50	42	51	50	43
Argentina	47						42		49		27	55	51	48	41	52	49	42
Denmark	47						42		48			53	52	48	42	54	52	42
Germany	47	31	55	40	50	58	39		51		44	53	48	49		48	50	43
Greece	47								48			54		50			54	41
Canada	46	27	52	46	55	63	40	29	51	50	41	48	44	46	47	46	52	45
Netherlands	46		58	42	56	63	41		48		40	52	51	48	43	52	50	43
Portugal	46		56	42	56		38		45		30	53	48	46	45	50	48	42
South Africa	45						39		46			51	53	45	41	46	46	40
Norway	45						37		47			51	51	46	42		48	41
Chile	44						38		46			66	48	47	40	52	47	40
Vietnam	44								44				49	48			48	34
Poland	44			44			39		44		38	50	46	45	35	56	46	36
Switzerland	43		49	37	55	60	38		41		35	48	42	45	39	49	43	40
Brazil	43	34	51		37		40		29	50			37			35	42	
Venezuela	42								47					45	41			40
Mexico	42		52				35		44		30	48	46	45	37	46	48	37
Malaysia	41						38		48		36	45	45	45	33	46	46	35
Japan	39		48	39	40		34		43		32	41	52	43	30	43	38	32
Luxembourg	39			44					45				49	46	45	47	48	43
Thailand	38								43			42	45	41	34		45	31
Indonesia	38						37		44			48	49	44	32	51	45	32
Israel	38								40					43	36		43	37
Sri Lanka	36																	
Egypt	35		45	46	49		33		36		35	41	54	33	25	35	35	23
Turkey	35		43				30		38		29	40	38	36	27	39	37	27
Nigeria	32						27		34		27	40	33	34	30	35	34	29
UAE	32	16	50	30	43	50	25	15	33	31	29	32	34	32	28	35	34	27
India	29	13	40	33	41	42	21		33		30	29	35	29	25	35	32	21
Kuwait	22													22				
Bangladesh	22												28					
Pakistan	19						14		20		19		24	19	14	24	19	13
Saudi Arabia	16		33		28	39	11		18		17	16	20	17	13	18	16	12

Panel B. Spatial Distribution of iGGI



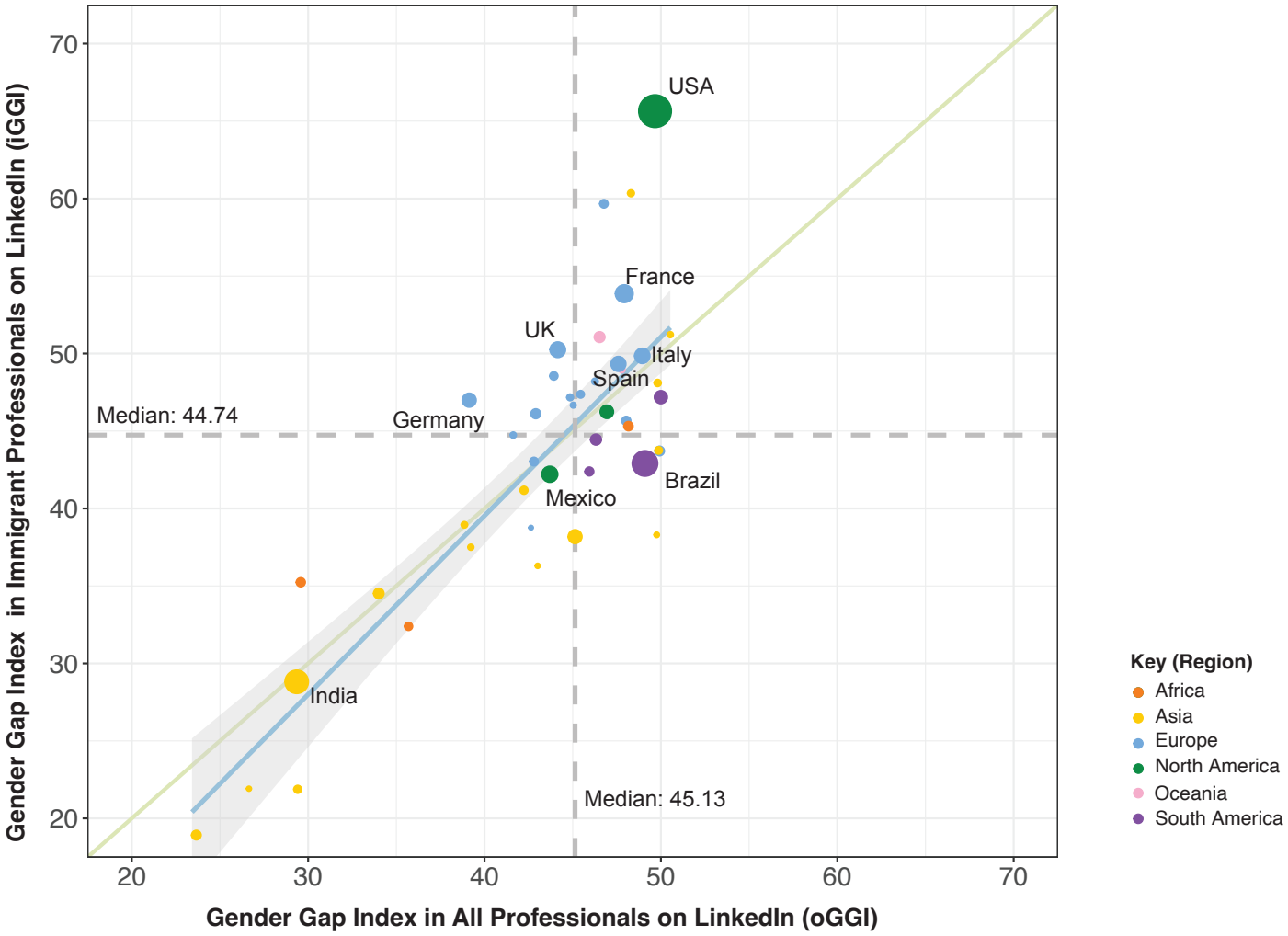
iGGI color scale

0% 50% 100%

Source: LinkedIn Advertising Platform

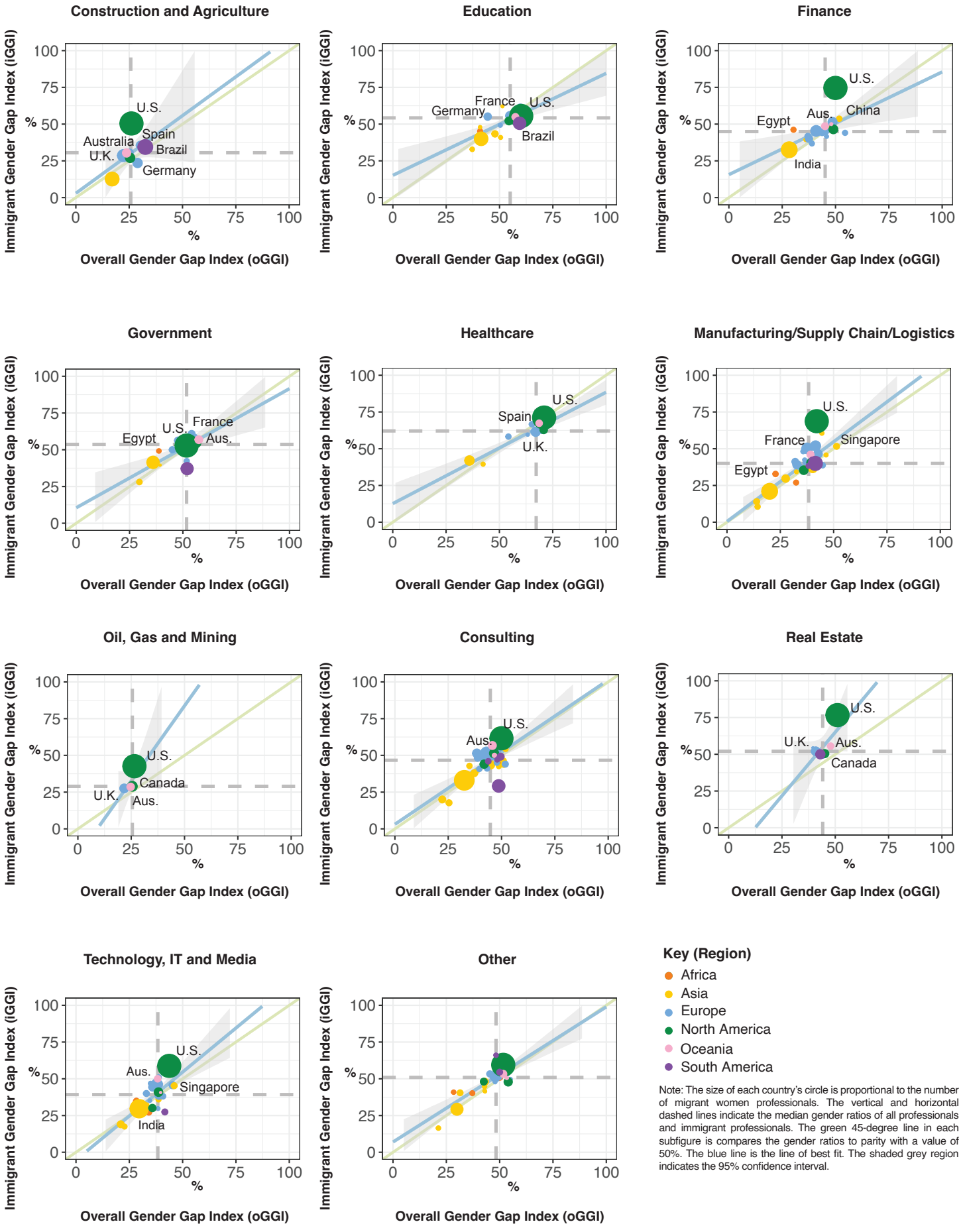
Note: The GGI measures the gender composition of the migrant population: women as a share of all migrant professionals. A GGI value below 50% indicates that women are underrepresented relative to men in the migrant population in the host country; a value over 50% indicates that women comprise a larger share of the migrant pool than men. A GGI of 50% indicates gender parity. The Immigrant Gender Gap Index measures professionals on LinkedIn who recently relocated internationally for work to a given country. Missing data is shown in white in the matrix. Countries in grey on the map were not included in the analysis.

Figure 2.
Panel A. Gender gaps among immigrant professionals and all LinkedIn users



Note: The size of each country's circle is proportional to the number of LinkedIn Users in that country. The vertical and horizontal dashed lines indicate the median gender ratios of all professionals and immigrant professionals. The green 45-degree line in each subfigure compares the gender ratios to parity with a value of 1. The blue line is the line of best fit. The shaded grey region indicates the 95% confidence interval.

Figure 2.
Panel B. Gender gaps among immigrant professionals and all LinkedIn users by Industry (% women)



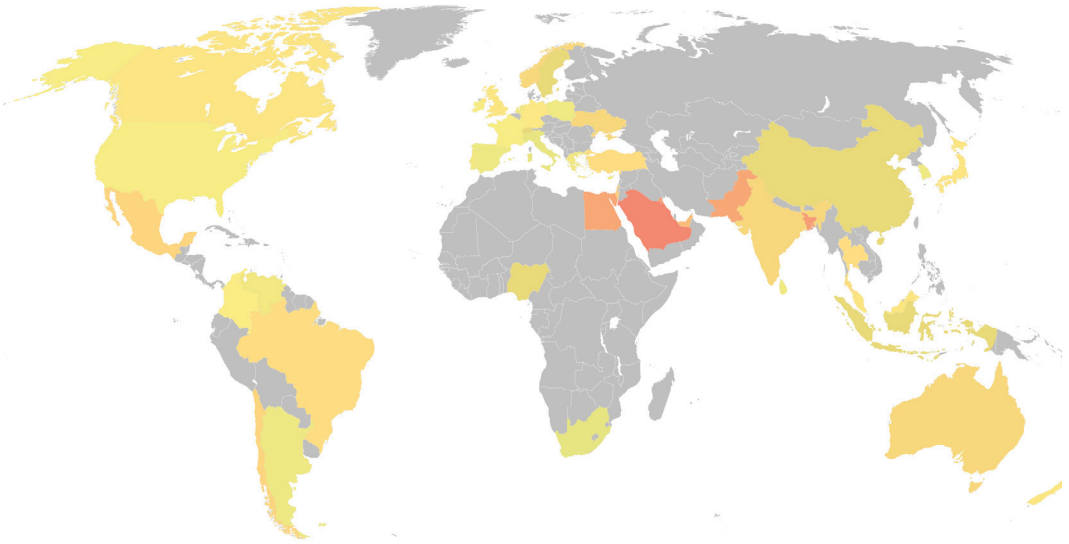
Note: The size of each country's circle is proportional to the number of migrant women professionals. The vertical and horizontal dashed lines indicate the median gender ratios of all professionals and immigrant professionals. The green 45-degree line in each subfigure is compares the gender ratios to parity with a value of 50%. The blue line is the line of best fit. The shaded grey region indicates the 95% confidence interval.

Figure 3

Panel A. Emigrant Gender Gap Index (eGGI) (% women)

	eGGI	INDUSTRY										AGE			YEARS OF EXPERIENCE		
	Emigrant GGI	Construction and Agriculture	Education	Finance	Government	Healthcare	Mfg., Supply Chain, Logistics	Oil, Gas and Mining	Consulting	Real Estate	Tech, IT and Media	Other	18-24	25-34	35-54	1-3	4-7	8+
Global	30	18	40	29	40	43	24	14	31	25	26	35	33	31	25	32	31	25
Europe	36	24	46	29	46	52	32	18	37	37	33	46	38	39	34	38	39	34
South America	33	25	46	32	47	56	28	19	35	30	26	46	33	36	31	34	36	31
North America	31	21	40	31	42	47	26	13	32	37	27	37	34	33	27	33	34	28
Africa	30	17	39	34	40	47	24	16	33	26	27	34	34	30	27	33	30	27
Asia	27	13	35	25	34	36	18	11	29	19	26	27	32	26	20	31	28	19
South Africa	43	28	53	45	52	65	35	25	44		38	49	49	44	40	49	45	40
Italy	42	31	52	35	53	56	37	18	41		40	51	42	44	39	44	44	38
Argentina	39	27	53	35	51	60	33	21	43		30	52	41	43	36	39	44	38
Spain	39	27	49	31	54	56	34		39		34	48	38	40	38	37	41	39
Sri Lanka	38						34		40		42		39	41	37	42	40	37
Poland	38		47	36			34		39		32	50	37	40	35	39	42	35
South Korea	38													42				
Portugal	36	16	46	32	34	57	33		37		31	46	36	38	34	39	39	34
Venezuela	36		44	37	49		32	20	40		28	44	41	39	35	38	38	34
Netherlands	36		49	27			33		36		32	44	42	39	31	41	41	32
Greece	36		50				31		36		26	44	39	37	32	36	38	31
France	35		33	28	47		33		35		31	47	40	36	32	36	37	33
Ireland	35		45	32			32		35		32	43	35	36	33	35	37	33
United States	35	24	40	33	40	48	32		33		30	37	36	36	32	34	37	32
Indonesia	34		44	35	46		30	15	37		28	34	39	35	23	41	35	26
Switzerland	34		39	24			29		34		28	43	35	32	32	38	39	26
China	33													34	32			31
Nigeria	33	22	38	36	44	54	28	22	33		29	38	35	35	30	37	34	30
Sweden	33						24		36		31	43	41	36	29	38	38	28
Colombia	33	26	41	36	45	51	31		33		24	42	32	35	29	33	35	31
Germany	32	20	42	25	41	46	26		34		29	44	35	34	30	34	36	29
Luxembourg	32																	
United Kingdom	31	20	40	25	39	46	28		32		29	37	35	34	29	35	35	29
Malaysia	31			34			28		33		31	38	38	33	26	36	37	26
New Zealand	31													35	28			30
Canada	30	19	39	28	39	46	26		32		26	37	31	33	28	30	34	27
Japan	30													32				
Norway	29													33				28
Australia	29		33				25		31		26	38	36	32	25	36	34	26
Ukraine	29								34		28			38	31			30
India	29	15	37	28	37	38	19	13	30	21	27	28	33	29	22	33	30	20
Thailand	28																	
Brazil	28	23	39	26	42	50	24	17	28		23	40	27	31	26	29	32	26
Turkey	28	20	41	28	39	46	24	17	31		24	35	31	28	24	32	29	24
Mexico	27	12	40	28	43	45	23		30		25	37	33	30	23	32	32	24
Chile	27								29				20	29	22		31	23
Israel	26								28		23			28	27			26
UAE	22	11	40	23	33	42	17	11	26	20	21	22	26	23	19	29	24	18
Pakistan	16	6	27	14	25	24	10	6	17		17	21	20	16	10	20	16	10
Egypt	16	7	30	15	29	24	11		20		17	21	22	15	13	19	17	13
Kuwait	14																	
Bangladesh	13						9		13		12	16	14	14	10	16	12	9
Saudi Arabia	8					25	6		9			9	12	9	6	12	9	7

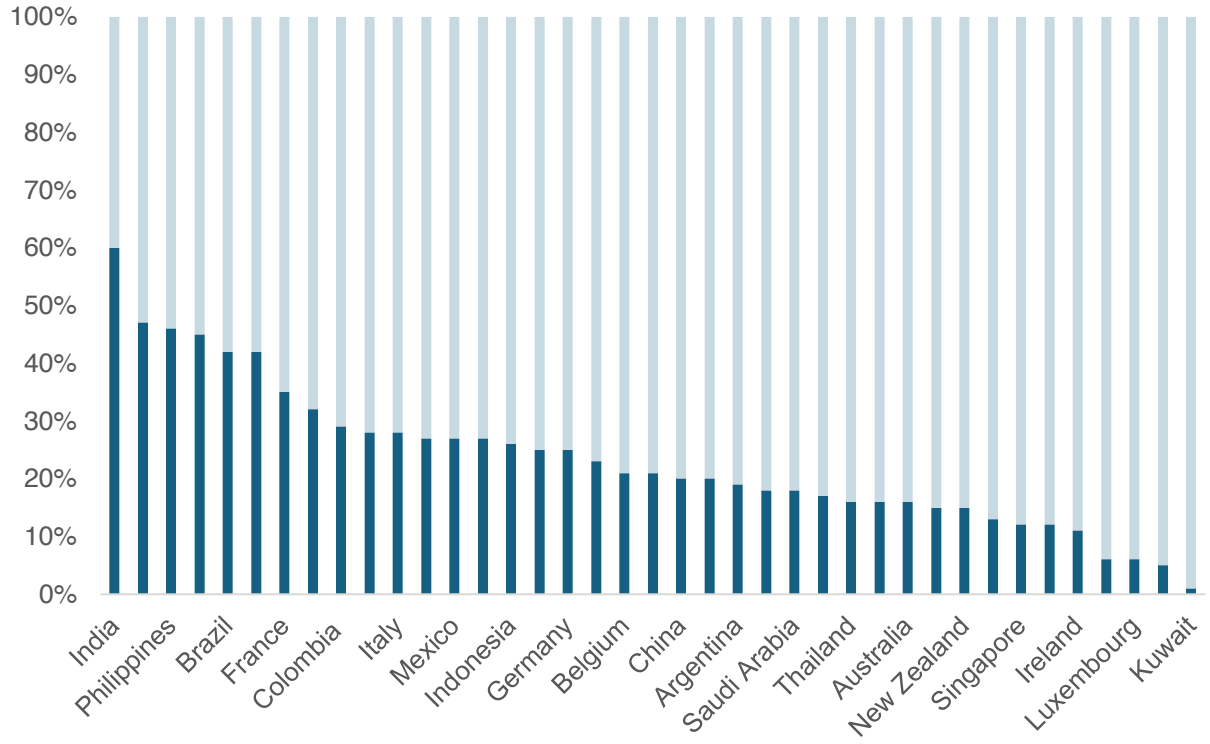
Panel B. Spatial Distribution of eGGI



Source: LinkedIn Advertising Platform

Note: The GGI measures the gender composition of the migrant population: women as a share of all migrant professionals. A GGI value below 50% indicates that women are underrepresented relative to men in the migrant population in the origin country; a value over 50% indicates that women comprise a larger share of the migrant pool than men. A GGI of 50% indicates gender parity. The Emigrant Gender Gap Index measures professionals on LinkedIn who are open to relocate internationally for work, and measures potential emigration from a given country. Missing data is shown in white in the matrix. Countries in grey on the map were not included in the analysis.

Figure 4. Relocation-Aspiration Gap



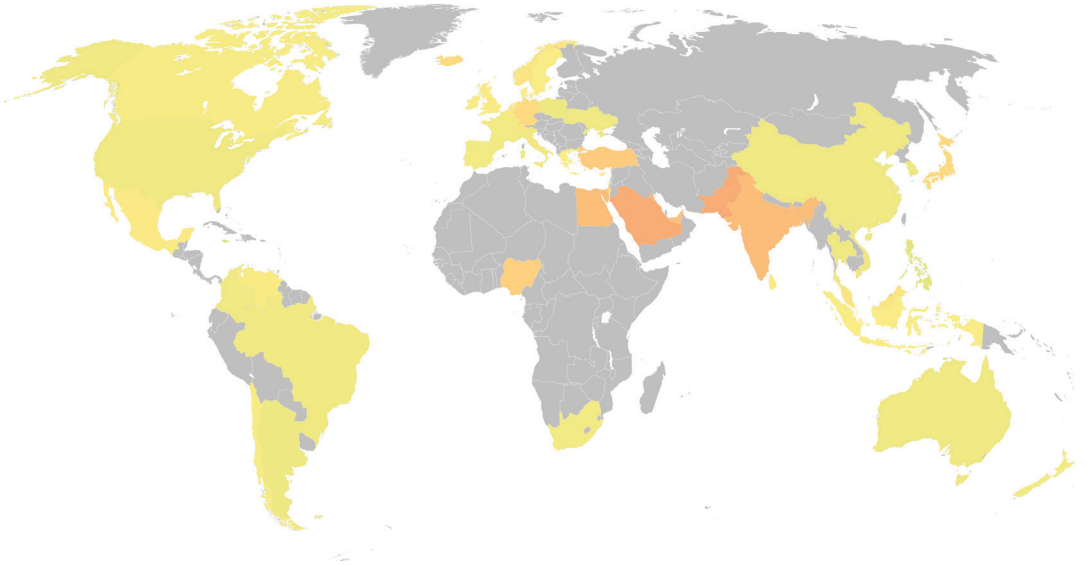
Source: Authors' analysis of data from LinkedIn Advertising and Recruiter Platform
Note: Dark blue indicates population of people who recently relocated as a share of population open to relocate (light blue).

Appendix Figure A

Panel A. Overal Gender Gap Index (oGGI) (% women)

	oGGI	INDUSTRY											AGE			YEARS OF EXPERIENCE		
	Overall GGI	Construction and Agriculture	Education	Finance	Government	Healthcare	Mfg., Supply Chain, Logistics	Oil, Gas and Mining	Consulting	Real Estate	Tech, IT and Media	Other	18-24	25-34	35-54	1-3	4-7	8+
Global	44	28	55	45	50	64	38	26	44	45	39	48	46	45	43	49	48	42
North America	49	27	59	49	52	69	41	27	46	51	43	51	51	49	48	51	51	47
South America	48	32	59	48	52	66	41	25	48	44	40	52	51	49	45	53	50	43
Europe	46	28	56	45	53	65	40	29	44	45	39	50	48	47	45	51	50	43
Africa	37	24	42	41	39	48	31	22	38	36	33	38	39	36	34	42	37	32
Asia	35	22	44	36	42	44	29	22	36	31	32	36	37	35	32	40	37	30
Jamaica	57	32	67	62	66	74	49	35	59	52	50	56	61	56	55	65	62	54
Philippines	54	36	61	58	67	66	48	33	53	55	49	54	56	55	50	57	56	50
South Korea	51	43	54	49	53	58	46	40	52	49	50	53	51	52	46	59	57	46
Argentina	50	28	67	43	56	68	40	23	50	45	42	50	52	51	46	53	52	44
Poland	50	31	61	54	56	68	45	36	52	54	41	55	51	50	47	54	53	46
China	50	47	51	52	52	52	51	47	51	50	46	54	52	50	49	58	58	50
Vietnam	50	37	56	54	55	54	51	44	51	52	48	52	49	50	50	56	54	48
Colombia	50	36	56	52	54	66	45	28	49	51	41	49	51	50	46	53	51	45
Thailand	50	41	48	49	47	54	49	44	49	43	54	43	63	46	38	53	48	35
United States	50	26	60	50	52	71	42	27	50	51	44	52	53	50	49	53	53	47
Brazil	49	33	59	48	52	68	41	25	49	43	40	54	51	50	45	54	51	43
Italy	49	32	64	45	50	63	43	31	48	45	45	51	52	50	48	57	55	45
Singapore	48	35	51	48	51	62	44	33	48	49	44	48	45	48	46	51	54	47
South Africa	48	32	58	53	54	66	42	31	49	53	43	50	50	48	46	51	50	44
Portugal	48	30	62	46	55	70	41	30	48	47	38	53	50	49	47	55	52	45
France	48	29	55	49	55	69	42	31	47	51	39	52	50	48	45	53	52	45
New Zealand	48	27	60	48	59	69	39	26	47	48	40	53	49	49	48	52	53	46
Spain	48	30	60	44	54	65	40	30	47	44	39	50	50	49	46	53	52	43
Canada	47	25	59	49	56	71	39	26	46	45	39	54	49	49	47	48	50	46
Ukraine	47	31	66	55	56	65	41	33	48	54	39	55	49	48	43	49	47	41
Australia	47	24	57	45	57	69	39	25	46	48	38	52	48	48	46	51	52	44
Chile	46	30	62	49	55	68	38	22	44	45	39	48	48	47	43	49	47	41
Ireland	46	19	56	45	56	67	39	24	43	42	39	49	48	48	45	49	48	43
Venezuela	46	32	59	47	53	59	38	27	48	50	37	42	45	46	44	48	46	42
Sweden	45	23	56	44	65	68	37	28	41	40	35	50	46	47	44	46	49	45
Indonesia	45	33	53	47	50	60	40	29	45	40	40	43	51	44	35	52	46	36
Greece	45	30	57	45	53	55	37	31	46	43	38	47	46	46		51	50	41
Denmark	45	23	55	41	60	70	36	26	43	36	36	54	44	48	46	47	48	46
United Kingdom	44	22	56	41	54	67	38	22	43	41	38	48	48	46	42	48	50	41
Belgium	44	22	55	42	52	66	36	28	43	40	35	47	46	46	43	50	49	42
Mexico	44	28	54	43	49	55	36	26	42	44	36	43	46	44	40	46	43	37
Sri Lanka	43	38	55	45	50	50	37	37	43	37	40	39	47	42	40	50	44	39
Netherlands	43	19	58	37	48	70	32	23	39	37	33	47	44	43	43	48	50	43
Switzerland	43	21	50	39	49	63	35	30	40	43	35	48	45	45	40	47	48	40
Luxembourg	43	20	52	43	47	62	36	32	44	40	35	48	46	45	42	49	47	40
Malaysia	42	33	47	47	49	52	38	29	45	42	39	43	44	42	40	45	44	39
Norway	42	22	55	42	58	64	34	25	42	34	35	48	43	43	42	45	47	43
Israel	39	25	45	36	42	51	31	26	39	31	32	42	37	40	38	38	38	35
Germany	39	25	44	38	45	54	33	28	38	39	36	45	42	41	36	45	44	35
Japan	39	25	41	36	39	43	33	26	35	37	33	43	40	41	35	42	42	32
Iceland	38	30	60	47	56	67	41	28	47		40	49	50	36	43	52	53	47
Nigeria	36	23	39	39	38	47	32	26	35	35	34	37	38	36	32	44	39	31
Turkey	34	20	48	38	39	52	28	21	37	30	30	31	35	33	32	44	39	30
UAE	31	16	52	29	39	52	26	18	33	32	30	31	32	32	30	38	35	29
Egypt	30	14	41	30	39	38	23	12	31	28	28	28	34	30	24	35	31	22
Bangladesh	29	23	29	32	25	30	26	37	28	21	32	28	34	28	16	23	19	14
India	29	17	41	28	36	36	20	16	33	22	30	30	33	29	26	37	31	23
Kuwait	27	14	44	28	38	42	23	15	27	20	24	26	31	27	24	34	29	22
Pakistan	24	10	33	20	31	32	14	10	22	17	21	23	27	23	17	28	21	14
Saudi Arabia	23	7	37	22	30	42	14	11	25	15	23	21	27	24	14	33	23	12

Panel B. Spatial Distribution of oGGI



oGGI color scale

Source: LinkedIn Advertising Platform

Note: The GGI measures the gender composition of the migrant population: women as a share of all migrant professionals. A GGI value below 50% indicates that women are underrepresented relative to men in the migrant population in the host country; a value over 50% indicates that women comprise a larger share of the migrant pool than men. A GGI of 50% indicates gender parity. The Overall Gender Gap Index measures all professionals on LinkedIn in a given country. Missing data is shown in white in the matrix. Countries in grey on the map were not included in the analysis.

Appendix Table A.
Pearson Correlations between Migrant Gender Gap Index and Five Socio-Political-Economic Indicators

	Immigration	Emigration
	r	*r*
Gender Equality	0.49***	0.38**
GDP	0.28	0.05
Skilled Wages	0.09	-0.43*
Gender Wage Gap	-0.27	-0.32
Migration Policy Openness	0.44*	--
Internet Penetration	0.14	-0.10

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

Source: Authors' analysis of data from LinkedIn Advertising and Recruiter Platforms. Gender Equality indicator from World Economic Forum (2023); GDP from World Bank (2023); Wages from OECD (2023); Migration Policy from OECD (2023); Internet Penetration from UN International Telecommunciation Union (2023).