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Bound by Tradition: Cultural Gender Norms and Occupational Choice*

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Abstract

This paper investigates whether cultural gender norms about occupations, defined as a society's perception of what is appropriate work for men and women, contribute to persistent gender-stereotypical occupational choice. Using large-scale international survey data and high-quality administrative records, I study whether second-generation immigrant men (women) are less likely to work in an occupation that is perceived as female (male)-typical work in their country of ancestry. I find robust evidence that men, but not women, adhere to occupation-specific cultural gender norms: men are less likely to work in an occupation that is perceived as female work in their country of ancestry, while there is no such effect for women. To investigate mechanisms behind this result, I design an international survey experiment. The results corroborate the gender asymmetry found in the observational data and reveal a social perception penalty for men in heavily female-dominated occupations, but no comparable consistent penalty for women in male-dominated fields. Taken together, the findings of this paper suggest that persistent social norms are a key factor behind the slow integration of men into female-dominated occupations.

Keywords: occupational choice, social norms, epidemiological approach
JEL codes: J16, J24, J62

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1 Introduction

Gender-based occupational segregation remains a persistent challenge in labor markets around the world. Despite decades of progress in workplace equality, the distribution of men and women across occupations remains highly imbalanced (Goldin and Katz, 2016; Pan, 2015), particularly in traditionally female-dominated fields where male representation has shown minimal change (Blau et al., 2013). This occupational segregation carries significant economic costs: it can lead to suboptimal matching between workers' skills and job requirements (Hsieh et al., 2019; Schaede and Mankki, 2022), contribute to the gender pay gap (Blau and Kahn, 2017), and enhance frictions when labor market conditions (Acemoglu and Autor, 2011; Autor et al., 2013) or skill requirements (Deming, 2017) change. Although these economic implications are well-documented, our understanding of the underlying reasons for its persistence are still limited.

In this paper, I study whether occupation-specific gender norms contribute to gender- stereotypical occupational choice. Previous literature has demonstrated that societal gender norms are an important determinant of economic outcomes (e.g. Bertrand et al., 2015) and present a main obstacle to gender convergence in labor markets (Fernández, 2013; Kleven, 2022). I focus on a specific subset of gender norms with direct policy implications: *occupation-specific* gender norms, which reflect a society's perception of whether particular occupations are "appropriate" for men versus women (Cortes and Pan, 2018). To study this question, I use two complementary research designs. First, I propose a novel variation of the epidemiological approach (Fernández and Fogli, 2006; Fernandez, 2007) that asks whether male (female) descendants of immigrants are less likely to choose an occupation that is female- (male-) dominated in the country they originate from. Second, I design an international survey experiment that investigates perceptions towards men and women in atypical occupations to test whether observed occupational gender shares indeed reflect perceptions of gender appropriateness.

Identifying the impact of culture on occupational choice is challenging as culture is deeply intertwined with economic and institutional factors. To address this challenge, the empirical strategy in the first part of the paper builds on the epidemiological approach. This method relies on comparing outcomes of second-generation immigrants who reside in the same location, thereby sharing the same economic and institutional environment, but differ with respect to their cultural heritage. I propose an augmented version of this approach that measures cultural norms at the country of origin-by-occupation level. Specifically, I exploit variation in the gender composition of occupations across origin countries and use the share of women among all workers in a given occupation in the country of ancestry as a cultural proxy. While the economic and institutional factors captured in this variable should not be relevant for second-generation immigrants, the cultural norms embodied in this variable may affect the occupational choice of these individuals. Intuitively, the approach thus asks whether a male (female) individual is less (more) likely to work in an occupation that is more female dominated in his (her) country of origin.

I perform this empirical analysis in two distinct data sets. First, I use large-scale international survey data from the European Social Survey (ESS), which covers 39 European countries. Second, I use high-quality administrative records that contain the universe of the Swedish population. The data on the share of females by occupation across countries of ancestry is also

obtained from two data sources: in the first part of the analysis, I compute this variable directly within the ESS data. When I estimate effects in administrative records, I obtain these data from the International Labor Organization (ILO).[1]

The main finding of this analysis is that men, but not women, adhere to occupation-specific gender norms. The effect size is remarkably consistent across the two data sets: a 10 percentage point increase in the share of females working in a given occupation in the country of origin reduces the probability for men working in this occupation by around 4 to 7 percent. The results for women, on the other hand, are less conclusive. While I find a precisely estimated zero effect in the ESS data, I find evidence that women counteract occupation-specific gender norms in the administrative records.

Motivated by the somewhat differing findings for women in the two data sets, I then explore the relative importance of cultural norms and local factors for occupational choice in two ways. First, I perform heterogeneity analyses by gender equality in place of residence. I restrict the ESS sample to women living in countries with similarly high levels of gender equality like Sweden and indeed find virtually the same results like in the Swedish setting, which suggests that women counteract occupation-specific gender norms in more gender equal environments. The results for men, on the other hand, are unaffected by the level of gender equality in their environment. Second, I run horse race regressions to compare the predictive power of the origin and residence country gender composition of an occupation on occupational choice. While I find that both factors matter for men's occupational choice, only the residence country gender composition matters for women. Taken together, these findings suggest a striking gender asymmetry: while the sorting of women into female dominated fields seems to be explained by institutional characteristics of occupations and local norms, the occupational choice of men is additionally affected by occupation-specific cultural gender norms.

In further heterogeneity analyses, I find that the results for men are driven by men without college education. Non-college men being bound by traditional norms in their occupational choice may thus be one factor explaining their struggles in the labor market in recent decades (Reeves, 2022). For women, I find that the counteracting of norms is driven by college-educated women.

In the second part of the paper, I design and field an international survey experiment to examine whether the observed female shares of occupations indeed reflect perceptions of gender appropriateness. The experiment presents respondents with vignettes describing hypothetical individuals in gender-typical or gender-atypical occupations and asks them to evaluate these individuals along multiple dimensions, such as aspirations and occupational fit. Respondents report both their private beliefs, that is, their own perceptions, and their second-order beliefs, that is, how they think others perceive these individuals. This approach makes it possible not only to test whether the share of females in an occupation corresponds to perceptions of appropriateness of this occupation for either gender, but also to identify the specific dimensions along which individuals in gender-atypical occupations are evaluated differently. To this end, I implement the experiment in two countries that differ by the extent of gender segregation

[1] This choice of data sets for the treatment variable lets me harness the advantages of both the ESS and administrative data in terms of detail and scope in the best way. However, I also show that the results are robust to using the ESS treatment variable data in the administrative data, and to using the ILO treatment variable data in the ESS.

within the occupations under study.

The results reveal a pronounced asymmetry in social perceptions of gender-atypical occupational choices. Men entering female-dominated occupations face a consistent social perception penalty: they are viewed as less aspirational and as a poorer fit to the occupational context than women in the same occupations. This pattern appears in both respondents' private and second-order beliefs, suggesting that the findings from the first part of the paper may reflect men anticipating being perceived as a poor fit and as less socially desirable when entering female-dominated occupations. For women in male-dominated occupations, the evidence is, again, less conclusive. In private beliefs, respondents tend to view women in these roles, if anything, more favorably than men, but this perception premium disappears in second-order beliefs. Women do not appear to face a social desirability penalty in neither private nor second-order beliefs, which may explain why occupational gender norms do not affect women's occupational choices.

The findings of this paper contribute to our understanding of persistent patterns in occupational gender segregation. Over the last decades, overall desegregation in the labor market has been entirely driven by women entering traditionally male dominated fields, such as veterinary sciences and pharmacy (Goldin and Katz, 2016; Pan, 2015). The share of men in traditionally female dominated fields, on the other hand, has remained low or has, if anything, decreased (Goldin, 2014; Blau et al., 2013; Reeves, 2022). Moreover, evidence from psychology demonstrates that gender norms related to men have remained remarkably static over time, in stark contrast to the significant evolution of norms related to women (Gustafsson Sendén et al., 2019). The findings of this paper bridge the gap between these observations and suggest that persistent cultural norms constitute a barrier for men to enter female-dominated occupations. The persistence of these norms further provides a potential explanation for why men remain largely unresponsive to interventions that experimentally manipulate the perceived gender composition of occupations (Delfino, 2024; Palffy et al., 2023*a*).

This paper contributes to several strands of the literature. First, the paper relates to the growing literature on the effects of cultural traits on economic outcomes. The importance of cultural traits, such as individualism (Gorodnichenko and Roland, 2011; Hartinger et al., 2025), patience (Hanushek et al., 2022; Figlio et al., 2019), and risk taking (Ek et al., 2022) has been demonstrated in a large number of studies, many of which employ the epidemiological approach. One large strand within this literature focuses on the effects of gender norms on economic outcomes. This literature has mainly been focused on studying the importance of gender norms for women's outcomes, including labor force participation (Fernandez, 2007; Fernández, 2013; Blau et al., 2011; Alesina et al., 2013; Finseraas and Kotsadam, 2017), fertility (Fernández and Fogli, 2006), child penalties (Kleven, 2022), the division of home production (Bertrand et al., 2015), and girls' educational attainment (Nollenberger et al., 2016). The importance of masculinity norms for men's outcomes, on the other hand, has long been overlooked (Lundberg, 2023). Only recently, there is an emerging literature on how social norms about masculinity affect men's outcomes (DeHaas et al., 2024; Baranov et al., 2023; Matavelli, 2024). My contribution to this literature is twofold. First, I focus on occupation-specific gender norms rather than general gender norms. While there is correlational evidence linking more traditional gender norms to

higher occupational gender segregation (Graves and Kuehn, 2021; Palffy et al., 2023*b*; Kuhn and Wolter, 2023), this paper is the first to study the effect of occupation-specific gender norms on occupational choice. Second, I contribute to this literature by proposing a novel extension of the epidemiological approach that proxies norms at the country of origin-by-occupation level and thereby allows me to hold institutional characteristics constant.

Second, this paper contributes to the literature on the determinants of gender differences in occupational choice. This literature has identified a wide range occupational characteristics such as flexibility (Goldin and Katz, 2016; Wasserman, 2023), social contribution (Burbano et al., 2023), competitiveness and risk (Buser et al., 2014; Reuben et al., 2015; Flory et al., 2015; DeLeire and Levy, 2004), and workplace safety (Lavetti and Schmutte, 2023) as drivers of occupational gender segregation. Moreover, gender differences in preferences for occupational tasks (Kuhn and Wolter, 2022; Lordan and Pischke, 2022; Gelblum, 2020), differing comparative advantages in physical vs. social skills (Baker and Cornelson, 2018), as well as parental advice (Wolter and Zöllner, 2024; Carlana and Corno, 2024) and role models (Hederos, 2014; Lassen, 2022) have been found to contribute to gender stereotypical sorting into occupations. The impact of external factors, such as culture and social norms, on occupational choice has received much less attention. In theoretical work, Akerlof and Kranton (2000) define a model of identity in which a man (woman) entering a female (male) typical occupation experiences a cost of deviating from the social norm. I contribute to this literature by providing an empirical tests of this theoretical model and studying whether occupation-specific gender norms are a determinant of gender differences in occupational choice.

Third, this paper relates to the emerging literature on the declining economic prospects of boys and men. There is mounting evidence that boys, particularly those from disadvantaged backgrounds, are falling behind in education (Autor and Wasserman, 2013; Autor et al., 2023; Bertrand and Pan, 2013; Autor, Figlio, Karbownik, Roth and Wasserman, 2019; Almås et al., 2016). This is especially concerning as low-educated men face declining real wages and labor market participation (Autor and Wasserman, 2013; Autor et al., 2013; Binder and Bound, 2019), with adverse effects on family formation (Autor, Dorn and Hanson, 2019; Coile and Duggan, 2019), reinforcing the cycle of disadvantage.[2] A key takeaway from this literature is that men were on average less successful than women in adjusting to changing labor market conditions in recent decades. In this vein, Graves and Kuehn (2021) document that men have not been entering growing sectors, such as in health care and education, and hypothesize that non-wage factors are likely to explain this reluctance. Delfino (2024) shows in a field experiment that increasing the perceived share of male workers in a female-dominated occupation is not sufficient to encourage more men to apply, suggesting that norms about occupations are sticky and deeply rooted in culture. Taken together, there is reason to believe that cultural norms contribute to the adjustment frictions men have been experiencing in the labor market. I contribute to this literature by empirically testing whether occupation-specific gender norms contribute to rigid, gender-stereotypical occupational choice.

[2]Notably, this development seems to raise little public concern: Cappelen et al. (2025) provide experimental evidence that society shows greater acceptance of males falling behind than females falling behind and less demand for policy initiatives when men face struggles.

2 Empirical strategy

2.1 Endogeneity of norms and the epidemiological approach

Identifying the effects of cultural norms is challenging as they are deeply intertwined with formal and economic institutions. One way to address this challenge is the epidemiological approach (e.g. Fernández and Fogli, 2006; Fernandez, 2007). The underlying idea of this approach is to disentangle the effects of culture from those of institutions by comparing outcomes of second-generation immigrants residing in the same country. What makes this group an attractive study population is that they are born and raised in the same country, and therefore share the same institutional environment, but their parents originate from different countries. Under the assumption that cultural beliefs are systematically transmitted from parents to children, it is thus possible to identify the effects of different cultural norms while keeping the institutional environment constant.

When applying the epidemiological approach, cultural norms in the countries of origin are typically operationalized with a quantitative country-level variable. Such a variable represents both institutional characteristics of the origin country, but also a society's shared beliefs and cultural norms. For second-generation immigrants who were born and grew up outside their country of ancestry, the institutional characteristics captured by this variable should no longer matter for their decision making. The cultural component, however, is transmitted through generations and might therefore affect outcomes of descendants of immigrants.[3]

2.2 Variation of the epidemiological approach

I propose a variation of the epidemiological approach in which I define the variable that captures cultural norms not at the country-level but instead at the country-by-occupation level. Specifically, my treatment variable operationalizes occupation-specific gender norms with the share of females working in each occupation in the country of origin. As in the standard epidemiological approach, this variable captures both institutional factors and cultural beliefs, but only the cultural component is relevant for the outcomes of second-generation immigrants. In my case, this means that the treatment variable captures gender norms related to an occupation, that is whether an occupation is perceived as 'appropriate' work for men vs. women. The choice of this variable as cultural proxy is further motivated by a large body of research in psychology that documents that the share of women in an occupation is highly predictive of the gender stereotypes held about this occupation (e.g. Cejka and Eagly, 1999; Adachi, 2013; Koenig and Eagly, 2014), and, importantly, also predicts differences in stereotypes across countries (Miller et al., 2015). Intuitively, I ask whether male (female) descendants of immigrants are less likely to choose an occupation that it is more female (male) dominated in the country their parents originate from. This means I exploit variation in the gender composition of occupations across countries.

[3] For instance, female labor force participation has been employed to proxy cultural gender norms as it does not only represent institutional factors but also a society's beliefs about the role of women in the labor market (Fernández and Fogli, 2006; Fernandez, 2007).

2.3 Estimation

To estimate the effect of occupation-specific gender norms on occupational choice, I implement a stacked model that aims to mimic the occupational choice process at the individual level. This means that in practice, I duplicate each individual observation by the total number of occupations so that each observation represents an occupation the individual could have chosen to work in. I then match this sample to the treatment variable data, i.e. the share of women by occupation, at the country of origin-by-occupation level. Finally, I construct the dependent variable as a dummy variable that takes the value 1 for the one true occupation of the individual, and 0 for all other occupations. Since all institutional factors are kept constant, the only variable influencing the occupational choice in this set-up is the occupation-specific gender norm from the origin country. Hence, I identify the effect of occupation-specific gender norms on occupational choice by estimating the following specification in a linear probability model:

$$OCC_{ijco} = \beta_1 FSO_{oj} + \eta_c \times \eta_j + X'_{ijco}\gamma + \varepsilon_{ijco} \tag{1}$$

where OCC_{ijco} is a dummy variable being 1 for the one true occupation j of individual i in residence country c from origin o, and 0 for all other possible occupations. FSO_{oj} is the share of females working in occupation j in origin country o. Hence, the coefficient of interest β_1 captures the effect of occupation-specific cultural gender norms on occupational choice. $\eta_c \times \eta_j$ are occupation by country of residence fixed-effects which non-parametrically control for all occupation-specific local norms and institutions such as wages, gender composition, flexibility of working hours, and status. X'_{ijco} is a vector of individual level controls.

Across all specifications, I follow the literature on the epidemiological approach and cluster standard errors at the country of origin level. However, the structure of the stacked model used in this analysis also provides justification for alternative clustering levels. Specifically, clustering at the occupation-by-origin level can be motivated, as this is the level at which the treatment variable varies (Abadie et al., 2023). Additionally, the stacked model also motivates clustering at the individual level, as each individual is constraint to only work in one of all the possible occupations, which gives potentially rise to errors being correlated at the individual level. In a robustness check, I demonstrate that clustering at the country-of-origin level yields the most conservative inference: standard errors clustered at alternative levels are consistently smaller.

The regression specified in Equation 1 isolates the effect of cultural norms from that of correlated institutional and economic factors by leveraging variation among second-generation migrants originating from different countries. By incorporating occupation-by-residence-country fixed effects, the specification accounts for all shared determinants of occupational choice in the current country of residence. Importantly, these fixed effects imply that identification relies exclusively on comparisons within the same occupation-residence-country cell. In other words, the variation used to estimate the coefficient stems entirely from differences in the gender composition *within a given occupation* across origin countries. Intuitively, the comparison can be illustrated using the example of nursing. Consider two male second-generation migrants who both live in the same country of residence. One has parents from Italy, where nursing is less

strongly female dominated (approximately 20% of nurses are male), while the other has parents from Poland, where nursing is much more strongly female dominated (fewer than 5% of nurses are male). The specification asks whether the individual with Italian origin is more likely to work in nursing than the individual with Polish origin.[4]

2.4 Identification

This empirical strategy identifies the effect of occupation-specific cultural gender norms on occupational choice under a number of assumptions. First, the epidemiological approach relies on intergenerational transmission of social norms from parents to children. Importantly, this pattern is not only well-documented in previous research (Bisin and Verdier, 2001; Bau and Fernández, 2023), but it should be noted that the absence of this relationship would attenuate my estimated effects to zero.

Second, migrants represent a non-random sample of the origin country population. However, such selection is a concern for my empirical strategy only if it correlates with both the gender composition of occupations in origin countries and migrants' subsequent occupational choices in destination countries. Notably, in the stacked model employed here, such selection would need to operate at the occupation level – for instance, if individuals emigrate specifically because they are prevented from entering certain occupations in their home country for reasons related to the occupations' gender composition. I address this concern in two ways. First, I focus exclusively on second-generation migrants, for whom direct selection effects are substantially attenuated since they were born and socialized in the destination country. Yet, intergenerational persistence of occupational choice remains a potential confounding factor, i.e. the phenomenon that children tend to choose similar occupations as their parents (Hederos, 2014; Lassen, 2022). Therefore, I conduct robustness checks that explicitly control for parental occupations. Second, my main specification restricts the analysis to second-generation migrants of European descent, i.e. individuals residing in European countries whose parents migrated from other European countries. For this intra-European migration population, selective migration driven by occupation-specific gender barriers is arguably much less of a concern than for international migrants.[5] Additionally, when analyzing international migrant samples, I implement robustness checks incorporating continent-of-origin fixed effects to account for geographical clustering in occupational gender compositions across continents.

Third, the gender composition of occupations in migrants' origin countries may be correlated with other country-specific factors, such as levels of economic development, the structure of educational systems, or broader cultural attributes, which could confound the analysis. In

[4] This implies that my specification does not exploit variation in the overall gender segregation of labor markets. In fact, the Duncan Index for occupational segregation (a measure that reflects the share of individuals that would have to change occupation so that there is no gender segregation in the labor market) is very similar in most countries in my sample. For example, the Duncan Index is 0.46 in Italy and 0.45 in Poland (World Bank Group, 2023). Figure A.1 shows the Duncan Index of occupational gender segregation across countries.

[5] Within the EU, there exist no formal legal bans that restrict - in particular women - from entering specific occupations. In contrast, in some non-EU countries there exist explicit legal restrictions that prohibit women from working in certain sectors or occupations (World Bank, 2024). In such contexts, migration may be directly motivated by the inability to access particular occupations in the home country due to formal regulatory barriers. Because such explicit constraints do not exist within the EU, it is arguably less likely that migration is driven by the need to circumvent legal exclusion from specific occupations.

other words, observed differences in occupational choices might reflect systematic differences in assimilation patterns across migrants from different origin countries. I address this concern in two ways. First, I conduct robustness checks that include an extensive set of origin-country controls. Second, I present regression results using a measure that standardizes the share of females in an occupation at the origin country level, thereby accounting for differing rates of female labor force participation across origin countries.

Finally, the gender composition of occupations in origin countries reflects not only occupational gender norms but is an equilibrium outcome shaped by factors such as labor demand, discrimination, and beliefs about economic returns. To the extent that such factors are specific to the institutional and economic environment of the origin country, they should not influence second-generation migrants and are thus absorbed by the epidemiological approach. Yet, there might be non-institutional factors other than gender norms that are correlated with the female share of occupations and also affect second-generation migrants' occupational choice. For instance, parents might transmit beliefs about economic returns of occupations to their children. This would challenge the interpretation of my results as being merely due to occupational gender norms. I address this concern in several ways. First, I include a robustness check in which I control for wages of each occupation in the origin country using data from the Occupational Wages around the World (OWW) Database (Freeman and Oostendorp, 2005) to proxy parents' beliefs about economic returns. Moreover, I include an additional analysis using thresholds of female shares in occupations instead of a continuous definition of the treatment variable. If my results are really about occupational gender norms, we would expect the results to be driven by the most extremely gender segregated occupations.

The epidemiological approach does ultimately not exploit truly exogenous variation in gender norms. However, prior research has demonstrated that the findings obtained from this approach are highly comparable to those derived from instrumental variable models.[6] In addition, my empirical strategy augments the classic epidemiological framework by proxying norms at the occupation-by-country-of-origin level. This means for identification to be threatened, potentially confounding factors would need to be systematically correlated with the gender composition across occupations. While this condition is already restrictive, I also conduct an extensive set of robustness checks (see Section 4.4), all of which yield highly consistent results. This makes it unlikely that the estimates merely capture features of the economic or institutional environment that are intertwined with the gender composition of occupations.

3 Data

The empirical strategy outlined above entails specific data requirements. In particular, it requires data sets that include detailed demographic information on individuals' family backgrounds including both their own and their parents' countries of birth. In addition, in order to construct the outcome variable, I require information on individuals' occupations. Finally, to define the treatment variable, I need data on the share of women in each occupation in the coun-

[6] For example, Hartinger et al. (2025), Gorodnichenko and Roland (2011), and Bietenbeck et al. (2024) use both an IV approach and the epidemiological approach to estimate the effects of cultural individualism and find very similar results with the two approaches.

tries of origin. I draw on two data sets that fulfill these criteria: first, a large-scale international survey data set, and second, administrative records from Sweden.

3.1 Survey data

In the first part of the empirical analysis, I use large-scale international survey data from the European Social Survey (ESS). The ESS is a survey on attitudes, beliefs, and behaviors, which has been carried out in 11 waves since 2001 and covers in total 39 European countries. It is administrated as a repeated cross-sectional survey and provides nationally representative data on the adult population. Each wave of the ESS contains a consistent core questionnaire covering a wide range of demographic variables about respondents and their family members, including socioeconomic characteristics and potential migration history. For my analysis, I pool data of this core module from all 11 waves and countries.

Independent variable: occupation-specific gender norms

The treatment variable operationalizes cultural gender norms as the share of female workers by occupation in an individual's country of origin. In my main analysis, I leverage the international dimension of the survey data and construct this variable directly within the ESS.[7] To construct the variable, I use the pooled data from all 11 waves of the ESS, comprising a total of 511,190 observations. The ESS provides information on each respondent's occupation coded at the three-digit level according to the International Standard Classification of Occupations (ISCO-08), covering 130 distinct occupational categories. For each country surveyed in at least one ESS wave, I calculate the share of female workers in each of these three-digit occupations.[8] While doing so, I exclude country-occupation cells that contain less than 10 individuals. In robustness checks, I test the sensitivity of the results with respect to different definitions of the treatment variable and the use of external data sources.

The use of the ESS data to construct the independent variable implies that the treatment variable captures contemporaneous gender compositions of occupations rather than the gender distributions at the time of parents' migration.[9] This choice is primarily driven by data constraints. To the best of my knowledge, there exists no cross-country dataset that reports occupational gender compositions at the two or three-digit level consistently over several decades. However, this concern is mitigated by the fact that cultural norms tend to be highly persistent and typically evolve only gradually over time (Alesina et al., 2013). Indeed, Fernandez (2007) and Fernández and Fogli (2009) demonstrate that the results of a specification using the epidemiological approach are largely unchanged when using contemporaneous cultural proxies

[7] This means that I use contemporaneous data on the female share in occupations across countries rather than historic data from the time of parental migration. While partly driven by data limitations, previous research employing the epidemiological approach has shown that using contemporaneous versus historical cultural indicators yields virtually identical results (Fernandez, 2007), as cultural norms tend to be highly persistent over time. Additionally, migrants often maintain substantial ties to their countries of origin, facilitating the continued transmission and reinforcement of cultural values.

[8] Although four-digit ISCO-08 codes are available, I rely on three-digit codes due to the trade-off between occupational detail and statistical reliability: the average number of individuals per four-digit occupation and country is only 19, compared to 75 for three-digit codes.

[9] The same applies to the ILO data that is introduced below in section 3.2 and used to define the independent variable in the specifications using Swedish administrative data.

instead of historical measures. To provide suggestive evidence that this stability of cultural norms also applies to occupational gender norms, Figure A.2 plots female shares over time for a selected set of occupations in four countries for which historical data are available. The figure reveals remarkable stability in gender composition across decades, supporting the view that contemporaneous occupational gender shares constitute a valid proxy for underlying cultural norms.

Sample selection

My empirical strategy relies on comparing outcomes of second-generation immigrants. Accordingly, I restrict the estimation sample to this population. In the ESS data, I define second-generation immigrants as individuals who were born in their current country of residence and have at least one foreign-born parent. An individual's country of origin is defined as the country of birth of their foreign-born parent. In cases where both parents are foreign-born but originate from different countries, I use the mother's country of birth to determine the respondent's origin.[10] The pooled ESS data contains in total 40,246 second-generation immigrants. I exclude 6,504 individuals due to missing information on their country of origin or because the country no longer exists (e.g., the Soviet Union). This exclusion is necessary because the treatment variable is constructed within the ESS and thus only available for countries included in the survey. I further exclude 3,211 individuals with missing occupational data and 12 individuals with missing gender information. The resulting analysis sample comprises 9,499 male and 11,099 female second-generation immigrants.[11]

Construction of estimation sample and outcome variable

In order to apply the empirical strategy described above in Section 2, I duplicate each individual observation in my sample by the number of occupations. When using three-digit occupation codes, this implies that each individual is duplicated 130 times. Each of these observations per individual thus represents a possible occupation the individual could have chosen to work in. I merge this sample to the treatment variable at the occupation-by-country of origin level. Finally, I define the outcome variable as a dummy variable that is 1 for the one occupation the individual has reported as her occupation in the ESS survey, and 0 for all other possible occupations.

Descriptive statistics

Table 1 presents summary statistics for the overall ESS sample, all second-generation migrants in the ESS, and the final estimation sample after applying the sample selection criteria described above. Men and women in the full ESS sample are, on average, 48 and 49 years old, respectively, with tertiary education rates of 23 percent for men and 25 percent for women. Second-generation migrants are somewhat younger on average, but the restricted estimation

[10] The results are virtually identical when instead using the father's country of birth in cases where parents were born in different countries.

[11] I do not restrict the sample to individuals currently in the labor force. The ESS provides occupational information even for respondents outside the labor force. In the final sample, 65% are either employed or seeking employment, 25% are retired, and 10% are not in the labor force for other reasons. The results are robust to restricting the sample to individuals in the labor force.

sample closely resembles the full ESS sample in terms of age. With respect to education, second-generation migrants in the estimation sample appear to be positively selected, exhibiting slightly higher rates of tertiary attainment than the overall population. Approximately 30 percent of individuals in the estimation sample have two migrant parents, and about 25 percent have parents originating from the same country.

Table 1
Descriptive statistics: ESS data

	Full ESS		Second-generation migrants		Analysis sample	
	Men	Women	Men	Women	Men	Women
Female	0.00	1.00	0.00	1.00	0.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age	47.96	49.29	43.79	45.20	47.74	48.99
	(18.46)	(18.69)	(18.05)	(18.20)	(17.33)	(17.15)
College degree	0.23	0.25	0.26	0.28	0.26	0.30
	(0.42)	(0.43)	(0.44)	(0.45)	(0.44)	(0.46)
Father migrant	0.13	0.14	0.70	0.70	0.66	0.68
	(0.34)	(0.35)	(0.46)	(0.46)	(0.47)	(0.46)
Mother migrant	0.13	0.13	0.66	0.66	0.65	0.63
	(0.34)	(0.34)	(0.47)	(0.47)	(0.48)	(0.48)
Both parents migrants	0.10	0.11	0.36	0.36	0.31	0.31
	(0.30)	(0.31)	(0.48)	(0.48)	(0.46)	(0.46)
Parents from same origin	0.93	0.93	0.29	0.29	0.25	0.23
	(0.25)	(0.26)	(0.45)	(0.45)	(0.43)	(0.42)
Born in country of residence	0.91	0.90	1.00	1.00	1.00	1.00
	(0.29)	(0.30)	(0.00)	(0.00)	(0.00)	(0.00)
Number of individuals	236,554	274,636	18,580	21,579	9,499	11,099

Notes: The table reports the mean (standard deviation in parantheses) of demographic variables of the full ESS sample that pools all countries and waves (columns 1-2), the sample of all second-generation migrants in the ESS (columns 3-4), and the analysis sample of second-generation migrants after applying the sample restrictions described in Section 3.1.

Figure A.3 illustrates the variation in the treatment variable in four different occupations: bus and truck drivers, primary school teachers, finance professionals, and medical doctors, for all 39 countries in the ESS.[12] The share of females among bus drivers and primary school teachers varies only little across countries. What is evident, however, is the strong gender segregation in these two professions: while the share of females is less than ten percent among bus drivers in all countries, more than 80 percent of primary school teachers are women in the majority of the countries in my sample. The share of females among finance professionals and medical doctors, on the other hand, varies considerably across countries. While less than 40 percent of finance professionals are women in Germany, Denmark and the Netherlands, this share is above 80 percent in, for example, Bulgaria, Estonia, and Poland. Similarly, less than 40 percent of medical doctors are women in Austria and Italy, whereas this figure stands at above 80 percent in Lithuania and Latvia.

[12]Table A.3 presents summary statistics for the female share in all three-digit occupations.

3.2 Administrative data

In the second part of my analysis, I draw on high-quality administrative records from the Swedish Interdisciplinary Panel (SIP)[13], which I combine with international data on the share of females by occupations in the origin countries from the ILO.

Independent variable: cultural gender norms

As in the first part of the analysis, the treatment variable captures cultural gender norms by measuring the share of female workers by occupation in the country of origin. While the international scope of the ESS survey data enables direct calculation of this measure within the dataset, the use of administrative data requires an external source to construct the treatment variable. I do not rely on the ESS for this purpose in the administrative data analysis, as only 12 of the origin countries represented in the administrative data are included in the ESS. Instead, I draw on data from the International Labour Organization (ILO), which provides internationally comparable statistics on the share of women in employment by two-digit occupation codes. The primary advantage of using the ILO data is its broader country coverage (up to 141 countries) compared to the 39 countries available in the ESS. This extended coverage allows me to retain individuals whose parents originate from countries outside the ESS sample frame. However, a limitation of the ILO data is its coarse occupational resolution: it reports only at the two-digit level of the ISCO-08 classification, corresponding to 43 distinct occupational categories. This aggregation may obscure important within-category variation in gender composition; for example, medical doctors and nurses are grouped together under the category of 'Health Professionals'. Both the ESS and ILO data sources come with distinct advantages and limitations; leveraging both in the analysis is therefore beneficial, as it allows for a more comprehensive and robust assessment across different samples and levels of occupational detail.[14]

Sample selection

To construct the sample of second-generation immigrants, I link data from three registers. First, I draw on the Total Population Register, which includes information on the country of birth for all individuals residing in Sweden and born between 1973 and 2016. This dataset is linked to the most recent Occupation Register, which records individuals' occupations as of 2016. Finally, using the Multi-Generation Register, I link individuals to their parents, enabling the identification of second-generation immigrant status. I define second-generation immigrants as individuals born in Sweden with at least one foreign-born parent. The country of birth of the foreign-born parent is used to define the individual's cultural origin. In cases where both parents are foreign-born but from different countries, I assign cultural origin based on the mother's country of birth. The resulting sample comprises 201,607 second-generation immigrants for whom information on the country of origin is available.[15] I exclude 634 individuals due to missing occupational information. The final sample thus consists of 200,973 individuals, comprising 99,486 men and 101,487 women.

[13] The Swedish Interdisciplinary Panel is administrated by the Centre for Economic Demography at Lund University, Sweden.

[14] More details on the ILO data are provided in Data Appendix B.2.

[15] Statistics Sweden reports specific countries of birth only for immigrants from the 25 most common origin countries; for all others, only the continent is reported due to data protection rules. I further exclude individuals of Eritrean origin, as corresponding ILO data are unavailable, leaving a total of 24 distinct origin countries.

Construction of estimation sample and outcome variable

Like in the first part of the analysis, I obtain my estimation sample by duplicating each individual observation in my sample by the number of available occupations. Each observation then represents a possible occupation the individual could be working in. I merge this sample to the ILO data based on each occupation - origin country combination.[16] Finally, I define the outcome variable as a dummy variable that is 1 for the one occupation the individual is registered to work in, and 0 for all other possible occupations.

Descriptive statistics

Table 2 presents summary statistics for the full Swedish population, all second-generation migrants in Sweden, and the estimation sample used in the analysis. Men and women in the full population sample are, on average, 36 and 35 years old, respectively, with tertiary education rates of 33 percent for men and 43 percent for women. Second-generation migrants are significantly younger, with a mean age of approximately 18 years. The estimation sample, which only includes individuals who are working, consists of older individuals, with an average age of 31 for both men and women, and is thus more comparable to the overall population sample. Similar to the ESS data, the estimation sample shows somewhat higher educational attainment than the full population sample: 34 percent of men and 48 percent of women hold a tertiary degree. Roughly 38 percent of individuals in the estimation sample have two migrant parents and about 31 percent have parents originating from the same country.

Table 2
Descriptive statistics: admin data

	Full population		**Second-generation migrants**		**Analysis sample**	
	Men	Women	Men	Women	Men	Women
Female	0.00	1.00	0.00	1.00	0.00	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age	36.19	35.59	17.85	17.87	30.88	30.57
	(21.59)	(20.80)	(12.67)	(12.66)	(7.02)	(7.13)
College	0.33	0.43	0.29	0.40	0.34	0.48
	(0.47)	(0.49)	(0.45)	(0.49)	(0.47)	(0.50)
Father migrant	0.12	0.12	0.76	0.77	0.69	0.69
	(0.33)	(0.33)	(0.42)	(0.42)	(0.46)	(0.46)
Mother migrant	0.13	0.13	0.74	0.73	0.69	0.69
	(0.34)	(0.34)	(0.44)	(0.44)	(0.46)	(0.46)
Both parents migrants	0.18	0.17	0.50	0.50	0.38	0.38
	(0.38)	(0.38)	(0.50)	(0.50)	(0.49)	(0.48)
Parents from same origin	0.91	0.91	0.39	0.39	0.31	0.31
	(0.29)	(0.29)	(0.49)	(0.49)	(0.46)	(0.46)
Born in Sweden	0.79	0.79	1.00	1.00	1.00	1.00
	(0.41)	(0.40)	(0.00)	(0.00)	(0.00)	(0.00)
Number of individuals	4,880,223	4,583,646	541,793	514,580	99,987	102,027

Notes: The table reports the mean (standard deviation in parantheses) of demographic variables of the full population sample after linking the administrative registries (columns 1-2), the sample of all second-generation migrants in the registries (columns 3-4), and the analysis sample of second-generation migrants after applying the sample restrictions described in Section 3.2.

[16] In the SIP occupation register, occupations are reported in SSYK codes (Standard for Swedish occupation classification). To merge the ILO data to the Swedish register data, I first transform the SSYK codes to ISCO-08 codes based on a translation key provided by Statistics Sweden.

Figure A.4 illustrates the variation in the female share across all 24 origin countries and Sweden for four different occupations: drivers and plant operators, teaching professionals, business and administration professionals, and health professionals.[17] Note that these four occupations are the two-digit occupation groups that correspond to the three-digit groups presented in Figure A.3. Similar to the observations in the ESS data (Figure A.3), the share of females working as drivers or teaching professionals does not vary much across countries, but instead these occupations show similar patterns of gender segregation in all countries in the sample. The share of women working as business and administration professionals as well as health professionals, however, varies considerably across countries. For example, while less than 40 percent of business and administration professionals are women in Iraq, Iran, and Ethiopia, this figure stands at over 60 percent in Poland, Slovakia and Thailand, and even over 80 percent in North-Macedonia.

3.3 Additional variables

I use additional data sources to construct variables for heterogeneity analyses and robustness checks. In particular, I obtain information on the female labor force participation by Swedish municipalities from the Statistics Sweden data base, as well as GDP per capita and female labor force participation in origin countries from the World Bank, gender norms in origin countries from the World Values Survey, and occupational wages in origin countries from the Occupational Wages around the World (OWW) Database (Freeman and Oostendorp, 2005). Details on all these additional data sources and constructions of variables are available in Appendix B.

4 Results

4.1 Main results

In the first part of the empirical analysis, I apply my empirical strategy to survey data from the ESS and run regressions separately for men and women. Column 1 and 2 of Table 3 present results for men, column 3 and 4 show results for women. I find that men adhere to cultural gender norms about occupations: in a regression with residence by occupation fixed effects (column 1), a 10 percentage point increase in the share of women working in a given occupation in the country of origin decreases the probability of a man choosing this occupation by 0.0004 percentage points. The estimated coefficient is highly statistically significant and unaffected when individual controls are included in column 2. To contextualize the magnitude of the effect, a 10 percentage point increase in the female share in an occupation in the country of origin reduces the probability of choosing that occupation by 4 percent. Columns 3 and 4 display the corresponding results for women. In both specifications, the estimated coefficients are close to zero and statistically insignificant. These findings suggest that cultural gender norms influence men's occupational choices – specifically, men are less likely to select occupations that are considered female-typical in their country of origin – whereas I observe no such effect for women.

[17] Table A.5 presents summary statistics for the female share in all two-digit occupations.

Figure 1 illustrates the main results for men and women based on the specification with residence by occupation fixed effects and individual controls (analogue columns 2 and 4, respectively). To do so, I residualize both the dependent variable and the treatment variable on the set of fixed effects separately for men and women. I then plot the conditional probability of working in a given occupation against the conditional share of females in this occupation in the country of origin. The slopes of the plotted lines are mechanically identical to the estimates in columns 2 and 4 of Table 3. Importantly, the plots reveal that there is no evidence of non-linearities in the estimated effects.

Table 3

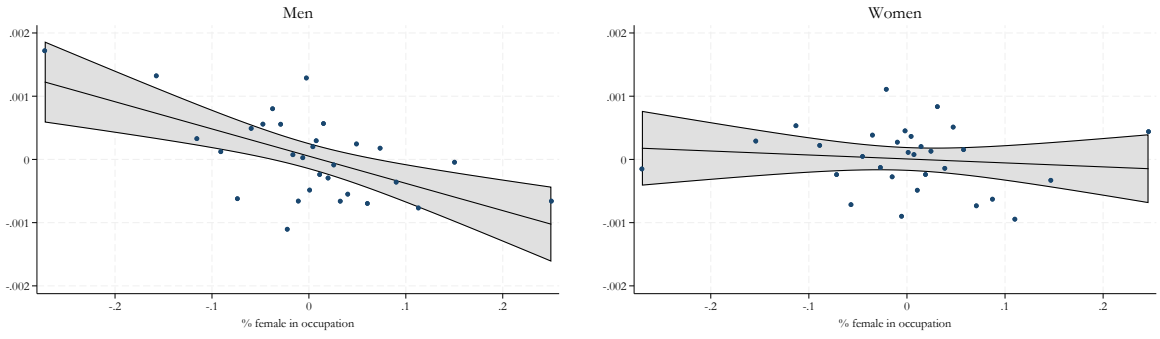
Effect of cultural gender norms on occupational choice: ESS data

	Men		Women	
	(1)	(2)	(3)	(4)
% female in occupation	–0.0040***	–0.0040***	–0.0009	–0.0009
	(0.0013)	(0.0013)	(0.0008)	(0.0008)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.0%	–4.0%	–0.9%	–0.9%
No. of individuals	9,499	9,499	11,099	11,099
No. of observations	962,101	962,101	1,128,197	1,128,197
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	no	yes	no	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 occupations. The number of observations is less than the number of individuals times 130 as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS. Standard errors are clustered at the country of origin level.

Figure 1

Effect of cultural gender norms on occupational choice: ESS data



Notes: The figures shows results from regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin equivalent to the regressions in column 2 and 4 in Table 3. To construct these plots, I residualize both the dependent variable and the treatment variable on the set of fixed effects separately for men and women. I then plot the conditional probability of working in a given occupation against the conditional share of females in this occupation in the country of origin. The slopes of the plotted lines are mechanically identical to the estimates in columns 2 and 4 of Table 3. The regressions use data from the ESS. Standard errors are clustered at the country of origin level.

In the second part of the analysis, I apply the empirical strategy to administrative records

from Sweden and again estimate regressions separately for men and women. Columns 1 and 2 of Table 4 present results for men, while Columns 3 and 4 report results for women. It is important to note that the scale of the estimated coefficients differs from the ESS analysis due to the coarser occupational classification: the administrative data are based on two-digit ISCO codes, which correspond to broader occupational categories. As a result, the baseline probability of observing any given occupation is substantially higher, mechanically inflating the magnitude of the coefficients.

Consistent with the findings from the ESS data, the results indicate that men respond to occupation-specific cultural gender norms. In the specification including occupation fixed effects[18] (Column 1), a 10 percentage point increase in the share of women employed in a given occupation in the country of origin reduces the probability that a man selects this occupation by 0.0022 percentage points. The coefficient is highly statistically significant and remains virtually unchanged when individual-level controls are included (Column 2), with an estimated effect of 0.0023 percentage points. When expressed relative to the number of available occupations, this effect implies that a 10 percentage point increase in the female share of an occupation in the country of origin reduces the likelihood that a man enters this occupation by approximately 7 percent.

Columns 3 and 4 present results for women. Somewhat surprisingly, I find that if anything, women counteract cultural gender norms about occupations: column 3 shows that a 10 percentage point increase in the share of women employed in a given occupation in the country of origin *decreases* the probability of a woman choosing this occupation by 0.0007 percentage points. This coefficient is statistically significant and increases only slightly when including individual fixed effects in column 4. When interpreted relative to the number of available occupations, the estimates suggest that a 10 p.p. increase in the share of women working in a given occupation in the country of origin decreases the probability of a woman choosing this occupation by around 2 percent. Although small in size, this result shows that women are less likely to choose an occupation that is considered female-typical work in their country of origin.

Again, I explore possibility of non-linear effects by plotting the main results. Figure 2 illustrates the estimated effects for men and women based on the specification in columns 2 and 4, respectively. The slopes of the plotted lines are mechanically identical to the estimates in columns 2 and 4 of Table 4. Consistent with the results from the ESS data set, the plots reveal that there is no evidence of non-linearities in the estimated effects.

4.2 Cultural norms vs. environment

Overall, the presented results show consistently that men adhere to cultural gender norms about occupational choice: a 10 p.p. increase in the share of women working in a given occupation in the country of origin decreases the probability of a man choosing this occupation by around 4 to 7 percent. For women, the results are somewhat more inconclusive: while in the ESS data the estimated effect is precisely zero, I find a small, yet significant negative effect

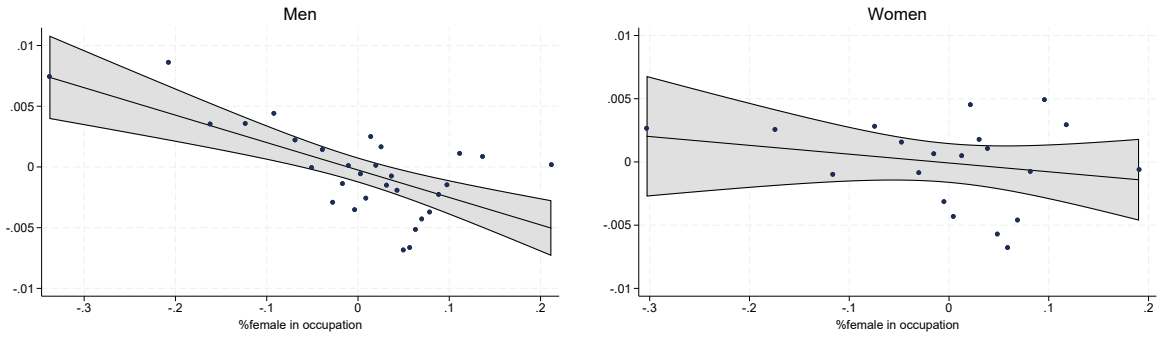
[18] Including occupation fixed effects in the analysis based on administrative data is equivalent to including occupation-by-country-of-residence fixed effects in the ESS analysis, given that the administrative data only cover Sweden.

Table 4
Effect of cultural gender norms on occupational choice: Administrative data

	Men		Women	
	(1)	(2)	(3)	(4)
% female in occupation	–0.0222***	–0.0229***	–0.0069***	–0.0073***
	(0.0045)	(0.0048)	(0.0024)	(0.0025)
Mean Y	0.03	0.03	0.03	0.03
Implied effect if a 10pp increase in X	–7.4%	–7.6%	–2.3%	–2.4%
No. of individuals	99,486	99,486	101,487	101,487
No. of observations	3,161,406	3,161,406	3,222,034	3,222,034
Fixed effects:				
Occupation	yes	yes	yes	yes
Individual controls:	no	yes	no	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 43 occupations. The number of observations is less than the number of individuals times 43 as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

Figure 2
Effect of cultural gender norms on occupational choice: Administrative data



Notes: The figures shows results from regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin equivalent to the regressions in column 2 and 4 in Table 4. To construct these plots, I residualize both the dependent variable and the treatment variable on the set of fixed effects separately for men and women. I then plot the conditional probability of working in a given occupation against the conditional share of females in this occupation in the country of origin. The slopes of the plotted lines are mechanically identical to the estimates in columns 2 and 4 of Table 4. The regressions use data from the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

in the administrative data, indicating that if anything, women in this sample counteract gender norms about occupational choice.

In this section, I examine the possibility that the differences in results between the ESS and the Swedish administrative data arise because Sweden, as a country of residence for second-generation immigrants, differs systematically from the other countries included in the ESS analysis.[19] One potential explanation is Sweden's comparatively high level of gender equality,

[19]It is also possible that differences in the composition of origin countries contribute to the divergence in results. However, sensitivity checks suggest that this is unlikely to be the primary explanation: restricting the ESS analysis to individuals with the same set of origin countries as in the administrative data yields results that are virtually identical to the main ESS estimates.

which may influence the extent to which cultural gender norms shape occupational choices.

As a first step in assessing whether differences in gender equality across countries of residence account for the effects observed in the administrative data, I conduct a complementary analysis using the ESS data. Specifically, I estimate the model separately for individuals residing in one of the 10 most gender-equal countries in the sample and for those residing in the remaining, less gender-equal countries.[20] Table 5 presents the results. The results show that the effects for men are nearly identical in the two samples: a 10 p.p. increase in the share of women working in a given occupation in the country of origin decreases the probability of a man choosing this occupation by around 4.5 percent. For women, however, the effects differ substantially by the gender equality level of the residence country. Among women residing in the most gender-equal countries, a 10 percentage point increase in the female share of an occupation in the country of origin reduces the likelihood of choosing that occupation by approximately 3.5 percent – an effect similar in magnitude (though opposite in implication) to that observed for men. This suggests that women in gender-equal environments counteract occupation-specific cultural gender norms. In contrast, for women residing in less gender-equal countries, the estimated coefficient is precisely zero.

Next, I conduct a similar heterogeneity analysis using the Swedish administrative data, this time exploiting variation in gender equality across municipalities within Sweden. Specifically, I estimate the main specification separately for municipalities with higher and lower levels of gender equality, using local female labor force participation as a proxy for gender-equal environments. The results are presented in Table 6. In this sample, the estimated effects for both men and women are relatively stable across municipalities and do not vary substantially with local gender equality. However, it is important to note that the degree of variation in gender equality within Sweden is relatively limited, which may account for the observed homogeneity in the results.

Importantly, these analyses should be interpreted with caution, as gender equality both at the national and municipal levels is correlated with various contextual factors that may also influence occupational choice, such as the local industry composition or the availability of childcare services. Furthermore, the estimated effect of the "environment" should be understood as reflecting a combination of genuine environmental influences and potential selection effects. Notwithstanding these limitations, both analyses consistently point to the same conclusion: women are more likely to counteract culturally inherited gender norms in their occupational choices when residing in more gender-equal environments, whereas men appear to conform to these norms regardless of the level of gender equality in their surroundings.

Finally, I estimate horse race regressions to compare the relative predictive power of the gender composition of occupations in the country of origin and the country of residence for individuals' occupational choices. Table 7 presents the results. For men, both the origin and residence country gender composition of an occupation significantly predict occupational choice. Importantly, the coefficient on the origin country remains economically meaningful and statis-

[20] The ranking is based on the 2023 Gender Gap Index published by the World Economic Forum. The ten most gender-equal countries in the ESS sample are: Norway, Iceland, Finland, Sweden, Germany, Lithuania, Belgium, Ireland, Latvia, and Great Britain. Due to sample size constraints, I cannot estimate the model using only Sweden as the country of residence.

Table 5
Heterogeneity by residence - ESS data

	Gender-equal residence		Less gender-equal residence	
	Men	**Women**	**Men**	**Women**
% female in occupation	–0.0042**	–0.0031***	–0.0039**	0.0001
	(0.0015)	(0.0011)	(0.0015)	(0.0008)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.2%	–3.1%	–3.9%	0.1%
No. of individuals	3,069	3,429	6,430	7,670
No. of observations	319,853	360,280	642,248	767,917
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	yes	yes	yes	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 occupations. The number of observations is less than the number of individuals times 130 as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS. Gender-equal residence countries are Norway, Iceland, Finland, Sweden, Germany, Lithuania, Belgium, Ireland, Latvia, and Great Britain. Standard errors are clustered at the country of origin level.

Table 6
Heterogeneity by residence - admin data

	Gender-equal residence		Less gender-equal residence	
	Men	**Women**	**Men**	**Women**
% female in occupation	–0.0214***	–0.0065**	–0.0254***	–0.0077**
	(0.0043)	(0.0025)	(0.0066)	(0.0035)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–7.1%	–2.2%	–8.5%	–2.6%
No. of individuals	71,478	73,487	28,008	28,000
No. of observations	2,283,722	2,345,132	877,684	876,902
Fixed effects:				
Occupation	yes	yes	yes	yes
Individual controls	yes	yes	yes	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 43 occupations. The number of observations is less than the number of individuals times 43 as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the Swedish Interdisciplinary Panel. Gender-equal municipalities of residence are municipalities with an above median female labor force participation. Standard errors are clustered at the country of origin level.

tically significant when both variables are included, reinforcing the main findings presented in Section 4.1. For women, by contrast, the coefficient on the origin country becomes statistically insignificant in the horse race specification. Notably, the coefficient on the residence country is approximately twice as large as that for men, suggesting that the gender composition of an occupation in the residence country, which is likely correlated with both institutional characteristics of an occupation as well as local norms, is a particularly strong predictor of women's occupational choices.

Table 7
Effects of origin and residence country: horse race regressions

	Men			Women		
	(1)	(2)	(3)	(4)	(5)	(6)
% female in occupation origin	–0.0073***		–0.0061***	0.0027**		0.0001
	(0.0014)		(0.0016)	(0.0013)		(0.0011)
% female in occupation residence		–0.0126***	–0.0132***		0.0184***	0.0203***
		(0.0018)	(0.0017)		(0.0011)	(0.0015)
No. of individuals	9,499	9,499	9,499	11,099	11,099	11,099
No. of observations	962,101	1,030,452	915,631	1,128,197	1,203,093	1,073,577
Fixed effects:						
Residence	yes	yes	yes	yes	yes	yes
Occupation	yes	yes	yes	yes	yes	yes
Individual controls	yes	yes	yes	yes	yes	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin, and the share of women working in this occupation in the country of residence. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 occupations. The number of observations is less than the number of individuals times 130 as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS. Standard errors are clustered at the country of origin level.

4.3 Further heterogeneity analyses

Taking advantage of the rich individual level data, I perform additional heterogeneity analyses. First, I examine whether the estimated effects vary by individuals' educational attainment by estimating the main specification separately for individuals with and without tertiary education. The results, presented in Table 8 for both the ESS and the administrative data, reveal a consistent pattern across datasets. The negative effect of cultural gender norms on occupational choice among men is driven by those without a college degree. That is, men without tertiary education are more likely to conform to occupation-specific gender norms, whereas college-educated men appear significantly less constrained by such norms. Among women, I find some evidence that those with tertiary education are more likely to counteract occupation specific gender norms in their occupational choices.

Second, I examine whether the estimated effects vary by age. Figure A.5 presents the results for the ESS data, while Figure A.6 shows the corresponding results for the administrative data. Across both datasets, I find no clear evidence of systematic heterogeneity in the effects by age. If anything, the estimated coefficients tend to be slightly larger among younger individuals, suggesting potentially stronger responsiveness to cultural gender norms in occupational choice. However, these differences are not statistically significant.

Third, I study whether the results vary by the family composition of second-generation migrants in the sample. Table A.6 presents the findings from both datasets. Panels A to D report results based on alternative definitions of an individual's origin. Specifically, whether origin is assigned based on the mother's or the father's country of birth. The results do not reveal a consistent pattern: in the administrative data, the estimated effects for men are somewhat larger when origin is defined using the father's country of birth; similarly, the negative coefficients for women are also slightly larger under this definition. However, the differences are small in magnitude. In contrast, the ESS data show no apparent difference between the two definitions.

Panels E and F restrict the sample to individuals whose parents were born in the same country. In both datasets, the effects are consistently larger for this subgroup compared to the full sample, suggesting that cultural transmission may be stronger in families where both parents come from the same cultural background.

Finally, the richness of the Swedish administrative data allows me to test whether the estimated effects vary by the age at which parents migrated to Sweden. To this end, I categorize parental age at arrival into bins, following the results of Chetty et al. (2016), who find that individuals are most strongly influenced by their new environment when they arrive before the age of 13, with significantly weaker effects for those arriving between ages 13 and 18. Figure A.7 presents the results. Overall, there is no clear pattern of heterogeneity by parents' age at arrival. If anything, the estimated effects are somewhat larger when parents migrated at younger ages, but the confidence intervals are wide, and the differences in coefficients are not statistically significant.

Table 8
Heterogeneity by education

	Tertiary education		No tertiary education	
	Men	**Women**	**Men**	**Women**
Panel A: ESS data				
% female in occupation	–0.0018	0.0009	–0.0041***	–0.0011
	(0.0013)	(0.0012)	(0.0013)	(0.0009)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–1.8%	0.9%	–4.1%	–1.1%
No. of individuals	2,479	3,299	6,983	7,766
No. of observations	255,487	338,306	702,685	786,337
Panel B: admin data				
% female in occupation	–0.0172***	–0.0081**	–0.0247***	–0.0058**
	(0.0029)	(0.0031)	(0.0056)	(0.0023)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–5.7%	–2.7%	–8.2%	–1.9%
No. of individuals	33,433	48,685	65,722	52,590
No. of observations	1,073,278	1,554,672	2,077,656	1,660,913
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	yes	yes	yes	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 (43) occupations. The number of observations is less than the number of individuals times 130 (43) as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS and the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

4.4 Robustness

4.4.1 Sensitivity analyses

In the following, I present a series of sensitivity analyses addressing variable definitions, sample composition, and inference methods across both datasets. As a first check, I examine whether

the results are driven by individuals from particular origin countries. Figures A.8 and A.9 display coefficients from the main specification (corresponding to columns 2 and 4 in Tables 3 and 4) estimated after sequentially excluding individuals from one origin country at a time, separately for the ESS and the administrative data. The results demonstrate that the findings are not driven by any specific origin country: in both datasets, the estimated coefficients remain remarkably stable when omitting one origin country at a time.

Second, I examine the sensitivity of the ESS results to the definition of the treatment variable – namely, the share of women employed in a given occupation in the country of origin. This variable may be subject to measurement error, as it is constructed directly from the ESS data and relies on all country-occupation cells with at least 10 observations. To address this concern, I implement several robustness checks. First, I recalculate the treatment variable using only country-occupation cells with a minimum of 30 and 50 observations, respectively, thereby reducing the influence of rare occupational categories. Panel A and B of Table A.7 present the results. The estimated coefficients are highly similar to those in the main specification and, if anything, slightly larger in magnitude, suggesting that the findings are not driven by rare occupations with few individuals.

To further address concerns about measurement error in the treatment variable, I rerun the analysis using external data from the International Labour Organization (ILO) to construct the share of women employed in each occupation in the country of origin.[21] As the ILO data is only available at the two-digit occupational level, I first aggregate the occupational categories accordingly. To ensure that this aggregation does not drive the results, I conduct an intermediate step in which the treatment variable is recalculated directly within the ESS at the two-digit level. Panel B of Table A.7 presents these results. As in Section 4.1, the magnitude of the coefficients increases mechanically due to the higher base probability associated with broader occupational categories, but the estimates remain similar to those in the main specification. Next, I use the ILO data to construct the treatment variable based on two-digit occupations. The results, shown in Panel C of Table A.7, are again comparable to the main analysis once the difference in scaling is taken into account, providing further evidence of the robustness of the findings.

Third, I present results from a regression that uses thresholds of the main independent variable rather than a continuous treatment. In particular, I define three dummy variables: "male-dominated" that is one when the female share of an occupation is less than 30 percent, "neutral" that takes the value one if the female share of an occupation is between 30 and 70 percent, and "female-dominated" that is one for occupations with a female share of more than 70 percent, and zero otherwise. Table A.8 presents results using these dummy variables as main regressors, with either male-dominated (columns 1 and 3) or neutral (columns 2 and 4) as reference categories. Th results show that the main effects are driven by the female-dominated occupations, for which I find significant negative coefficients for men in both data sets.

Next, I examine whether the estimated effects are sensitive to the set of origin countries

[21] Using the ILO data also expands the set of origin countries included in the analysis. While the treatment variable in the main specification could only be constructed for the 39 countries surveyed in the ESS, the ILO provides data for over 100 countries. The results are also robust when using the ILO data while restricting the sample to the original 39 ESS countries.

included in the two samples. While the origin countries represented in the ESS and administrative data differ along several dimensions, a potentially relevant distinction in the context of this study is that the countries included in the administrative data tend to exhibit lower average levels of gender equality compared to those in the ESS sample.[22] To assess whether this difference influences the results, I conduct an additional analysis using the ESS data but restrict the sample to second-generation immigrants whose countries of origin match those included in the administrative data. The results, presented in Panel D of Table A.7, are remarkably consistent with the main findings. Specifically, a 10 percentage point increase in the share of women employed in a given occupation in the country of origin reduces the likelihood of a man choosing that occupation by approximately 5.5 percent. For women, the estimated coefficient remains small and statistically insignificant, mirroring the results from the full ESS sample.

Panel E of Table A.7 shows a sensitivity check using the administrative data. Specifically, in this exercise, I use the data of the treatment variable calculated in the ESS. This allows me to run the analysis at the three-digit occupation level, but comes with the caveat that only 12 origin countries remain in the sample because only half of the 24 origin countries from the admin data are covered in the ESS. Notwithstanding this limitation, the results are again very similar to the main specification.

Finally, I conduct a series of sensitivity tests to assess the robustness of the results to alternative inference methods. Table A.9 presents the findings. The estimated effects remain stable when standard errors are clustered at the occupation-by-origin-country level (Panels A and C) or at the individual level (Panels B and D), rather than at the origin-country level, as in the main specification. As a final robustness check, I estimate the model at the aggregate level to verify that the statistical significance of the results is not an artifact of the stacked individual-level data structure. To this end, I compute the share of males (females) from a given origin working in each occupation at the residence-country level and merge this information with the treatment variable – the share of females in the same occupation in the individual's origin country. Panel E presents the results from this aggregate-level analysis. The estimated effect for men remains highly statistically significant and comparable in magnitude to the individual-level estimates, while the coefficient for women remains close to zero and statistically insignificant.

4.4.2 Migrant selection

In this section, I address the concern that selective migration is affecting my results. First, it is noteworthy that such selection is a concern for my empirical strategy only if it correlates with both the gender composition of occupations in origin countries and migrants' subsequent occupational choices in destination countries. Notably, in the stacked model employed here, such selection would need to operate at the occupation level, for instance, if individuals emigrate specifically because they are prevented from entering certain occupations in their home country for reasons related to the occupations' gender composition. Moreover, I focus exclusively on second-generation migrants, for whom direct selection effects are substantially attenuated

[22] On average, origin countries in the administrative data score lower on gender equality indices such as the Global Gender Gap Index published by the World Economic Forum, which measures gender parity across economic participation, education, health, and political empowerment.

since they were born and socialized in the destination country, and study different samples with different origin country groups – in the ESS analysis even only second-generation migrants of European descent for whom selective migration driven by occupation-specific gender barriers is arguably much less of a concern than for international migrants.

Nevertheless, I conduct a series of robustness checks to address concerns related to potential selection effects. Table A.10 presents the results. The findings remain robust when including continent-of-origin fixed effects, thereby accounting for broad regional differences in migrant composition. They are also robust to the inclusion of municipality-of-residence fixed effects, which control for selective residential sorting within the country of residence. Finally, the results hold under the most restrictive specification, which includes occupation-by-municipality fixed effects, further mitigating concerns about unobserved heterogeneity at the local labor market level.

Moreover, given that intergenerational persistence in occupational choice may constitute a potential confounding factor, I perform an additional robustness check in which I control for parental occupations. As shown in Table A.11, the inclusion of these controls does not alter the main results, suggesting that the findings are not driven by intergenerational persistence in occupational choice.

Finally, I address the concern that selective labor force participation may drive the results. Specifically, one might worry that only a non-random subset of second-generation men and women participates in the labor force. However, the use of two distinct data sets in this paper already mitigates this concern. In the ESS, occupational information is available for all respondents, including those outside the labor force. In contrast, the occupation register of the Swedish administrative data include only individuals who are currently active in the labor market. The similarity of results across these two samples suggests that selective labor force participation is unlikely to be driving the observed effects. Furthermore, Table A.14 presents results from regressions following the approach of Fernandez (2007), estimating the impact of origin-country female labor force participation on the likelihood of employment among second-generation migrants. The results provide further reassurance: in the Swedish administrative data, the estimated effects are small, and in the ESS, they are precisely estimated zeros. This evidence reinforces the conclusion that selective labor force participation driven by cultural factors from the origin country is unlikely to confound the main findings.

4.4.3 Correlated country characteristics

In this section, I address the concern that origin country characteristics correlated with the gender composition of occupations may bias the results. Importantly, in the stacked model employed in this analysis, such characteristics would need to be systematically correlated with the gender composition across occupations to pose a threat to identification. While this condition is already quite restrictive, I conduct additional robustness checks in which I control for potentially confounding origin country characteristics. The results are presented in Table A.12 for the ESS data and in Table A.13 for the administrative data.

First, I control for GDP per capita as a proxy for economic development, and for societal gender norms, proxied by the average country-level response to the World Values Survey item:

'When jobs are scarce, men should have more right to a job than women.' The corresponding results, presented in Panels A and B, indicate that the estimates remain robust to the inclusion of these controls.

Next, I account for occupational wages at the origin country level. While the epidemiological approach already controls for occupational wages in the country of residence through occupation-by-residence-country fixed effects, it remains possible that second-generation immigrants form beliefs about occupational wages based on wage structures in the origin country. Such beliefs could confound my results if they are systematically correlated with the gender composition of occupations in origin countries and influence occupational choices. To address this, I include origin-country occupational wages as additional controls. The results, presented in Panel C of Tables A.12 and A.13, demonstrate that the estimates remain robust. If anything, the coefficients are somewhat larger than in the main specification.

Finally, I address the concern that the gender composition of occupations may be correlated with overall female labor force participation in the origin countries. I address this concern in two ways. First, I include origin-country female labor force participation as a control variable (Panel D). Second, I use the standardized female share by occupation as an alternative treatment variable (Panel E).[23] In both cases, the results remain robust and, if anything, the estimated coefficients are somewhat larger than in the main specification.

5 Evidence from an international survey experiment

The main results of this paper consistently show that men, but not women, adhere to occupation-specific cultural gender norms. The definition of norms used in the first part of the paper closely aligns with what social psychology terms descriptive norms, which capture the observed behavior of individuals within a society (Cialdini et al., 1990, 1991). The epidemiological approach implicitly assumes that these descriptive norms reflect injunctive norms - that is, individuals' perceptions of what constitutes appropriate behavior. To test whether the observed female shares in occupations indeed correspond to people's perceptions of appropriateness, I design an original international survey experiment. This experiment allows me to test directly whether my cultural proxy (the gender composition of occupations) indeed captures variation in occupational gender norms. This experiment further allows me to unpack what exactly is perceived as "inappropriate" about gender-atypical occupational choices. Specifically, it tests whether the perceived inappropriateness is limited to occupational fit (i.e., mismatch between gender and job) or whether it spills over into broader evaluations of the individual's character and social desirability.

To this end, I implement a series of vignette survey experiments. Vignettes are short descriptions of hypothetical individuals or situations, designed to elicit respondents' attitudes, beliefs, or behavioral intentions in a controlled and comparable way. They are widely used in economics and social sciences to study perceptions and decision-making processes while holding constant key characteristics of the scenario. In the context of this paper, vignettes are

[23] This variable is defined by standardizing the female share across occupations within each origin country, such that higher values indicate occupations with a higher female share relative to the country-specific average.

particularly useful because they allow me to directly examine how respondents perceive individuals in gender-(non)stereotypical occupations, disentangled from confounding real-world characteristics. Specifically, I present survey respondents with profiles of hypothetical individuals working in either gender-typical or gender-atypical occupations and ask them to evaluate these individuals along multiple dimensions, such as competence, ambition, and suitability for their job. This allows a closer examination of the cultural beliefs and social perceptions that may contribute to the asymmetric impact of gender norms on men's and women's occupational choices.

The aim of the vignette experiment is threefold. First, it examines whether perceptions of individuals in gender-atypical occupations differ by gender – that is, whether men who defy gender norms by entering female-dominated occupations are perceived similarly to women who enter male-dominated fields, or whether their norm violations are perceived differently. Second, the experiment investigates how such perceptions vary across two countries that differ in the extent of gender segregation within the occupations under study. Third, I measure perceptions across multiple dimensions, which allows me to identify the specific aspects along which individuals in gender-atypical occupations are perceived differently.

The experiment is conducted in two countries (Poland and Italy) selected for their variation in the gender composition of the occupations under study. In both countries, the chosen occupations (nursing and engineering) are clearly gender-typed, yet the degree of gender dominance differs substantially, mirroring the cross-country variation exploited in the first part of the paper.[24] Nursing is strongly female-dominated in Poland, where approximately 95 percent of workers in the field are women, whereas in Italy the occupation is somewhat less gender-skewed, with a male share of around 20 percent. Conversely, engineering is highly male-dominated in Italy (approximately 15 percent women), while in Poland it exhibits a relatively higher representation of women (around 30 percent). Moreover, the countries and occupations were chosen to ensure that the occupations have similar relative wages in both countries.[25]

The survey experiment elicits both respondents' private beliefs - that is, their own perceptions of the appropriateness of occupations for each gender - and their second-order beliefs, that is, what they think others consider appropriate (Bursztyn et al., 2020). I present results for both types of beliefs.

5.1 Design

5.1.1 Data collection and sample

The experiment was conducted online in July 2025 in collaboration with the international survey firm Norstat, thereby ensuring standardized procedures across countries. The respondents

[24] The occupations were selected to represent both female- and male-typical fields that exhibit meaningful cross-country variation in gender composition. Additionally, they are sufficiently common so that respondents are familiar with the occupations. The occupations clearly differ in several respects, such as average earnings and educational requirements, that could affect how respondents perceive individuals working in those occupations. However, as the analysis is conducted within occupations, i.e. testing how women versus men are perceived in the *same* occupation, and how such perceptions vary across countries, any general perceptions associated with the occupation itself are held constant.

[25] In both countries, the hourly wages for nursing (civil engineering) are around 1.8 (2.1) times the median gross hourly earnings of the country (Eurostat, 2025; ERI, 2025).

constitute nationally representative samples of the adult populations in Poland and Italy. The final sample comprises 1,000 respondents from Italy, and 1,030 respondents from Poland. Appendix Table A.15 presents the demographic characteristics of the survey participants.[26]

5.1.2 Experimental design

The survey comprises a total of six vignettes, which are presented to respondents in random order. Three vignettes describe female individuals: one employed in a female-dominated occupation, one in a male-dominated occupation, and one in a gender-neutral occupation (sales assistant). The remaining three vignettes follow the same structure but describe male individuals in the corresponding occupations. Each vignette includes additional background information about the individual, such as their name, age, place of residence, educational attainment, years of occupational experience, workplace setting, and a set of hobbies and personal interests. All characteristics aside from gender and occupation are randomly assigned to ensure that any observed differences in perceptions are attributable to the gender-occupation pairing.

In the first part of the survey, respondents are asked to provide their personal perceptions of the individuals described in the vignettes. In the second part, they are asked to report their second-order beliefs – that is, how they believe most people in their country have responded to the same questions. For each vignette, respondents evaluate the individual along several dimensions using a four-point Likert scale (strongly agree, somewhat agree, somewhat disagree, strongly disagree). The statements, presented in randomized order, assess the extent to which the individual is perceived to be ambitious, in demand by employers, working in a prestigious job, likely to make their parents proud, fitting into the workplace culture, enjoying their job, being competent, and having leadership potential.[27]

Based on the individual response items, I construct two pre-registered indices by computing the mean of the standardized (z-scored) responses for the variables included in each index, followed by a standardization of the final index. The first index, the "fit-to-occupation index", aggregates the items 'demanded by employers', 'fits well in the workplace culture', 'enjoys her job', and 'has leadership potential'. It reflects how well the individual is perceived to align with the expectations, demands, and social environment of their occupational context. This index directly captures occupational gender norms: if respondents perceive, for example, a woman in a male-dominated occupation as fitting less well than a man in the same occupation, this is a direct indication of a norm about who "belongs" in that occupation. In this sense, perceived fit is the most direct operationalization of occupational gender norms. The second index, the "aspiration index", includes the items 'being ambitious', 'doing a job that is prestigious', 'makes her parents proud', and 'is competent'. This index is intended to capture whether deviating from occupational gender norms spills over into more general perceptions of the person. If norm violations trigger social sanctions, we would expect this not only to affect perceived occupational fit, but also to shape overall character evaluations. These broader measures therefore allow me to assess whether gender-atypical occupational choices are associated with more general

[26] As pre-registered, I exclude participants who finished the entire survey in less than three minutes, which was the case for 25 individuals in the Italian sample, and for 14 individuals in the Polish sample.

[27] The full questionnaire is available in Appendix C.

reputational penalties (or rewards), beyond the occupational context itself.

5.2 Pre-registration and specifications

The vignette survey experiment was pre-registered at AEA RCT Registry 0016307. I pre- registered two specifications to analyze the data from the vignette experiment. First, I study how respondents perceive hypothetical individuals working in non-stereotypical occupations compared to individuals working in gender-congruent occupations. Therefore, I run three regressions, one for each type of occupation (neutral, female-typical, male-typical), of the following form, separately for the two countries:

$$Y_{iv} = \alpha + \beta Gender_v + \gamma_i + \varepsilon_{iv} \tag{2}$$

where Y_{iv} are the two indices described above, $Gender$ is a dummy variable that is 1 if the portrayed individual belongs to the underrepresented gender in the given occupation (i.e., a male in a female-dominated occupation, a female in a male-dominated occupation, or a female in a gender-neutral occupation), and 0 otherwise. γ_i are respondent fixed effects. This means that intuitively, this specification compares how the same respondent evaluates male versus female individuals in the same occupation.

Second, I study how the perceptions of individuals in non-gendertypical occupations vary across contexts. Therefore, I stack the samples from the two countries, and run again three regressions, one for each type of occupation of the following form:

$$Y_{iv} = \alpha + \beta Gender_v x PL_i + \gamma_i + \varepsilon_{iv} \tag{3}$$

where PL_i is a dummy variable that is 1 if respondent i lives in Poland, and 0 if she lives in Italy. The outcome variables Y_{iv} are again the two indices described above, and γ_i are respondent fixed effects.

5.3 Results

5.3.1 First-order beliefs

I begin by documenting first-order beliefs, that is, the perceptions held by respondents themselves. Figure 3 presents the results. Panel A shows the results for the aspiration index, Panel B presents results for the fit-to-occupation index. The blue bars illustrate the standardized perception respondents have of men working in a female-dominated occupation relative to women in the same occupation, while the red bars show the standardized perception of women working in a male-dominated occupation relative to men in the same occupation. "High segregation" in the female (male)-dominated occupation refers to Poland (Italy), "low segregation" in the female (male)-dominated occupation refers to Italy (Poland).[28] The estimates indicate that in the context where the female-dominated occupation is highly female dominated men are rated 0.14 standard deviations lower on the aspiration index, suggesting they are perceived as less ambitious or driven than women in the same occupation. Similarly, men in this environment are

[28] Table A.16 and A.17 present the coefficients in table form for Poland and Italy, respectively.

rated 0.13 standard deviations lower on the fit-to-occupation index, implying they are viewed as less well-suited to the occupational environment. These findings point to a social perception penalty for men in a heavily female-dominated field. Moreover, the similar effect sizes across both indices suggest that this penalty comes both from being perceived as less aspirational and as being less of a fit to the occupational context. In the lower segregated environment, on the other hand, the social perception penalty for men is less pronounced and emerges only for the aspiration index, where men are rated 0.06 standard deviations lower than women in the same occupation.[29]

Respondents' perceptions of women in male-dominated occupations are illustrated in the red bars and present a stark contrast to those of men in female-dominated occupations. Overall, if anything, women in a heavily male dominated field seem to experience a social perception premium rather than a social perception penalty. In the highly segregated environment, women are rated 0.13 standard deviations higher on the aspiration index and 0.08 standard deviations higher on the fit-to-occupation index compared to male individuals in the same occupation. This finding highlights that women in heavily male-dominated occupations are perceived as particularly aspirational and driven.[30] In the lower segregated environment, on the other hand, perceptions towards male and female individuals differ minimally. [31]

Importantly, these differences are unlikely to be driven by general differences in perceptions of men and women. Panel C in both Table A.16 and A.17 show results for perceptions of individuals working in a gender-neutral occupation. The differences in perceptions between genders here are generally small. If anything, men are viewed as slightly less aspirational than women when portrayed in the gender-neutral role, suggesting that the perception differences identified in the gender-typed occupations are occupation-specific rather than driven by general stereotypes about men and women.[32]

5.3.2 Second-order beliefs

It has been shown in the literature that not only first-order beliefs shape individual behavior, but also second-order beliefs, that is, what individuals think other people think (e.g. Bursztyn et al., 2020). Therefore, I next analyze the second-order beliefs of respondents in my experiment. For that I analyze responses from the second part of the survey where respondents were shown

[29] Table A.18 presents results from a stacked data set including both countries and employing an interacted regression (Equation 3), showing that the differences in perceptions in the two countries are statistically significant.

[30] The result that women are perceived more ambitious in male-dominated occupations should be interpreted with some caution as there is evidence that ambition might be perceived as a negative trait in women in some contexts. For example, there is evidence that ambitious female politicians are supported less by voters than ambitious male politicians (Bauer et al., 2024; Saha and Weeks, 2022). At the same time, recent evidence points to quite heterogeneous patterns, with a substantial share of the population evaluating ambitious women positively (Dean et al., 2025, in progress). Hence, it is not obvious whether ambition in women is perceived as positive or negative, and likely dependent on the specific context.

[31] Appendix Tables A.23 and A.24 present results by respondent gender. Overall, there are no significant differences between male and female respondents in either country. Appendix Tables A.25 and A.26 show results by respondents' education. In Italy, perceptions do not significantly differ by education level. In Poland, however, some variation emerges: female respondents tend to evaluate women in male-dominated occupations more favorably, with effect sizes comparable to the perception premium observed in Italy, where the occupation is more male-dominated. The perception penalty for men in heavily female-dominated occupations, on the other hand, appears somewhat more pronounced among university-educated respondents.

[32] All results for individual items are presented in Appendix Tables A.19 and A.20.

Figure 3
Perceptions of individuals in gender-atypical occupations

Notes: The figures show results from the vignette survey experiment using the specification from Equation 2. The bars illustrate the standardized perception respondents have of men working in a female-dominated occupation relative to women in the same occupation, and of women working in a male-dominated occupation relative to men in this same occupation. Panel A shows the results for the aspiration index, Panel B for the fit-to-occupation index. High segregation in the female (male)-dominated occupation refers to Poland (Italy), low segregation in the female (male)-dominated occupation refers to Italy (Poland).

the same vignettes again but now asked how they think most other people in their country have answered the questions.

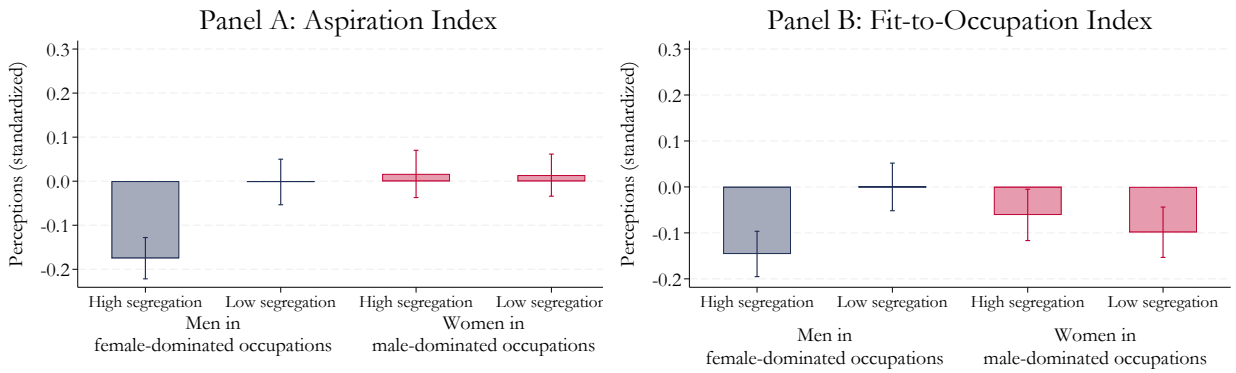
The results for second-order beliefs are presented in Figure 4. Again, Panel A shows the results for the aspiration index, Panel B presents results for the fit-to-occupation index. The blue bars illustrate what respondents think others in their country think of men working in a female-dominated occupation relative to women in the same occupation, while the red bars show what respondents think others in their country think of women working in a male-dominated occupation relative to men in the same occupation. "High segregation" in the female (male)-dominated occupation refers to Poland (Italy), "low segregation" in the female (male)-dominated occupation refers to Italy (Poland). Second-order perceptions of men in heavily female-dominated occupations largely mirror first-order perceptions, suggesting that individuals' own views closely align with what they believe others think. In particular, men are rated 0.17 standard deviations lower on the aspiration index and 0.15 standard deviations lower on the fit-to-occupation index, indicating that they are perceived as both less socially desirable and less well suited to the occupational environment than women in the same occupation. In the less segregated environment, by contrast, this penalty disappears entirely. As a result, the gap between highly and weakly segregated settings is even more pronounced in second-order beliefs.

Respondents' beliefs about how others perceive women in male-dominated occupations are illustrated by the red bars. In contrast to first-order beliefs, the social perception premium disappears in second-order beliefs: respondents believe that others in their country view women's aspirations in these occupations as identical to those of men. For occupational fit, however, second-order beliefs now reveal a penalty for women in male-dominated occupations. Respondents believe that others perceive women as about 0.1 standard deviations less well suited to the occupation than men in the same field.[33]

[33] Appendix Figures A.10 and A.11 present results by respondent gender. The main difference is that the belief that others perceive women as less well suited to male-dominated occupations is largely driven by female respondents.

Taken together, the results show that men in female-dominated occupations consistently face a social perception penalty, particularly in contexts where these occupations are more strongly female-dominated. This holds both for respondents' private beliefs and their second-order beliefs. These findings align with results from the first part of the paper, suggesting that men may shy away from female-dominated occupations because they anticipate being perceived as a poor fit and as less socially desirable overall. For women in male-dominated occupations, the vignette results are less conclusive, again consistent with findings from the first part of the paper. In private beliefs, respondents tend to view women in these occupations, if anything, more positively than men but this advantage disappears in second-order beliefs. However, even in second-order beliefs, women in male-dominated occupations are not perceived as less socially desirable. This may help explain why I do not find an effect of occupational gender norms on women's occupational choices in the first part of the paper.

Figure 4
Second-order perceptions of individuals in gender-atypical occupations



Notes: The figures show results from the vignette survey experiment using the specification from Equation 2. The bars illustrate the standardized second-order perceptions respondents have of men working in a female-dominated occupation relative to women in the same occupation, and of women working in a male-dominated occupation relative to men in this same occupation. Panel A shows the results for the aspiration index, Panel B for the fit-to-occupation index. High segregation in the female (male)-dominated occupation refers to Poland (Italy), low segregation in the female (male)-dominated occupation refers to Italy (Poland).

6 Discussion

The findings of this paper contribute to a deeper understanding of the persistent patterns of occupational gender segregation. Over the past several decades, overall desegregation in the labor market has been driven almost exclusively by women entering traditionally male-dominated fields, such as veterinary science and pharmacy (Goldin and Katz, 2016; Pan, 2015). In contrast, the share of men in traditionally female-dominated occupations has remained low, or has even declined, despite increasing demand in these sectors and deteriorating employment prospects in some male-dominated industries, such as manufacturing (Goldin, 2014; Blau et al., 2013; Reeves, 2022; Autor et al., 2013). Psychological research further underscores this asymmetry by showing that masculinity norms have remained largely static over time, in contrast to the significant evolution of norms related to women (Gustafsson Sendén et al., 2019). The results presented in this paper help bridge these empirical patterns by showing that persistent

cultural norms act as a barrier for men to enter female-dominated occupations.

Moreover, the findings of this paper align with earlier research suggesting that women tend to be more adaptive and mobile in response to changing social and economic environments. Evidence indicates that daughters of migrants exhibit greater upward intergenerational mobility than sons across a range of destination countries (Boustan et al., 2025). Similarly, studies examining major structural shifts in labor markets have shown that women display a high degree of adaptability, particularly in response to technological change and automation (Ager et al., 2023; Cortés et al., 2024). In contrast, men appear to be less responsive in contexts where male-dominated occupations decline, such as in the wake of manufacturing sector disruptions (Autor et al., 2013).

The results of the vignette survey experiment offer potential explanations for the main findings of the paper. They show that in contexts where female-dominated occupations are heavily female-dominated, men face a pronounced social perception penalty. In particular, they are being viewed as less aspirational and less well-suited to the occupational environment. Women, by contrast, are perceived as particularly aspirational when entering heavily male-dominated occupations. This pattern aligns with recent research documenting an asymmetry in how male and female norm violators are perceived. Dean et al. (2025, in progress) find that men consistently incur substantial penalties for behaving in non-stereotypical ways, whereas the responses to women who violate gender norms are more heterogeneous.

Importantly, the findings should not be interpreted as suggesting that women face no barriers when entering male-dominated fields. While the results indicate that women do not appear to be constrained by occupation-specific cultural gender norms, the horse race regressions reveal that the local gender composition is an even stronger predictor of occupational choice for women than for men. This suggests that women make equally gender-stereotypical occupational choices, but these are not driven by occupation-specific cultural gender norms, but rather by institutional characteristics of occupations and local norms. Moreover, the social perception premium for women in heavily male-dominated occupations observed in the vignette experiment should be interpreted with caution. It may reflect that women are seen as 'brave' for entering roles where they are expected to face significant challenges. Hence, the results suggest that women are more adaptive and less constrained by occupational gender norms, but extensive prior research documents a range of other structural and social barriers that continue to limit women's entry into male-dominated professions.

7 Conclusion

Occupational choice remains highly segregated by gender across the globe. In particular, men appear reluctant to enter traditionally female-dominated occupations, despite the rapid growth of these fields and the declining employment shares in many traditionally male-dominated sectors. In this paper, I examine whether occupation-specific gender norms contribute to this persistent pattern of gender-stereotypical occupational choice.

To address this question, I develop an augmented version of the epidemiological approach that enables me to disentangle the effects of occupation-specific cultural norms from those of

institutional characteristics. I apply this empirical strategy to both large-scale international survey data and high-quality Swedish administrative records. The findings consistently show that men, but not women, adhere to occupation-related gender norms. Men tend to avoid occupations that are more female-dominated in their country of origin, whereas I find suggestive evidence that women, if anything, counteract such norms in more gender-equal environments.

These results suggest that persistent cultural norms represent a significant barrier for men to enter female-dominated occupations. This insight is especially relevant in light of the long-term decline of traditionally male-dominated sectors such as manufacturing in many Western economies, and the growing demand for workers in female-dominated fields like healthcare and education. As such, the findings highlight the importance of addressing persistent gender norms surrounding female-dominated occupations. While policy efforts have, to some extent, succeeded in encouraging women to pursue careers in male-dominated fields, a key challenge moving forward is to identify effective interventions that can similarly encourage men to enter female-dominated professions. In doing so, addressing cultural barriers will be essential to reduce gender segregation in the labor market and ensure that occupational supply better aligns with the shifting demands of changing labor markets.

References

Abadie, A., Athey, S., Imbens, G. W. and Wooldridge, J. M. (2023), 'When should you adjust standard errors for clustering?', *The Quarterly Journal of Economics* **138**(1), 1–35.

Acemoglu, D. and Autor, D. (2011), Skills, tasks and technologies: Implications for employment and earnings, *in* 'Handbook of labor economics', Vol. 4, Elsevier, pp. 1043–1171.

Adachi, T. (2013), 'Occupational gender stereotypes: Is the ratio of women to men a powerful determinant?', *Psychological reports* **112**(2), 640–650.

Ager, P., Goñi, M. and Salvanes, K. G. (2023), 'Gender-biased technological change: Milking machines and the exodus of women from farming', *NHH Dept. of Economics Discussion Paper* (16).

Akerlof, G. A. and Kranton, R. E. (2000), 'Economics and identity', *The quarterly journal of economics* **115**(3), 715–753.

Alesina, A., Giuliano, P. and Nunn, N. (2013), 'On the origins of gender roles: Women and the plough', *The quarterly journal of economics* **128**(2), 469–530.

Almås, I., Cappelen, A. W., Salvanes, K. G., Sørensen, E. Ø. and Tungodden, B. (2016), 'What explains the gender gap in college track dropout? experimental and administrative evidence', *American Economic Review* **106**(5), 296–302.

Autor, D., Dorn, D. and Hanson, G. (2019), 'When work disappears: Manufacturing decline and the falling marriage market value of young men', *American Economic Review: Insights* **1**(2), 161–178.

Autor, D., Figlio, D., Karbownik, K., Roth, J. and Wasserman, M. (2019), 'Family disadvantage and the gender gap in behavioral and educational outcomes', *American Economic Journal: Applied Economics* **11**(3), 338–381.

Autor, D., Figlio, D., Karbownik, K., Roth, J. and Wasserman, M. (2023), 'Males at the tails: How socioeconomic status shapes the gender gap', *The Economic Journal* **133**(656), 3136–3152.

Autor, D. H., Dorn, D. and Hanson, G. H. (2013), 'The china syndrome: Local labor market effects of import competition in the united states', *American economic review* **103**(6), 2121–2168.

Autor, D. and Wasserman, M. (2013), 'Wayward sons: The emerging gender gap in labor markets and education', *Third Way Report* **20013**.

Baker, M. and Cornelson, K. (2018), 'Gender-based occupational segregation and sex differences in sensory, motor, and spatial aptitudes', *Demography* **55**(5), 1749–1775.

Baranov, V., De Haas, R. and Grosjean, P. (2023), 'Men. male-biased sex ratios and masculinity norms: evidence from australiaâĂŹs colonial past', *Journal of Economic Growth* pp. 1–58.

Bau, N. and Fernández, R. (2023), Culture and the family, *in* 'Handbook of the Economics of the Family', Vol. 1, Elsevier, pp. 1–48.

Bauer, N. M., Harman, M. and Russell, E. B. (2024), 'Do voters punish ambitious women? tracking a gendered backlash toward the 2020 democratic presidential contenders', *Political Behavior* **46**(1), 1–20.

Bertrand, M., Kamenica, E. and Pan, J. (2015), 'Gender identity and relative income within households', *The Quarterly Journal of Economics* **130**(2), 571–614.

Bertrand, M. and Pan, J. (2013), 'The trouble with boys: Social influences and the gender gap in disruptive behavior', *American economic journal: applied economics* **5**(1), 32–64.

Bietenbeck, J., Irmert, N. and Nilsson, T. (2024), 'Individualism and working from home'.

Binder, A. J. and Bound, J. (2019), 'The declining labor market prospects of less-educated men', *Journal of Economic Perspectives* **33**(2), 163–190.

Bisin, A. and Verdier, T. (2001), 'The economics of cultural transmission and the dynamics of preferences', *Journal of Economic theory* **97**(2), 298–319.

Blau, F. D., Brummund, P. and Liu, A. Y.-H. (2013), 'Trends in occupational segregation by gender 1970–2009: Adjusting for the impact of changes in the occupational coding system', *Demography* **50**(2), 471–492.

Blau, F. D. and Kahn, L. M. (2017), 'The gender wage gap: Extent, trends, and explanations', *Journal of economic literature* **55**(3), 789–865.

Blau, F. D., Kahn, L. M. and Papps, K. L. (2011), 'Gender, source country characteristics, and labor market assimilation among immigrants', *The Review of Economics and Statistics* **93**(1), 43–58.

Boustan, L., Jensen, M. F., Abramitzky, R., Jácome, E., Manning, A., Pérez, S., Watley, A., Adermon, A., Arellano-Bover, J., Åslund, O. et al. (2025), Intergenerational mobility of immigrants in 15 destination countries, Technical report, National Bureau of Economic Research.

Burbano, V. C., Folke, O., Meier, S. and Rickne, J. (2023), 'The gender gap in meaningful work', *Management Science* .

Bursztyn, L., González, A. L. and Yanagizawa-Drott, D. (2020), 'Misperceived social norms: Women working outside the home in saudi arabia', *American economic review* **110**(10), 2997–3029.

Buser, T., , M. and Oosterbeek, H. (2014), 'Gender, competitiveness, and career choices', *The quarterly journal of economics* **129**(3), 1409–1447.

Cappelen, A. W., Falch, R. and Tungodden, B. (2025), 'Experimental evidence on the acceptance of males falling behind', *Journal of the European Economic Association* p. jvaf016.

Carlana, M. and Corno, L. (2024), Thinking about parents: Gender and field of study, *in* 'AEA Papers and Proceedings', Vol. 114, American Economic Association 2014 Broadway, Suite 305, Nashville, TN 37203, pp. 254–258.

Cejka, M. A. and Eagly, A. H. (1999), 'Gender-stereotypic images of occupations correspond to the sex segregation of employment', *Personality and social psychology bulletin* **25**(4), 413–423.

Chetty, R., Hendren, N. and Katz, L. F. (2016), 'The effects of exposure to better neighborhoods on children: New evidence from the moving to opportunity experiment', *American Economic Review* **106**(4), 855–902.

Cialdini, R. B., Kallgren, C. A. and Reno, R. R. (1991), A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior, *in* 'Advances in experimental social psychology', Vol. 24, Elsevier, pp. 201–234.

Cialdini, R. B., Reno, R. R. and Kallgren, C. A. (1990), 'A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places.', *Journal of personality and social psychology* **58**(6), 1015.

Coile, C. C. and Duggan, M. G. (2019), 'When laborâĂŹs lost: Health, family life, incarceration, and education in a time of declining economic opportunity for low-skilled men', *Journal of Economic Perspectives* **33**(2), 191–210.

Cortés, P., Feng, Y., Guida-Johnson, N. and Pan, J. (2024), Automation and gender: Implications for occupational segregation and the gender skill gap, Technical report, National Bureau of Economic Research.

Cortes, P. and Pan, J. (2018), 'Occupation and gender', *The Oxford handbook of women and the economy* pp. 425–452.

Dean, J., Klinowski, D., Exley, C., Niederle, M. and Sarsons, H. (2025, in progress), 'Gender views: A restricted path for men and a mission impossible for women'.

DeHaas, R., Baranov, V., Matavelli, I. and Grosjean, P. (2024), Masculinity around the world, Technical report, Technical report, Working paper.

DeLeire, T. and Levy, H. (2004), 'Worker sorting and the risk of death on the job', *Journal of Labor Economics* **22**(4), 925–953.

Delfino, A. (2024), 'Breaking gender barriers: Experimental evidence on men in pink-collar jobs', *American Economic Review* **114**(6), 1816–1853.

Deming, D. J. (2017), 'The growing importance of social skills in the labor market', *The quarterly journal of economics* **132**(4), 1593–1640.

Ek, A., Gokmen, G. and Majlesi, K. (2022), *Cultural Origins of Investment Behavior*, Centre for Economic Policy Research.

ERI (2025), 'Economic research institute: Salary research database'. https://www.erieri.com/salary, Last accessed on 2025-07-17.

Eurostat (2025), 'Wages and labour costs'. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Wages_and_labour_costs, Last accessed on 2025-07-17.

Fernandez, R. (2007), 'Women, work, and culture', *Journal of the European Economic Association* **5**(2-3), 305–332.

Fernández, R. (2013), 'Cultural change as learning: The evolution of female labor force participation over a century', *American Economic Review* **103**(1), 472–500.

Fernández, R. and Fogli, A. (2006), 'Fertility: The role of culture and family experience', *Journal of the European economic association* **4**(2-3), 552–561.

Fernández, R. and Fogli, A. (2009), 'Culture: An empirical investigation of beliefs, work, and fertility', *American economic journal: Macroeconomics* **1**(1), 146–177.

Figlio, D., Giuliano, P., Özek, U. and Sapienza, P. (2019), 'Long-term orientation and educational performance', *American Economic Journal: Economic Policy* **11**(4), 272–309.

Finseraas, H. and Kotsadam, A. (2017), 'Ancestry culture and female employmentâĂŤan analysis using second-generation siblings', *European Sociological Review* **33**(3), 382–392.

Flory, J. A., Leibbrandt, A. and List, J. A. (2015), 'Do competitive workplaces deter female workers? a large-scale natural field experiment on job entry decisions', *The Review of Economic Studies* **82**(1), 122–155.

Freeman, R. B. and Oostendorp, R. H. (2005), 'Occupational wages around the world (oww) database'.

Gelblum, M. (2020), 'Preferences for job tasks and gender gaps in the labor market', *Job Market Paper* .

Goldin, C. (2014), 'A grand gender convergence: Its last chapter', *American economic review* **104**(4), 1091–1119.

Goldin, C. and Katz, L. F. (2016), 'A most egalitarian profession: pharmacy and the evolution of a family-friendly occupation', *Journal of Labor Economics* **34**(3), 705–746.

Gorodnichenko, Y. and Roland, G. (2011), 'Individualism, innovation, and long-run growth', *Proceedings of the National Academy of Sciences* **108**(supplement_4), 21316–21319.

Graves, J. and Kuehn, Z. (2021), 'Specializing in growing sectors: Wage returns and gender differences', *Labour Economics* **70**, 101994.

Gustafsson Sendén, M., Klysing, A., Lindqvist, A. and Renström, E. A. (2019), 'The (not so) changing man: Dynamic gender stereotypes in sweden', *Frontiers in psychology* **10**, 37.

Hanushek, E. A., Kinne, L., Lergetporer, P. and Woessmann, L. (2022), 'Patience, risk-taking, and human capital investment across countries', *The Economic Journal* **132**(646), 2290–2307.

Hartinger, K., Resnjanskij, S., Ruhose, J. and Wiederhold, S. (2025), 'Individualism and the formation of human capital', *Journal of the European Economic Association* p. jvaf066.

Hederos, K. (2014), 'Occupational segregation by sex: The role of intergenerational transmission'.

Hsieh, C.-T., Hurst, E., Jones, C. I. and Klenow, P. J. (2019), 'The allocation of talent and us economic growth', *Econometrica* **87**(5), 1439–1474.

Inglehart, R., Haerpfer, C., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., M. Lagos, P. N., Ponarin, E. and et al. (eds.), B. P. (2014), 'World values survey: All rounds - country-pooled datafile version: https://www.worldvaluessurvey.org/WVSDocumentationWVL.jsp madrid: Jd systems institute.'.

International Labour Organization (ILO) (2023), 'Employment by sex and occupation - isco level 2 (thousands) – annual'. https://rshiny.ilo.org/dataexplorer07/?lang=en&segment=indicator&id=EMP_TEMP_SEX_OC2_NB_A, Last accessed on 2023-07-10.

International Labour Organization (ILO) (2024), 'Ilo modelled estimates database (iloest): Labor force participation rate, female (ilo estimate)'. https://ilostat.ilo.org/data/bulk/, Last accessed on 2025-01-07.

Kleven, H. (2022), *The geography of child penalties and gender norms: Evidence from the United States*, National Bureau of Economic Research.

Koenig, A. M. and Eagly, A. H. (2014), 'Evidence for the social role theory of stereotype content: observations of groupsâĂŹ roles shape stereotypes.', *Journal of personality and social psychology* **107**(3), 371.

Kuhn, A. and Wolter, S. C. (2022), 'Things versus people: Gender differences in vocational interests and in occupational preferences', *Journal of economic behavior & organization* **203**, 210–234.

Kuhn, A. and Wolter, S. C. (2023), 'The strength of gender norms and gender-stereotypical occupational aspirations among adolescents', *Kyklos* **76**(1), 101–124.

Lassen, A. S. (2022), Intergenerational transmission of labor market segregation, Technical report, Working paper.

Lavetti, K. and Schmutte, I. M. (2023), 'Gender differences in sorting on wages and risk', *Journal of Econometrics* **233**(2), 507–523.

Lordan, G. and Pischke, J.-S. (2022), 'Does rosie like riveting? male and female occupational choices', *Economica* **89**(353), 110–130.

Lundberg, S. (2023), Gender economics: Dead-ends and new opportunities, *in* '50th Celebratory Volume', Emerald Publishing Limited, pp. 151–189.

Matavelli, I. (2024), 'We donâĂŹt talk about boys: Masculinity norms among adolescents in brazil', *University of British Columbia, mimeo* .

Miller, D. I., Eagly, A. H. and Linn, M. C. (2015), 'WomenâĂŹs representation in science predicts national gender-science stereotypes: Evidence from 66 nations.', *Journal of Educational Psychology* **107**(3), 631.

Nollenberger, N., Rodríguez-Planas, N. and Sevilla, A. (2016), 'The math gender gap: The role of culture', *American Economic Review* **106**(5), 257–261.

Palffy, P., Lehnert, P. and Backes-Gellner, U. (2023*a*), Countering gender-typicality in occupational choices: An information intervention targeted at adolescents, Technical report, University of Zurich, Department of Business Administration (IBW).

Palffy, P., Lehnert, P. and Backes-Gellner, U. (2023*b*), 'Social norms and gendered occupational choices of men and women: Time to turn the tide?', *Industrial Relations: A Journal of Economy and Society* **62**(4), 380–410.

Pan, J. (2015), 'Gender segregation in occupations: The role of tipping and social interactions', *Journal of Labor Economics* **33**(2), 365–408.

Reeves, R. (2022), *Of Boys and Men: Why the Modern Male is Struggling, why it Matters, and what to Do about it*, Brookings Institution Press.

Reuben, E., Sapienza, P. and Zingales, L. (2015), 'Taste for competition and the gender gap among young business professionals', *NBER Working Paper* (w21695).

Saha, S. and Weeks, A. C. (2022), 'Ambitious women: Gender and voter perceptions of candidate ambition', *Political Behavior* **44**(2), 779–805.

Schaede, U. and Mankki, V. (2022), 'Quota vs quality? long-term gains from an unusual gender quota'.

Statistics Sweden (2024), 'Population 16+ years (rams) by region, employment, age and sex. year 2004 - 2018'. https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__AM__AM0207__AM0207H/BefSyssAldKonK/, Last accessed on 2024-07-15.

Wasserman, M. (2023), 'Hours constraints, occupational choice, and gender: Evidence from medical residents', *The Review of Economic Studies* **90**(3), 1535–1568.

Wolter, S. C. and Zöllner, T. (2024), Are parents an obstacle to gender-atypical occupational choices?, Technical report, IZA Discussion Papers.

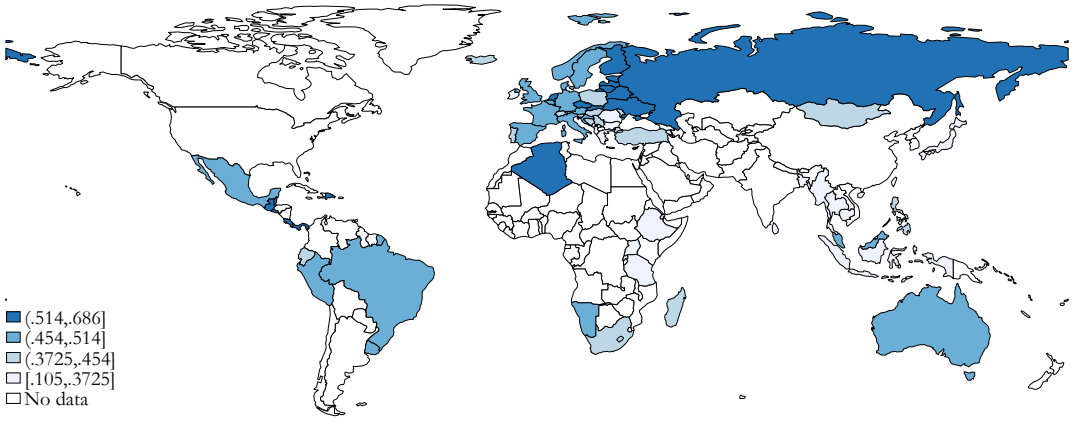
World Bank (2024), Women, business and the law 2024, World bank report, World Bank, Washington, DC.
URL: *https://wbl.worldbank.org*

World Bank Group (2023), Gender-based employment segregation: Understanding causes and policy interventions, Technical report, Jobs Working Paper, Issue No. 26.

World Bank Group (2024), 'World bank national accounts data, and oecd national accounts data files: Economic policy and debt: National accounts: Usd at constant 2015 prices: Aggregate indicators'. https://databank.worldbank.org/indicator/NY.GDP.PCAP.CD/1ff4a498/Popular-Indicators, Last accessed on 2024-05-13.

Appendix A Additional tables and figures

Figure A.1
Duncan Index of occupational gender segregation across countries



Notes: The figure shows the Duncan Index across countries. The index reflects the share of individuals who would have to change occupation so that there is no gender segregation in the labor market. The data are taken from World Bank Group (2023).

Table A.1
Number of individuals by origin country (ESS data)

Origin country	Number of individuals
Albania	40
Austria	548
Belgium	243
Bulgaria	139
Switzerland	103
Cyprus	40
Czech Republic	595
Germany	1,969
Denmark	240
Estonia	57
Spain	442
Finland	398
France	826
United Kingdom	843
Greece	257
Croatia	576
Hungary	553
Ireland	396
Israel	15
Iceland	15
Italy	1,509
Lithuania	172
Luxembourg	24
Latvia	151
Montenegro	72
North Macedonia	137
Netherlands	313
Norway	183
Poland	1,558
Portugal	268
Romania	671
Serbia	326
Russia	3,833
Sweden	240
Slovenia	128
Slovakia	713
Turkey	934
Ukraine	998
Kosovo	73

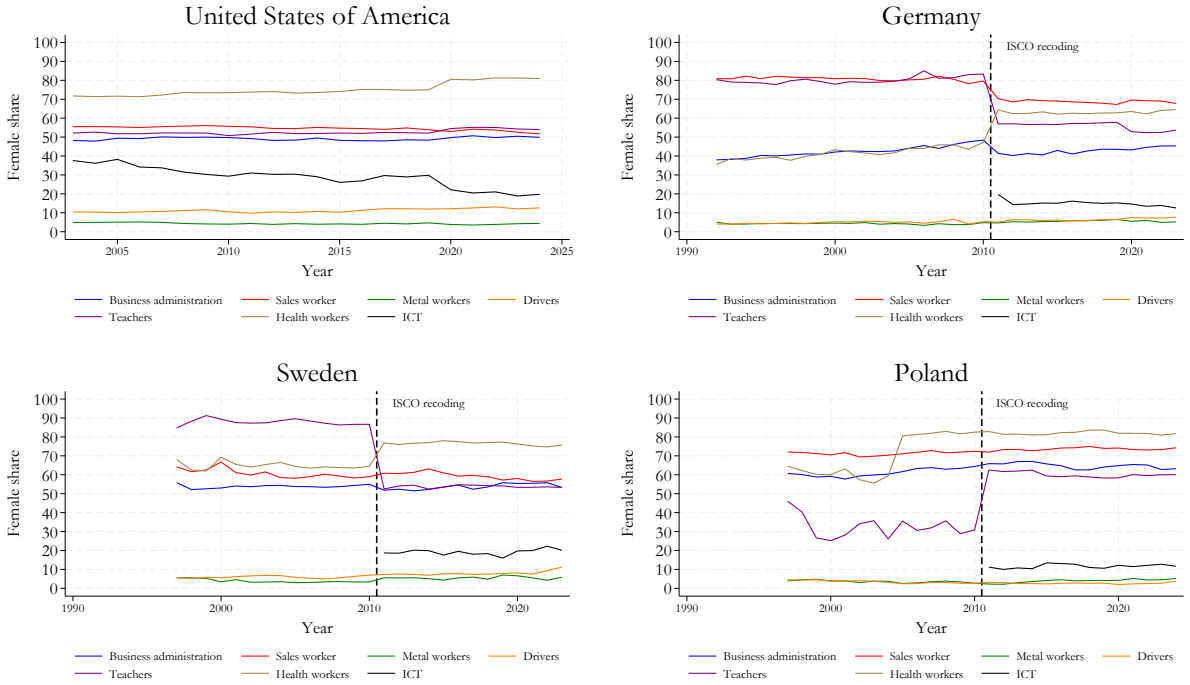
Notes: The table reports the number of individuals in the ESS analysis sample by origin country.

Table A.2
Number of individuals by origin country (admin data)

Origin country	Number of individuals
Bosnia-Herzegovina	3,054
Chile	5,702
Czech Republic	16
Germany	4,765
Denmark	7,307
Ethiopia	1,690
Finland	61,929
Greece	2,729
Iraq	3,410
Iran	4,844
Italy	739
Lebanon	5,402
Montenegro	4
North-Macedonia	655
Norway	8,436
Poland	10,572
Serbia	27
Slovenia	152
Slovakia	11
Somalia	1,388
Thailand	2,161
Turkey	12,510
United States	1,738
Vietnam	1,016

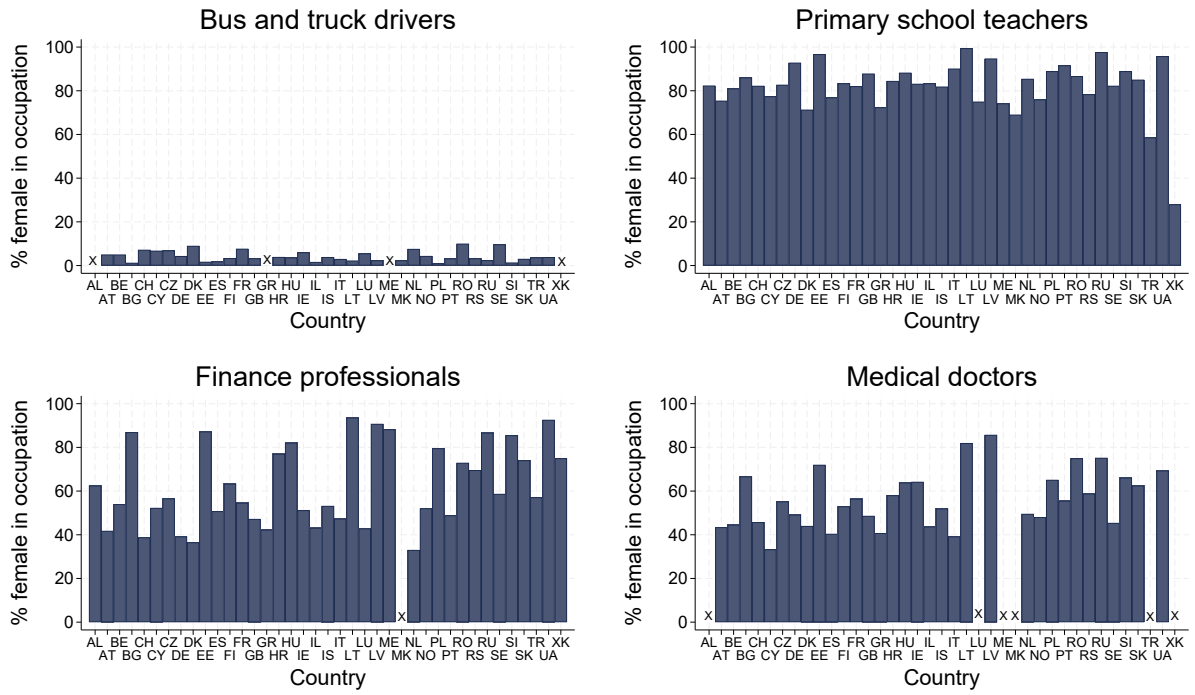
Notes: The table reports the number of individuals in the analysis sample from the Swedish administrative data by origin country.

Figure A.2
Time trends of female shares in occupations



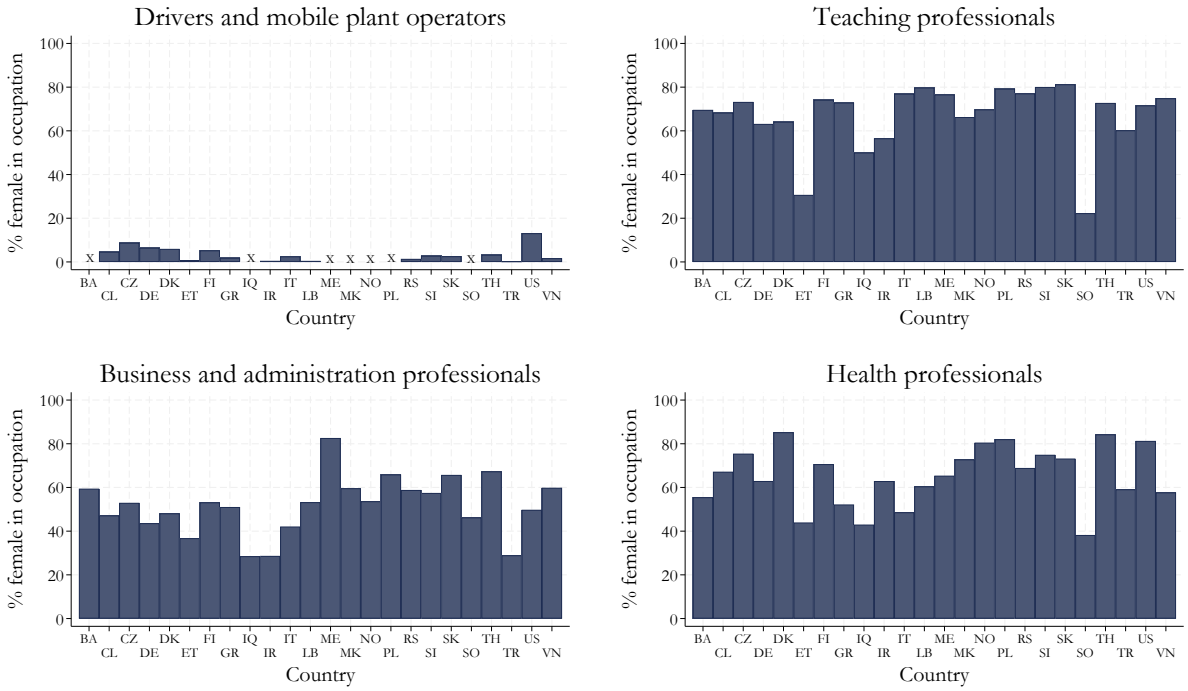
Notes: The figures show the share of women among all workers by country and occupation. The data come from the ILO data base "Employment by sex and occupation" (International Labour Organization (ILO), 2023).

Figure A.3
Variation in the share of females in four occupations across countries: ESS data



Notes: The figures show the share of women among all workers by country. The figures are obtained by calculating the share of female workers by country-occupation cell in the ESS data. 'X' indicates missing data.

Figure A.4
Variation in the share of females in four occupations across countries: ILO data



Notes: The figures show the share of women among all workers by country. The figures use data from the ILO Labor Force Statistics, in particular the table 'Employment by sex and occupation - ISCO level 2' (International Labour Organization (ILO), 2023). 'X' indicates missing data.

Table A.3
Female share in 3-digit occupations

	Mean	SD	Min	Max	N
Legislators and senior officials	0.36	0.13	0.05	0.62	25
Managing directors and chief executives	0.26	0.11	0.07	0.48	34
Business services and administration managers	0.47	0.13	0.20	0.70	36
Sales, marketing and development managers	0.38	0.12	0.15	0.58	33
Production managers in agriculture, forestry and fisheries	0.29	0.16	0.00	0.65	18
Manufacturing, mining, construction and distribution managers	0.19	0.09	0.00	0.39	36
Information and communications technology services managers	0.22	0.14	0.02	0.58	19
Professional services managers	0.51	0.12	0.22	0.72	33
Hotel and restaurant managers	0.49	0.17	0.07	0.91	33
Retail and wholesale trade managers	0.45	0.13	0.15	0.70	35
Other services managers	0.41	0.15	0.00	0.85	26
Physical and earth science professionals	0.45	0.16	0.15	0.82	22
Mathematicians, actuaries and statisticians	0.51	0.29	0.13	0.91	8
Life science professionals	0.47	0.14	0.00	0.72	30
Engineering professionals (excluding electrotechnology)	0.25	0.12	0.08	0.50	35
Electrotechnology engineers	0.13	0.10	0.00	0.36	29
Architects, planners, surveyors and designers	0.42	0.12	0.23	0.69	33
Medical doctors	0.56	0.13	0.33	0.86	33
Nursing and midwifery professionals	0.90	0.07	0.75	1.00	37
Traditional and complementary medicine professionals	0.92	0.02	0.91	0.94	2
Paramedical practitioners	0.66	0.23	0.47	0.92	3
Veterinarians	0.39	0.13	0.12	0.62	14
Other health professionals	0.74	0.10	0.54	1.00	34
University and higher education teachers	0.51	0.11	0.20	0.76	32
Vocational education teachers	0.57	0.13	0.35	0.85	21
Secondary education teachers	0.65	0.12	0.39	0.90	37
Primary school and early childhood teachers	0.82	0.12	0.28	0.99	39
Other teaching professionals	0.73	0.09	0.56	0.92	35
Finance professionals	0.62	0.19	0.33	0.94	38
Administration professionals	0.57	0.12	0.33	0.84	35
Sales, marketing and public relations professionals	0.56	0.13	0.33	0.86	29
Software and applications developers and analysts	0.21	0.08	0.08	0.44	30
Database and network professionals	0.25	0.11	0.04	0.43	22
Legal professionals	0.51	0.11	0.33	0.76	35
Librarians, archivists and curators	0.74	0.14	0.43	1.00	27
Social and religious professionals	0.69	0.11	0.43	0.93	34
Authors, journalists and linguists	0.59	0.12	0.42	0.90	34
Creative and performing artists	0.46	0.08	0.31	0.70	31
Physical and engineering science technicians	0.25	0.14	0.00	0.63	39
Mining, manufacturing and construction supervisors	0.19	0.12	0.02	0.59	29
Process control technicians	0.26	0.18	0.05	0.77	27
Life science technicians and related associate professionals	0.41	0.18	0.09	0.73	20
Ship and aircraft controllers and technicians	0.11	0.11	0.00	0.42	23
Medical and pharmaceutical technicians	0.77	0.15	0.27	1.00	31
Nursing and midwifery associate professionals	0.92	0.08	0.69	1.00	33
Traditional and complementary medicine associate professionals	0.55	.	0.55	0.55	1
Veterinary technicians and assistants	0.75	0.31	0.14	1.00	6
Other health associate professionals	0.74	0.11	0.50	0.97	34
Financial and mathematical associate professionals	0.72	0.15	0.43	0.96	34
Sales and purchasing agents and brokers	0.43	0.10	0.29	0.63	35
Business services agents	0.53	0.17	0.07	0.90	31
Administrative and specialized secretaries	0.76	0.11	0.36	0.93	36
Government regulatory associate professionals	0.46	0.13	0.20	0.69	35
Legal, social and religious associate professionals	0.74	0.14	0.42	1.00	30
Sports and fitness workers	0.45	0.13	0.06	0.67	30
Artistic, cultural and culinary associate professionals	0.57	0.13	0.35	1.00	34
Information and communications technology operations and user support technicians	0.23	0.10	0.05	0.44	33
Telecommunications and broadcasting technicians	0.27	0.12	0.00	0.60	24
General office clerks	0.77	0.13	0.40	1.00	31
Secretaries (general)	0.91	0.06	0.78	1.00	35
Keyboard operators	0.79	0.12	0.47	0.96	34
Tellers, money collectors and related clerks	0.71	0.13	0.42	0.93	33
Client information workers	0.77	0.09	0.58	0.90	35
Numerical clerks	0.81	0.10	0.64	0.96	36
Material recording and transport clerks	0.37	0.18	0.10	0.75	35
Other clerical support workers	0.69	0.13	0.27	0.92	36
Travel attendants, conductors and guides	0.59	0.18	0.23	0.90	31
Cooks	0.69	0.17	0.32	0.96	38
Waiters and bartenders	0.63	0.20	0.08	0.86	39
Hairdressers, beauticians and related workers	0.88	0.08	0.64	0.98	36
Building and housekeeping supervisors	0.54	0.19	0.15	0.92	36
Other personal services workers	0.53	0.11	0.29	0.80	30
Street and market salespersons	0.65	0.20	0.21	0.95	19
Shop salespersons	0.73	0.11	0.44	0.90	39
Cashiers and ticket clerks	0.84	0.10	0.58	1.00	36
Other sales workers	0.63	0.12	0.31	0.86	30
Child care workers and teachersâĂŹ aides	0.93	0.08	0.70	1.00	33
Personal care workers in health services	0.90	0.06	0.75	1.00	33
Protective services workers	0.17	0.08	0.04	0.41	39

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Table A.4
Female share in 3-digit occupations (continued)

	Mean	SD	Min	Max	N
Market gardeners and crop growers	0.40	0.19	0.07	0.76	33
Animal producers	0.44	0.24	0.09	0.92	33
Mixed crop and animal producers	0.30	0.16	0.00	0.62	30
Forestry and related workers	0.13	0.10	0.00	0.35	21
Fishery workers, hunters and trappers	0.13	0.17	0.00	0.55	10
Subsistence crop farmers	0.54	0.10	0.43	0.63	3
Subsistence livestock farmers	0.08	.	0.08	0.08	1
Subsistence mixed crop and livestock farmers	0.30	0.19	0.09	0.54	4
Building frame and related trades workers	0.03	0.04	0.00	0.18	39
Building finishers and related trades workers	0.06	0.09	0.00	0.41	35
Painters, building structure cleaners and related trades workers	0.14	0.18	0.00	0.78	34
Sheet and structural metal workers, moulders and welders, and related workers	0.08	0.05	0.00	0.17	35
Blacksmiths, toolmakers and related trades workers	0.14	0.09	0.00	0.35	34
Machinery mechanics and repairers	0.05	0.05	0.00	0.18	38
Handicraft workers	0.46	0.13	0.26	0.83	36
Printing trades workers	0.40	0.17	0.17	0.90	31
Electrical equipment installers and repairers	0.07	0.05	0.00	0.20	37
Electronics and telecommunications installers and repairers	0.17	0.11	0.03	0.36	31
Food processing and related trades workers	0.48	0.21	0.15	0.87	38
Wood treaters, cabinet-makers and related trades workers	0.15	0.09	0.00	0.34	31
Garment and related trades workers	0.83	0.11	0.37	0.95	37
Other craft and related workers	0.46	0.22	0.00	1.00	23
Mining and mineral processing plant operators	0.10	0.10	0.00	0.37	26
Metal processing and finishing plant operators	0.23	0.11	0.00	0.48	28
Chemical and photographic products plant and machine operators	0.41	0.17	0.04	0.73	24
Rubber, plastic and paper products machine operators	0.38	0.15	0.08	0.63	30
Textile, fur and leather products machine operators	0.84	0.11	0.47	0.98	34
Food and related products machine operators	0.54	0.15	0.08	0.77	29
Wood processing and papermaking plant operators	0.29	0.14	0.05	0.54	22
Other stationary plant and machine operators	0.42	0.14	0.17	0.66	32
Assemblers	0.43	0.16	0.05	0.67	34
Locomotive engine drivers and related workers	0.12	0.09	0.00	0.32	27
Car, van and motorcycle drivers	0.07	0.07	0.00	0.26	37
Heavy truck and bus drivers	0.04	0.03	0.00	0.10	38
Mobile plant operators	0.07	0.06	0.00	0.28	34
ShipsâĂŹ deck crews and related workers	0.05	0.04	0.00	0.12	9
Domestic, hotel and office cleaners and helpers	0.90	0.07	0.65	0.98	38
Vehicle, window, laundry and other hand cleaning workers	0.69	0.17	0.20	0.95	32
Agricultural, forestry and fishery labourers	0.52	0.15	0.13	0.84	35
Mining and construction labourers	0.10	0.08	0.00	0.34	38
Manufacturing labourers	0.57	0.12	0.30	0.81	38
Transport and storage labourers	0.29	0.16	0.00	0.72	34
Food preparation assistants	0.77	0.15	0.46	1.00	28
Street and related services workers	0.40	0.35	0.00	0.62	3
Refuse workers	0.29	0.22	0.00	0.74	32
Other elementary workers	0.36	0.13	0.08	0.64	36

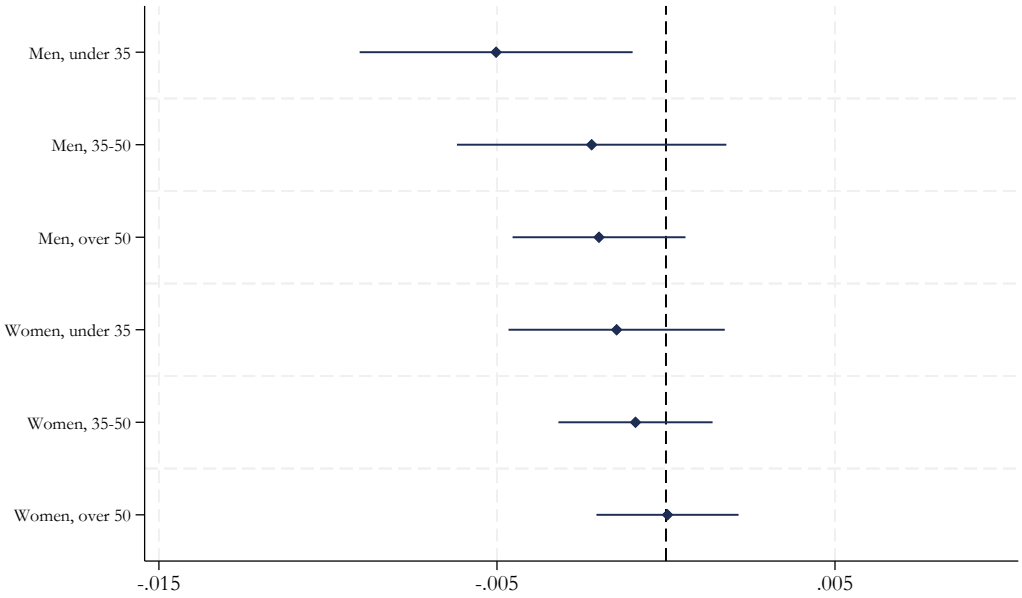
Notes: The table shows summary statistics of the share of women working in each three-digit ISCO-08 occupation. The variable is calculated based on pooled ESS data from all covered countries and waves.

Table A.5
Female share in 2-digit occupations (ILO)

	Mean	SD	Min	Max	N
Chief Executives, Senior Officials and Legislators	0.28	0.11	0.00	0.48	22
Administrative and Commercial Managers	0.38	0.12	0.17	0.58	20
Production and Specialized Services Managers	0.28	0.07	0.15	0.44	21
Hospitality, Retail and Other Services Managers	0.30	0.13	0.00	0.51	21
Science and Engineering Professionals	0.27	0.06	0.14	0.34	23
Health Professionals	0.65	0.14	0.38	0.85	24
Teaching Professionals	0.67	0.15	0.22	0.81	24
Business and Administration Professionals	0.52	0.13	0.28	0.83	24
Information and Communications Technology Professionals	0.21	0.07	0.10	0.35	21
Legal, Social and Cultural Professionals	0.52	0.13	0.21	0.71	23
Science and Engineering Associate Professionals	0.17	0.05	0.06	0.28	22
Health Associate Professionals	0.73	0.14	0.30	0.90	23
Business and Administration Associate Professionals	0.50	0.14	0.13	0.71	24
Legal, Social, Cultural and Related Associate Professionals	0.48	0.15	0.19	0.78	22
Information and Communications Technicians	0.23	0.15	0.08	0.73	18
General and Keyboard Clerks	0.71	0.16	0.29	0.89	23
Customer Services Clerks	0.64	0.12	0.32	0.84	22
Numerical and Material Recording Clerks	0.45	0.17	0.08	0.72	22
Other Clerical Support Workers	0.51	0.16	0.21	0.79	21
Personal Services Workers	0.50	0.16	0.10	0.70	24
Sales Workers	0.57	0.20	0.02	0.77	24
Personal Care Workers	0.84	0.09	0.63	0.96	23
Protective Services Workers	0.12	0.07	0.01	0.24	21
Market-Oriented Skilled Agricultural Workers	0.31	0.10	0.13	0.43	23
Market-Oriented Skilled Forestry, Fishery and Hunting Workers	0.15	0.12	0.00	0.37	8
Subsistence Farmers, Fishers, Hunters and Gatherers	0.38	0.18	0.09	0.66	12
Building and Related Trades Workers (excluding Electricians)	0.04	0.04	0.00	0.15	16
Metal, Machinery and Related Trades Workers	0.04	0.02	0.00	0.08	16
Handicraft and Printing Workers	0.38	0.15	0.15	0.60	16
Electrical and Electronic Trades Workers	0.03	0.02	0.00	0.07	11
Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers	0.41	0.13	0.19	0.64	23
Stationary Plant and Machine Operators	0.32	0.14	0.09	0.63	22
Assemblers	0.35	0.20	0.00	0.60	18
Drivers and Mobile Plant Operators	0.04	0.03	0.00	0.13	17
Cleaners and Helpers	0.77	0.21	0.20	0.93	24
Agricultural, Forestry and Fishery Labourers	0.36	0.16	0.09	0.64	22
Labourers in Mining, Construction, Manufacturing and Transport	0.26	0.11	0.02	0.48	20
Food Preparation Assistants	0.68	0.20	0.14	0.92	22
Street and Related Sales and Service Workers	0.35	0.23	0.00	0.59	10
Refuse Workers and Other Elementary Workers	0.26	0.16	0.01	0.70	20

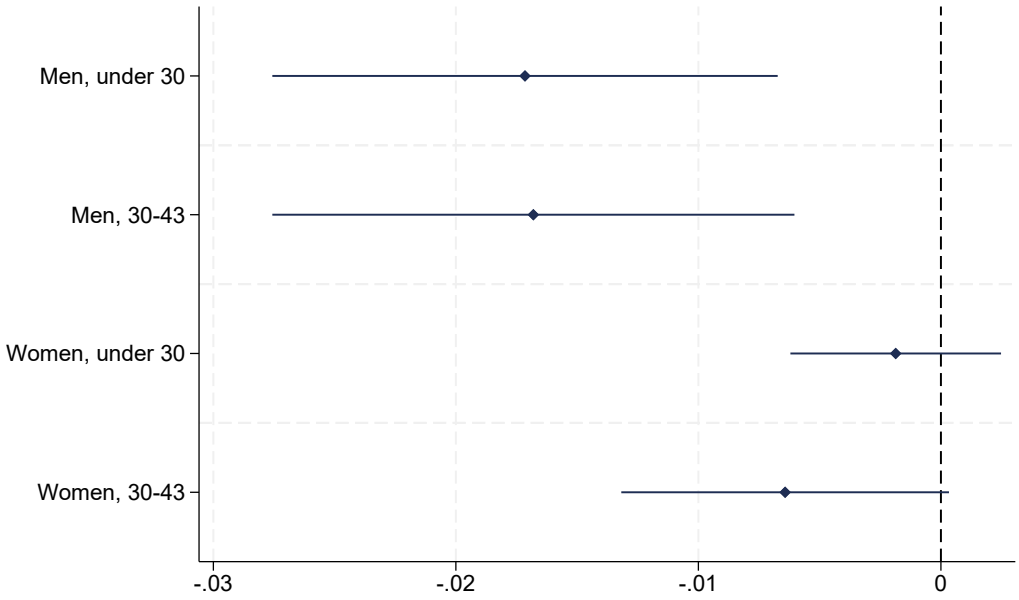
Notes: The table shows summary statistics of the share of women working in each two-digit ISCO-08 occupation. The variable is constructed based on data from the International Labour Organization (ILO) (2023).

Figure A.5
Heterogeneity by age (ESS data)



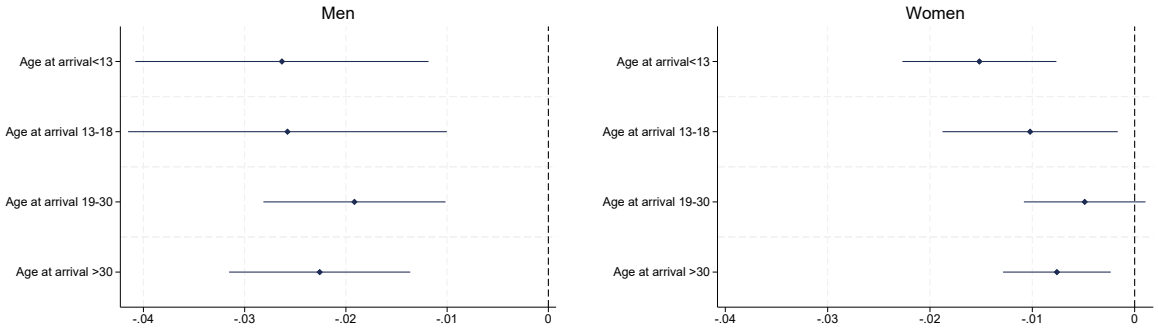
Notes: The figure shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin equivalent to the regressions in column 2 and 4 in Table 3. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 occupations. The regressions use data from the ESS. Standard errors are clustered at the country of origin level.

Figure A.6
Heterogeneity by age (admin data)



Notes: The figure shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin equivalent to the regressions in column 2 and 4 in Table 4. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 43 occupations. The regressions use data from the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

Figure A.7
Heterogeneity by parents' age of arrival in Sweden (admin data)



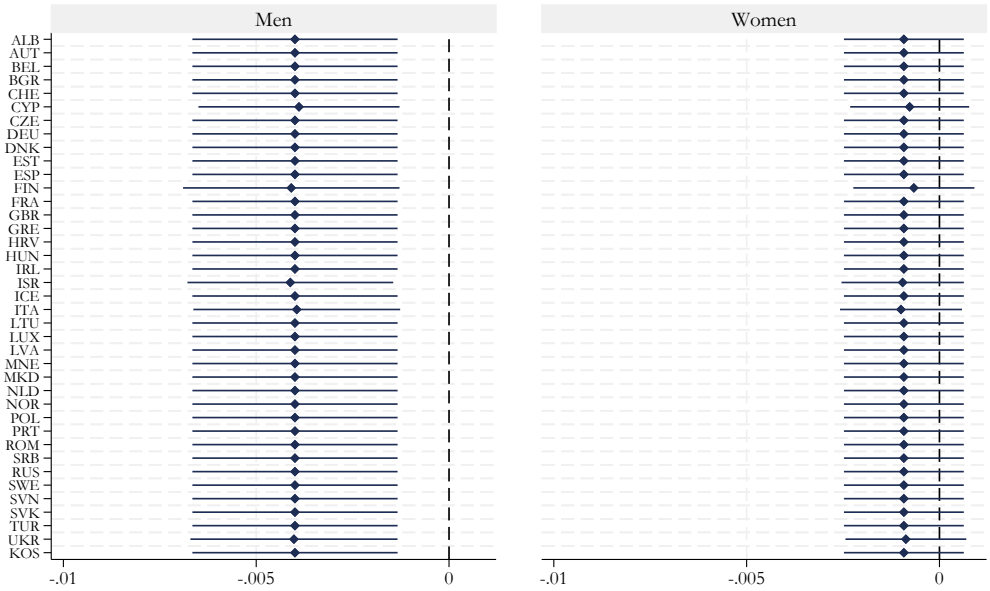
Notes: The figure shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin equivalent to the regressions in column 2 and 4 in Table 4 by the age at which second-generation migrant parents arrived in Sweden. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 43 occupations. The regressions use data from the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

Table A.6
Heterogeneity by family composition

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: origin based on father's country of birth (ESS data)				
% female in occupation	–0.0041***	–0.0041***	–0.0014	–0.0014
	(0.0013)	(0.0013)	(0.0011)	(0.0011)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.1%	–4.1%	–1.4%	–1.4%
No. of individuals	6,259	6,259	7,536	7,536
No. of observations	617,492	617,492	750,156	750,156
Panel B: origin based on father's country of birth (admin data)				
% female in occupation	–0.0238***	–0.0246***	–0.0084***	–0.0090***
	(0.0054)	(0.0056)	(0.0025)	(0.0027)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–7.9%	–8.2%	–2.9%	–3.0%
No. of individuals	67,145	67,145	68,933	68,933
No. of observations	2,172,039	2,172,039	2,225,995	2,225,995
Panel C: origin based on mothers's country of birth (ESS data)				
% female in occupation	–0.0045***	–0.0045***	–0.0012	–0.0012
	(0.0015)	(0.0015)	(0.0011)	(0.0011)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.5%	–4.5%	–1.2%	–1.2%
No. of individuals	6,193	6,193	6,969	6,969
No. of observations	622,117	622,117	702,622	702,622
Panel D: origin based on mothers's country of birth (admin data)				
% female in occupation	–0.0229***	–0.0238***	–0.0058**	–0.0064**
	(0.0051)	(0.0055)	(0.0026)	(0.0027)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–7.6%	–7.9%	–1.9%	–2.1%
No. of individuals	68,898	68,898	69,844	69,844
No. of observations	2,183,646	2,183,646	2,211,931	2,211,931
Panel E: parents with same origin country (ESS data)				
% female in occupation	–0.0062***	–0.0062***	–0.0005	–0.0005
	(0.0014)	(0.0014)	(0.0012)	(0.0012)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–6.2%	–6.2%	–0.5%	–0.5%
No. of individuals	2,340	2,340	2,592	2,592
No. of observations	216,868	216,868	244,517	244,517
Panel F: parents with same origin country (admin data)				
% female in occupation	–0.0255***	–0.0263***	–0.0069*	–0.0078*
	(0.0078)	(0.0085)	(0.0035)	(0.0040)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–8.5%	–8.8%	–2.3%	–2.6%
No. of individuals	30,605	30,605	31,009	31,009
No. of observations	1,000,267	1,000,267	1,011,755	1,011,755
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	no	yes	no	yes

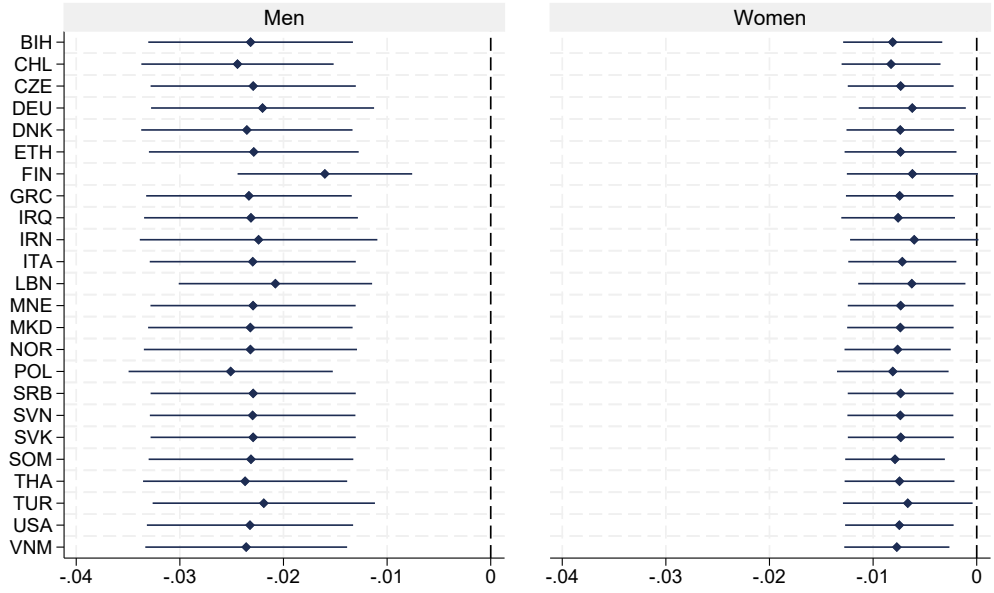
Notes: The figure shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 (43) occupations. The number of observations is less than the number of individuals times 130 (43) as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS and the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

Figure A.8
Robustness check: leave one origin out at a time (ESS data)



Notes: The figures shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 occupations. The regressions use data from the ESS. The regressions exclude second-generation immigrants from one origin country at a time: the country code on the x-axis indicates the dropped origin. Standard errors are clustered at the country of origin level.

Figure A.9
Robustness check: leave one origin out at a time (administrative data)



Notes: The figures shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 occupations. The regressions use data from the Swedish Interdisciplinary Panel. The regressions exclude second-generation immigrants from one origin country at a time: the country code on the x-axis indicates the dropped origin. Standard errors are clustered at the country of origin level.

Table A.7
Sensitivity analyses: variable definitions and sample composition

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: excluding country-occupation cells with less than 30 individuals (ESS data)				
% female in occupation	–0.0042***	–0.0042***	–0.0024*	–0.0024*
	(0.0015)	(0.0015)	(0.0013)	(0.0013)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.2%	–4.2%	–2.4%	–2.4%
No. of individuals	9,499	9,499	11,099	11,099
No. of observations	751,637	751,637	876,320	876,320
Panel B: excluding country-occupation cells with less than 50 individuals (ESS data)				
% female in occupation	–0.0076***	–0.0076***	–0.0031*	–0.0031*
	(0.0018)	(0.0018)	(0.0017)	(0.0017)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–7.6%	–7.6%	–3.1%	–3.1%
No. of individuals	9,499	9,499	11,099	11,099
No. of observations	607,052	607,052	704,327	704,327
Panel C: using two-digit occupations (ESS data)				
% female in occupation	–0.0063***	–0.0065***	0.0022	0.0022
	(0.0022)	(0.0021)	(0.0027)	(0.0027)
Mean Y	0.025	0.025	0.025	0.025
Implied effect of a 10pp increase in X	–2.5%	–2.6%	0.8%	0.8%
No. of individuals	10,018	10,018	11,437	11,437
No. of observations	399,306	399,306	455,492	455,492
Panel D: using two-digit occupations and data from ILO (ESS data)				
% female in occupation	–0.0056*	–0.0058*	0.0003	0.0004
	(0.0031)	(0.0032)	(0.0034)	(0.0034)
Mean Y	0.025	0.025	0.025	0.025
Implied effect of a 10pp increase in X	–2.2%	–2.2%	0.1%	0.2%
No. of individuals	9,562	9,562	10,872	10,872
No. of observations	337,670	337,670	384,288	384,288
Panel E: using two-digit occupations and origin countries from admin data in ESS (ESS data)				
% female in occupation	–0.0126***	–0.0134***	–0.0039	–0.0040
	(0.0040)	(0.0041)	(0.0035)	(0.0035)
Mean Y	0.025	0.025	0.025	0.025
Implied effect of a 10pp increase in X	–5%	–5.4%	–1.6%	–1.6%
No. of individuals	4,556	4,556	4,874	4,874
No. of observations	161,670	161,670	172,939	172,939
Panel F: using ESS treatment data in admin data (admin data)				
% female in occupation	–0.0055**	–0.0055**	0.0000	0.0000
	(0.0026)	(0.0025)	(0.0007)	(0.0007)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–5.5%	–5.5%	0.0%	0.0%
No. of individuals	80,431	80,431	81,507	81,507
No. of observations	8,076,070	8,076,070	8,195,118	8,195,118
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	no	yes	no	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 (43) occupations. The number of observations is less than the number of individuals times 130 (43) as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS and the Swedish Interdisciplinary Panel. In the admin data, residence x occupation fixed effects are replaced with occupation fixed effects. Standard errors are clustered at the country of origin level.

Table A.8
Sensitivity analyses: using thresholds of female shares as definition of main regressor

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: ESS				
Male-dominated		0.0004		–0.0005*
		(0.0004)		(0.0003)
Neutral	–0.0004		0.0005*	
	(0.0004)		(0.0003)	
Female-dominated	–0.0015**	–0.0012**	–0.0012**	–0.0017***
	(0.0007)	(0.0006)	(0.0005)	(0.0005)
Mean Y	0.01	0.01	0.01	0.01
No. of individuals	9,499	9,499	11,099	11,099
No. of observations	962,101	962,101	1,128,197	1,128,197
Panel B: admin data				
Male-dominated		0.0014		–0.0001
		(0.0014)		(0.0011)
Neutral	–0.0014		0.0001	
	(0.0014)		(0.0011)	
Female-dominated	–0.0088**	–0.0074***	–0.0008	–0.0009
	(0.0032)	(0.0021)	(0.0024)	(0.0020)
Mean Y	0.03	0.03	0.03	0.03
No. of individuals	99,486	99,486	101,487	101,487
No. of observations	3,161,406	3,161,406	3,222,034	3,222,034
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	yes	yes	yes	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on thresholds of the share of women working in this occupation in the country of origin. The thresholds of the regressor are defined as follows: $> 70\%$ female share is defined as female-dominated occupation, $30\% <$ female share $< 70\%$ is a neutral occupation, $< 30\%$ female share is defined as male-dominated occupation. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 (43) occupations. The number of observations is less than the number of individuals times 130 (43) as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS and the Swedish Interdisciplinary Panel. In the admin data, residence x occupation fixed effects are replaced with occupation fixed effects. Standard errors are clustered at the country of origin level.

Table A.9
Sensitivity analyses: inference

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: standard errors clustered at occupation-by-origin level (ESS data)				
% female in occupation	–0.0040***	–0.0040***	–0.0009	–0.0009
	(0.0011)	(0.0011)	(0.0009)	(0.0009)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.0%	–4.0%	–0.9%	–0.9%
No. of individuals	9,499	9,499	11,099	11,099
No. of observations	962,101	962,101	1,128,197	1,128,197
Panel B: standard errors clustered at individual level (ESS data)				
% female in occupation	–0.0040***	–0.0040***	–0.0009	–0.0009
	(0.0008)	(0.0008)	(0.0007)	(0.0007)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.0%	–4.0%	–0.9%	–0.9%
No. of individuals	9,499	9,499	11,099	11,099
No. of observations	962,101	962,101	1,128,197	1,128,197
Panel C: standard errors clustered at occupation-by-origin level (admin data)				
% female in occupation	–0.0222***	–0.0229***	–0.0069	–0.0073*
	(0.0049)	(0.0046)	(0.0046)	(0.0044)
Mean Y	0.03	0.03	0.03	0.03
Implied effect if a 10pp increase in X	–7.4%	–7.6%	–2.3%	–2.4%
No. of individuals	99,486	99,486	101,487	101,487
No. of observations	3,161,406	3,161,406	3,222,034	3,222,034
Panel D: standard errors clustered at individual level (admin data)				
% female in occupation	–0.0222***	–0.0229***	–0.0069***	–0.0073***
	(0.0006)	(0.0007)	(0.0006)	(0.0006)
Mean Y	0.03	0.03	0.03	0.03
Implied effect if a 10pp increase in X	–7.4%	–7.6%	–2.3%	–2.4%
No. of individuals	99,486	99,486	101,487	101,487
No. of observations	3,161,406	3,161,406	3,222,034	3,222,034
Panel E: estimation at the aggregate level (ESS data)				
% female in occupation	–0.0170***		–0.0005	
	(0.0051)		(0.0072)	
Mean Y	0.03		0.03	
Implied effect if a 10pp increase in X	–6.1%		–1.8%	
No. of observations	2,432		2,576	
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	no	yes	no	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 (43) occupations. The number of observations is less than the number of individuals times 130 (43) as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS and the Swedish Interdisciplinary Panel.

Table A.10
Robustness checks: addressing migrant selection

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: including municipality of residence fixed effects (admin data)				
% female in occupation	–0.0207***	–0.0214***	–0.0069**	–0.0073***
	(0.0041)	(0.0044)	(0.0025)	(0.0025)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–6.9%	–7.1%	–2.3%	–2.4%
No. of individuals	99,486	99,486	101,487	101,487
No. of observations	3,161,406	3,161,406	3,222,034	3,222,034
Panel B: including municipality of residence by occupation fixed effects (admin data)				
% female in occupation	–0.0184***	–0.0191***	–0.0045*	–0.0049*
	(0.0038)	(0.0041)	(0.0024)	(0.0025)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–6.1%	–6.4%	–1.5%	–1.6%
No. of individuals	99,486	99,486	101,487	101,487
No. of observations	3,161,406	3,161,406	3,222,034	3,222,034
Panel C: including continent of origin fixed effects (admin data)				
% female in occupation	–0.0245***	–0.0248***	–0.0082**	–0.0083**
	(0.0060)	(0.0060)	(0.0033)	(0.0033)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–8.2%	–6.3%	–2.7%	–2.8%
No. of individuals	99,486	99,486	101,487	101,487
No. of observations	3,161,406	3,161,406	3,222,034	3,222,034
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	no	yes	no	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 (43) occupations. The number of observations is less than the number of individuals times 130 (43) as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS and Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

Table A.11
Robustness checks: controlling for parents' occupation

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: controlling for father's occupation (admin data)				
% female in occupation	–0.0200***	–0.0204***	–0.0044*	–0.0048*
	(0.0050)	(0.0052)	(0.0025)	(0.0026)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–6.7%	–6.8%	–1.5%	–1.6%
No. of individuals	42,614	42,614	43,648	43,648
No. of observations	1,355,130	1,355,130	1,386,422	1,386,422
Panel B: controlling for mother's occupation (admin data)				
% female in occupation	–0.0206***	–0.0211***	–0.0054**	–0.0059**
	(0.0044)	(0.0047)	(0.0025)	(0.0025)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–6.9%	–7%	–1.8%	–2%
No. of individuals	56,258	56,258	58,401	58,401
No. of observations	1,787,035	1,787,035	1,852,246	1,852,246
Panel C: controlling for mother's and father's occupation (admin data)				
% female in occupation	–0.0196***	–0.0200***	–0.0046*	–0.0050*
	(0.0048)	(0.0051)	(0.0027)	(0.0027)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–6.5%	–6.7%	–1.5%	–1.7%
No. of individuals	31,327	31,327	32,415	32,415
No. of observations	995,325	995,325	1,028,171	1,028,171
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	no	yes	no	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 43 occupations. The number of observations is less than the number of individuals times 43 as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

Table A.12
Robustness checks: controlling for origin country characteristics (ESS data)

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: controlling for GDP per capita in origin countries (ESS data)				
% female in occupation	–0.0045***	–0.0045***	–0.0010	–0.0010
	(0.0014)	(0.0014)	(0.0008)	(0.0008)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.5%	–4.5%	–1%	–1%
No. of individuals	9,437	9,437	11,016	11,016
No. of observations	960,375	960,375	1,125,946	1,125,946
Panel B: controlling for origin country gender norms (ESS data)				
% female in occupation	–0.0042***	–0.0042***	–0.0006	–0.0006
	(0.0014)	(0.0014)	(0.0008)	(0.0008)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.2%	–4.2%	–0.6%	–0.6%
No. of individuals	8,782	8,782	10,262	10,262
No. of observations	885,415	885,415	1,039,360	1,039,360
Panel C: controlling for origin country wages by occupation (ESS data)				
% female in occupation	–0.0080***	–0.0078***	–0.0028**	–0.0028**
	(0.0029)	(0.0026)	(0.0014)	(0.0013)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–8%	–7.8%	–2.8%	–2.8%
No. of individuals	9,207	9,207	10,743	10,743
No. of observations	421,553	421,553	492,433	492,433
Panel D: controlling for origin country female labor force participation (ESS data)				
% female in occupation	–0.0042***	–0.0042***	–0.0009	–0.0009
	(0.0011)	(0.0011)	(0.0009)	(0.0009)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 10pp increase in X	–4.2%	–4.2%	–0.9%	–0.9%
No. of individuals	9,029	9,029	10,498	10,498
No. of observations	917,151	917,151	1,071,108	1,071,108
Panel E: using standardized treatment variable (ESS data)				
% female in occupation (std)	–0.0011***	–0.0011***	–0.0002	–0.0002
	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Mean Y	0.01	0.01	0.01	0.01
Implied effect of a 1SD increase in X	–11%	–11%	–2%	–2%
No. of individuals	9,499	9,499	11,099	11,099
No. of observations	962,101	962,101	1,128,197	1,128,197
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	no	yes	no	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 (43) occupations. The number of observations is less than the number of individuals times 130 (43) as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS and the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

Table A.13
Robustness checks: controlling for origin country characteristics (admin data)

	Men		Women	
	(1)	(2)	(3)	(4)
Panel A: controlling for GDP per capita in origin countries (admin data)				
% female in occupation	–0.0224***	–0.0228***	–0.0081***	–0.0083***
	(0.0056)	(0.0056)	(0.0028)	(0.0028)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–7.5%	–7.6%	–2.7%	–2.8%
No. of individuals	98,821	98,821	100,712	100,712
No. of observations	3,150,057	3,150,057	3,208,826	3,208,826
Panel B: controlling for origin country gender norms (admin data)				
% female in occupation	–0.0265***	–0.0265***	–0.0103**	–0.0103**
	(0.0087)	(0.0087)	(0.0043)	(0.0043)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–8.8%	–8.8%	–3.4%	–3.4%
No. of individuals	91,626	91,626	93,501	93,501
No. of observations	2,919,801	2,919,801	2,978,062	2,978,062
Panel C: controlling for origin country wages by occupation (admin data)				
% female in occupation	–0.0262***	–0.0269***	–0.0100	–0.0123*
	(0.0064)	(0.0069)	(0.0061)	(0.0064)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–8.7%	–9%	–3.3%	–4.1%
No. of individuals	97,479	97,479	99,399	99,399
No. of observations	2,068,411	2,068,411	2,103,453	2,103,453
Panel D: controlling for origin country female labor force participation (ESS data)				
% female in occupation	–0.0272***	–0.0272***	–0.0101**	–0.0102**
	(0.0085)	(0.0085)	(0.0044)	(0.0044)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 10pp increase in X	–9.1%	–9.1%	–3.4%	–3.4%
No. of individuals	96,337	96,337	98,391	98,391
No. of observations	3,063,787	3,063,787	3,126,058	3,126,058
Panel E: using standardized treatment variable (ESS data)				
% female in occupation (std)	–0.0052***	–0.0052***	–0.0023**	–0.0023**
	(0.0012)	(0.0012)	(0.0010)	(0.0010)
Mean Y	0.03	0.03	0.03	0.03
Implied effect of a 1SD increase in X	–17.3%	–17.3%	–7.7%	–7.7%
No. of individuals	99,486	99,486	101,487	101,487
No. of observations	3,161,406	3,161,406	3,222,034	3,222,034
Fixed effects:				
Residence x occupation	yes	yes	yes	yes
Individual controls	no	yes	no	yes

Notes: The table shows estimates of regressions of the probability of working in an occupation on the share of women working in this occupation in the country of origin. The dependent variable is a dummy variable being 1 for the occupation in the individual is in fact working in, and 0 for all other possible 130 (43) occupations. The number of observations is less than the number of individuals times 130 (43) as the share of women working in an occupation is not available for each and every country-occupation cells. The regressions use data from the ESS and the Swedish Interdisciplinary Panel. Standard errors are clustered at the country of origin level.

Table A.14
Effect of origin country gender norms on employment

	Men (1)	**Women** (2)	**Men** (3)	**Women** (4)
Panel A: ESS data				
FLFP	0.0004	0.0009		
	(0.0007)	(0.0015)		
Gender norms			0.0134	–0.0385
			(0.0231)	(0.0265)
Mean Y	0.64	0.55	0.64	0.55
No. of individuals	8,592	10,042	8,379	9,839
Panel B: admin data				
FLFP	0.0006*	0.0008**		
	(0.0003)	(0.0004)		
Gender norms			–0.0288**	–0.0393**
			(0.0136)	(0.0150)
Mean Y	0.49	0.51	0.49	0.51
No. of individuals	287,541	272,446	267,653	253,840
Fixed effects:				
Residence	yes	yes	yes	yes
Individual controls	yes	yes	yes	yes

Notes: The table shows estimates of regressions of the probability of being employed on the female labor force participation and gender norms in the origin country, respectively, for samples of second-generation migrants. The outcome variable in Panel A is a dummy variable that is 1 if the individual has been doing paid work in last 7 days. The outcome variable in Panel B is a dummy variable that is 1 if the individual has a positive income from employment. Gender norms are the origin country average answer to the World Values Survey item 'When jobs are scarce, men should have more right to them than women.', where higher values indicate higher agreement with the statement. Standard errors are clustered at the country of origin level.

Table A.15
Demographics of survey respondents

	Italy		
	Mean	SD	N
Female	0.49	0.50	1,000
Birthyear	1973.56	15.76	1,000
University education	0.39	0.49	949
Employed	0.46	0.50	1,000
Self-employed	0.14	0.35	1,000
Retired	0.21	0.41	1,000
Student	0.05	0.21	1,000
Native	0.97	0.17	1,000
Mother native	0.96	0.19	1,000
Father native	0.97	0.16	1,000
	Poland		
Female	0.52	0.50	1,028
Birthyear	1977.23	15.61	1,030
University education	0.57	0.49	982
Employed	0.58	0.49	1,030
Self-employed	0.07	0.26	1,030
Retired	0.21	0.41	1,030
Student	0.04	0.19	1,030
Native	0.98	0.13	1,030
Mother native	0.97	0.16	1,030
Father native	0.97	0.17	1,030

Notes: The table shows summary statistics of socio-demographics of the participants in the vignette survey experiments in Italy and Poland. The total number of respondents was 1,000 is Italy and 1,030 in Poland. The number of observations is lower for the variable Female in Poland because two respondents did not want to indicate their gender. The number of observations for the variable University education is lower in both countries as this question was mistakenly not shown in the survey on the first day of data collection.

Table A.16
Vignette results: Poland

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	-0.139^{***}	-0.127^{***}
	(0.025)	(0.025)
No. of individuals	1,030	1,030
No. of observations	2,060	2,060
R-squared	0.844	0.833
Panel B: male-dominated occupation		
Women	0.042^{*}	-0.001
	(0.024)	(0.026)
No. of individuals	1,030	1,030
No. of observations	2,060	2,060
R-squared	0.848	0.819
Panel C: neutral occupation		
Men	-0.050^{**}	-0.000
	(0.025)	(0.027)
No. of individuals	1,030	1,030
No. of observations	2,060	2,060
R-squared	0.832	0.813

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2). The dependent variables are two standardized indices constructed from responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.17
Vignette results: Italy

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	-0.062^{**}	-0.035
	(0.025)	(0.026)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.832	0.832
Panel B: male-dominated occupation		
Women	0.126^{***}	0.079^{***}
	(0.027)	(0.027)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.816	0.808
Panel C: neutral occupation		
Men	-0.072^{***}	-0.047^{*}
	(0.027)	(0.027)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.823	0.816

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2). The dependent variables are two standardized indices constructed from responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.18
Vignette results: country interactions

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	-0.062^{**}	-0.035
	(0.025)	(0.026)
Men X Poland	-0.078^{**}	-0.092^{**}
	(0.035)	(0.036)
No. of individuals	2,030	2,030
No. of observations	4,060	4,060
R-squared	0.838	0.833
Panel B: male-dominated occupation		
Women	0.126^{***}	0.079^{***}
	(0.027)	(0.027)
Women X Poland	-0.084^{**}	-0.080^{**}
	(0.036)	(0.038)
No. of individuals	2,030	2,030
No. of observations	4,060	4,060
R-squared	0.832	0.814
Panel C: neutral occupation		
Men	-0.072^{***}	-0.047^{*}
	(0.027)	(0.027)
Men X Poland	0.022	0.046
	(0.037)	(0.038)
No. of individuals	2,030	2,030
No. of observations	4,060	4,060
R-squared	0.827	0.815

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 3). The dependent variables are two standardized indices constructed from responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.19
Vignette results individual items: Poland

	Competent	Ambitious	Leadership	Employers	Culture	Enjoy	Prestige	Parents
Panel A: female-dominated occupation								
Men	−0.062***	−0.113***	−0.077***	−0.093***	−0.083***	−0.045**	−0.084***	−0.084***
	(0.020)	(0.023)	(0.025)	(0.022)	(0.022)	(0.021)	(0.024)	(0.021)
No. of individuals	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030
No. of observations	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060
R-squared	0.786	0.773	0.751	0.809	0.731	0.767	0.769	0.794
Panel B: male-dominated occupation								
Women	0.017	0.050**	0.057**	−0.043*	−0.043*	0.029	0.020	0.017
	(0.019)	(0.022)	(0.025)	(0.024)	(0.022)	(0.020)	(0.023)	(0.021)
No. of individuals	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030
No. of observations	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060
R-squared	0.787	0.784	0.730	0.745	0.729	0.757	0.744	0.790
Panel C: neutral occupation								
Men	−0.031	−0.047**	−0.006	0.049*	−0.027	−0.011	−0.028	−0.017
	(0.021)	(0.023)	(0.024)	(0.025)	(0.021)	(0.021)	(0.023)	(0.021)
No. of individuals	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030
No. of observations	2,060	2,060	2,060	2,060	2,060	2,060	2,060	2,060
R-squared	0.739	0.776	0.758	0.732	0.749	0.763	0.765	0.789

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2). The dependent variables are responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.20
Vignette results individual items: Italy

	Competent	Ambitious	Leadership	Employers	Culture	Enjoy	Prestige	Parents
Panel A: female-dominated occupation								
Men	−0.055***	−0.020	−0.033	−0.022	−0.015	−0.004	−0.014	−0.032*
	(0.019)	(0.023)	(0.022)	(0.021)	(0.020)	(0.020)	(0.022)	(0.019)
No. of individuals	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
No. of observations	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
R-squared	0.751	0.749	0.754	0.784	0.717	0.737	0.766	0.777
Panel B: male-dominated occupation								
Women	0.070***	0.071***	0.082***	0.049**	0.014	0.023	0.082***	0.038**
	(0.019)	(0.024)	(0.023)	(0.023)	(0.019)	(0.020)	(0.022)	(0.019)
No. of individuals	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
No. of observations	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
R-squared	0.733	0.719	0.708	0.724	0.725	0.720	0.751	0.786
Panel C: neutral occupation								
Men	−0.037*	−0.026	−0.037	−0.018	−0.017	−0.024	−0.044*	−0.041**
	(0.020)	(0.023)	(0.024)	(0.022)	(0.020)	(0.020)	(0.022)	(0.021)
No. of individuals	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
No. of observations	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
R-squared	0.713	0.780	0.719	0.756	0.723	0.734	0.778	0.767

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2). The dependent variables are responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.21
Vignette results second-order beliefs: Poland

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	-0.175^{***}	-0.146^{***}
	(0.024)	(0.025)
No. of individuals	1,030	1,030
No. of observations	2,060	2,060
R-squared	0.856	0.836
Panel B: male-dominated occupation		
Women	0.014	-0.099^{***}
	(0.024)	(0.028)
No. of individuals	1,030	1,030
No. of observations	2,060	2,060
R-squared	0.840	0.803
Panel C: neutral occupation		
Men	-0.051^{**}	0.020
	(0.024)	(0.024)
No. of individuals	1,030	1,030
No. of observations	2,060	2,060
R-squared	0.855	0.842

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2). The dependent variables are two indices constructed from responses to single items in each vignette where respondents are asked about their second-order beliefs, i.e. how they think other people in their country have responded. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.22
Vignette results second-order beliefs: Italy

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	−0.002	0.000
	(0.026)	(0.026)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.811	0.813
Panel B: male-dominated occupation		
Women	0.016	−0.061**
	(0.027)	(0.028)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.801	0.789
Panel C: neutral occupation		
Men	0.019	0.062**
	(0.026)	(0.028)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.840	0.819

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2). The dependent variables are two indices constructed from responses to single items in each vignette where respondents are asked about their second-order beliefs, i.e. how they think other people in their country have responded. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.23
Vignette results heterogeneity by respondents gender: Poland

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	-0.126^{***}	-0.123^{***}
	(0.039)	(0.037)
Men X female respondent	-0.026	-0.005
	(0.050)	(0.051)
No. of individuals	1,028	1,028
No. of observations	2,056	2,056
R-squared	0.844	0.833
Panel B: male-dominated occupation		
Women	0.006	-0.029
	(0.037)	(0.039)
Women X female respondent	0.068	0.057
	(0.048)	(0.052)
No. of individuals	1,028	1,028
No. of observations	2,056	2,056
R-squared	0.848	0.819
Panel C: neutral occupation		
Men	-0.021	0.019
	(0.039)	(0.042)
Men X female respondent	-0.057	-0.040
	(0.050)	(0.054)
No. of individuals	1,028	1,028
No. of observations	2,056	2,056
R-squared	0.832	0.814

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2) separately by the gender of the survey participant. The dependent variables are two indices constructed from responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.24
Vignette results heterogeneity by respondents gender: Italy

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	-0.073^{**}	-0.055
	(0.036)	(0.035)
Men X female respondent	0.023	0.040
	(0.050)	(0.052)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.832	0.832
Panel B: male-dominated occupation		
Women	0.161^{***}	0.135^{***}
	(0.040)	(0.041)
Women X female respondent	-0.071	-0.113^{**}
	(0.053)	(0.054)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.816	0.809
Panel C: neutral occupation		
Men	-0.080^{**}	-0.081^{**}
	(0.039)	(0.038)
Men X female respondent	0.015	0.070
	(0.053)	(0.054)
No. of individuals	1,000	1,000
No. of observations	2,000	2,000
R-squared	0.823	0.816

Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2) separately by the gender of the survey participant. The dependent variables are two indices constructed from responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.25
Vignette results heterogeneity by respondents education: Poland

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	-0.076^{*}	-0.086^{**}
	(0.043)	(0.043)
Men X respondent university educated	-0.106^{**}	-0.062
	(0.053)	(0.054)
No. of individuals	982	982
No. of observations	1,964	1,964
R-squared	0.844	0.833
Panel B: male-dominated occupation		
Women	-0.024	-0.054
	(0.038)	(0.040)
Women X respondent university educated	0.113^{**}	0.079
	(0.050)	(0.053)
No. of individuals	982	982
No. of observations	1,964	1,964
R-squared	0.848	0.822
Panel C: neutral occupation		
Men	0.011	0.061
	(0.041)	(0.045)
Men X respondent university educated	-0.083	-0.095^{*}
	(0.052)	(0.057)
No. of individuals	982	982
No. of observations	1,964	1,964
R-squared	0.836	0.815

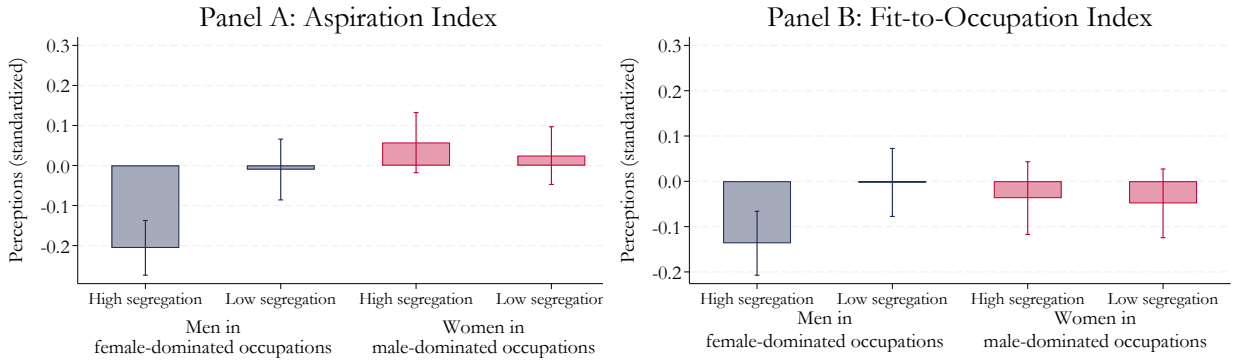
Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2) separately by the education level of the survey participant. The dependent variables are two indices constructed from responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Table A.26
Vignette results heterogeneity by respondents education: Italy

	Aspiration index	Fit to occupation index
Panel A: female-dominated occupation		
Men	−0.063*	0.001
	(0.035)	(0.036)
Men X respondent university educated	0.007	−0.078
	(0.052)	(0.051)
No. of individuals	949	949
No. of observations	1,898	1,898
R-squared	0.831	0.837
Panel B: male-dominated occupation		
Women	0.110***	0.043
	(0.037)	(0.037)
Women X respondent university educated	0.016	0.080
	(0.054)	(0.055)
No. of individuals	949	949
No. of observations	1,898	1,898
R-squared	0.813	0.812
Panel C: neutral occupation		
Men	−0.060*	−0.071*
	(0.036)	(0.036)
Men X respondent university educated	0.003	0.087
	(0.055)	(0.056)
No. of individuals	949	949
No. of observations	1,898	1,898
R-squared	0.823	0.818

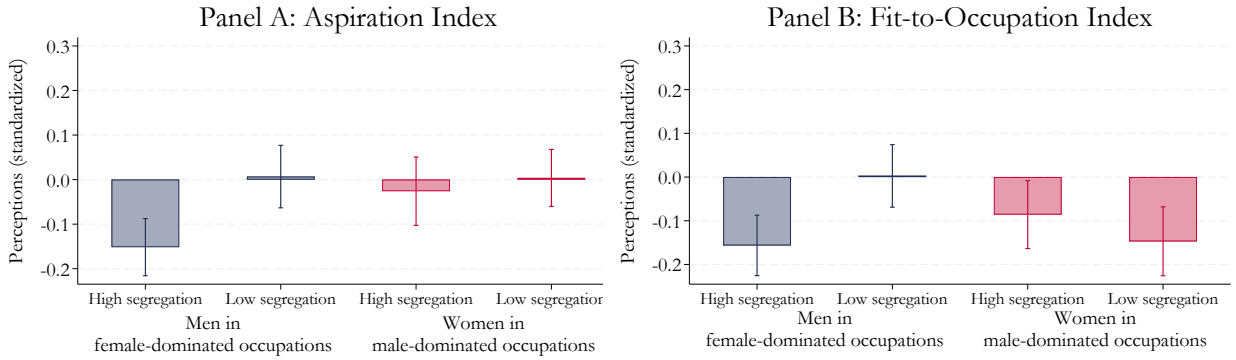
Notes: The table shows estimates of regressions of the perceptions of individuals portrayed in a male vs. female-dominated occupation on the gender of the portrayed individual (Equation 2) separately by the education level of the survey participant. The dependent variables are two indices constructed from responses to single items in each vignette. The regressions are at the vignette level and include respondent fixed effects, which is why the number of observations is double the number of respondents. Robust standard errors in parantheses.

Figure A.10
Second-order perceptions of individuals in gender-atypical occupations: male respondents



Notes: The figures show results from the vignette survey experiment using the specification from Equation 2. The bars illustrate the standardized second-order perceptions male respondents have of men working in a female-dominated occupation relative to women in the same occupation, and of women working in a male-dominated occupation relative to men in this same occupation. Panel A shows the results for the aspiration index, Panel B for the fit-to-occupation index. High segregation in the female (male)-dominated occupation refers to Poland (Italy), low segregation in the female (male)-dominated occupation refers to Italy (Poland).

Figure A.11
Second-order perceptions of individuals in gender-atypical occupations: female respondents



Notes: The figures show results from the vignette survey experiment using the specification from Equation 2. The bars illustrate the standardized second-order perceptions female respondents have of men working in a female-dominated occupation relative to women in the same occupation, and of women working in a male-dominated occupation relative to men in this same occupation. Panel A shows the results for the aspiration index, Panel B for the fit-to-occupation index. High segregation in the female (male)-dominated occupation refers to Poland (Italy), low segregation in the female (male)-dominated occupation refers to Italy (Poland).

Appendix B Data appendix

B.1 Swedish administrative records

I combine several administrative registers to construct the dataset used for the analysis of the Swedish administrative records. The data cover all individuals registered in Sweden who were born in 1973 or later. All registries can be linked via a unique individual identifier. First, I use the Multigeneration Register, which allows individuals to be linked to their parents. I then use the TCC Register, which provides information on individuals' birth years and countries of birth. Additionally, I use the RTB Register to identify individuals' municipalities of residence in each year.

Occupational information is drawn from the Occupation Register, which records the four-digit SSYK occupational codes for each individual annually. I translate these codes into ISCO codes using the official crosswalk provided by Statistics Sweden. For supplementary analyses, I use the Education Register, which records individuals' highest level of completed education. I classify individuals as having tertiary education if they have attained a level of at least 5 in the SUN2000 Niva-old classification, corresponding to education beyond upper secondary school. I also use the Migration Register to determine individuals' year of arrival in Sweden.

Finally, for the employment definition used in the robustness analysis in Table A.14, I rely on the Income Register. I classify an individual as employed if they have any positive income from employment in a given year.

B.2 ILO data on female shares in occupations

In addition to constructing occupational gender shares using the ESS, I also rely on an external data source that provides information on female shares across occupations and countries: the Labor Force Statistics database hosted by ILOSTAT, the statistics department of the International Labour Organization (ILO). In particular, I draw on the data base *Employment by sex and occupation - ISCO level 2 (thousands) – Annual* (International Labour Organization (ILO), 2023). This database reports annual counts of employed individuals in the working-age population by occupation and country. While the data are available from 1982 onwards, earlier years contain a substantial number of missing observations. I therefore use, for each country, the most recent year with available information in the database. Occupations are classified according to the international ISCO coding system, ensuring cross-country comparability. I compute the female share in each occupation as the ratio of employed women to the total number of employed individuals in that occupation.

B.3 Additional variables

I compile additional variables from various data sources to conduct heterogeneity analyses and robustness checks. First, to assess heterogeneity by local gender equality within Swedish municipalities, I obtain data on female labor force participation from Statistics Sweden. Specifically, I use data on the gainfully employed population aged 16 and older by municipality in 2016 (Statistics Sweden, 2024). I calculate female labor force participation as the share of women

aged 16 or older who are gainfully employed in each municipality and classify a municipality as more gender-equal if this share is above the national median.

In addition, I gather international data from several external sources. I obtain GDP per capita figures (in 2015 USD) from the World Bank database (World Bank Group, 2024). To measure gender norms across countries, I use data from the World Values Survey (WVS) (Inglehart et al., 2014), focusing on responses to the question: 'When jobs are scarce, men should have more right to them than women.' I pool all available WVS waves, recode responses so that higher values reflect stronger agreement with the statement, and construct a country-level measure of gender norms by averaging responses. Female labor force participation rates across countries are sourced from the International Labour Organization (ILO) database (International Labour Organization (ILO), 2024), specifically the share of the female population aged 15 and above participating in the labor force in 2024. Finally, I obtain occupational wage data from Freeman and Oostendorp (2005), using the variable $hw3wl_presen t$, which reports present-day hourly wage levels by three-digit occupation codes across countries.

Appendix C Details on vignette survey experiment

C.1 Survey questionnaire

Welcome to this study!
This study concerns social perceptions and is conducted by researchers at Lund University (Sweden). The study is confidential, anonymous, and will be used solely for research purposes. If you have any questions about the study, you can contact the research team by email at natalie.irmert@nek.lu.se. Completing the questionnaire takes about 10âĂŞ15 minutes.
By participating in this questionnaire, you consent to the use of your anonymized information and responses for research purposes.

○ I consent to participate in this study.

page break

You will now read six brief descriptions of different fictional people. After each description, we will ask you to share your **personal impressions** of the person described.
There are no right or wrong answers âĂŞ please respond based on your **own** thoughts and feelings.

page break

[NAME] is [AGE] years old, lives in [RESIDENCE], and works as a nurse in a [SIZE] hospital. He has a university degree and [EXPERIENCE] years of work experience. In his free time, he enjoys [ACTIVITY1] and [ACTIVITY2]. He also regularly meets his friends for [ACTIVITY3] and enjoys [ACTIVITY4]. To what extent do you think [NAME]...

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
is competent in his job	○	○	○	○
is ambitious	○	○	○	○
has leadership potential	○	○	○	○
is demanded by employers	○	○	○	○
makes his parents proud	○	○	○	○
gets along well with most people	○	○	○	○
enjoys his work	○	○	○	○
cares about environmental issues	○	○	○	○
fits well in the workplace culture	○	○	○	○
is doing a job that is prestigious for someone like him	○	○	○	○

page break

[NAME] is [AGE] years old, lives in [RESIDENCE], and works as a civil engineer in a [SIZE] construction company. He has a university degree and [EXPERIENCE] years of work experience. In his free time, he enjoys [ACTIVITY1] and [ACTIVITY2]. He also regularly meets his friends for [ACTIVITY3] and enjoys [ACTIVITY4]. To what extent do you think [NAME]...

same matrix as above

page break

[NAME] is [AGE] years old, lives in [RESIDENCE], and works as a nurse in a [SIZE] hospital. She has a university degree and [EXPERIENCE] years of work experience. In her free time, she enjoys [ACTIVITY1] and [ACTIVITY2]. She also regularly meets her friends for [ACTIVITY3] and enjoys [ACTIVITY4]. To what extent do you think [NAME]...

same matrix as above

page break

[NAME] is [AGE] years old, lives in [RESIDENCE], and works as a civil engineer in a [SIZE] construction company. She has a university degree and [EXPERIENCE] years of work experience. In her free time, she enjoys [ACTIVITY1] and [ACTIVITY2]. She also regularly meets her friends for [ACTIVITY3] and enjoys [ACTIVITY4]. To what extent do you think [NAME]...

same matrix as above

page break

[NAME] is [AGE] years old, lives in [RESIDENCE], and works as a sales assistant in a [SIZE] company. She has a university degree and [EXPERIENCE] years of work experience. In her free time, she enjoys [ACTIVITY1] and [ACTIVITY2]. She also regularly meets her friends for [ACTIVITY3] and enjoys [ACTIVITY4]. To what extent do you think [NAME]...

same matrix as above

page break

[NAME] is [AGE] years old, lives in [RESIDENCE], and works as a sales assistant in a [SIZE] company. He has a university degree and [EXPERIENCE] years of work experience. In his free time, he enjoys [ACTIVITY1] and [ACTIVITY2]. He also regularly meets his friends for [ACTIVITY3] and enjoys [ACTIVITY4]. To what extent do you think [NAME2]...

same matrix as above

page break

You will now see the same descriptions again. This time, instead of sharing your personal opinion, **we ask you to guess how most other people who participated in this study responded in the first part**. This means we are not asking for your personal opinion, but only for your best guess about what the most common response was among the other participants.
You may think of the other participants as representative of the Italian *[Polish]* population.

same six vignettes and answer matrices as above

page break

Please indicate your gender.

◦ Male

- ○ Female
- ○ Other

In which year were you born?

Drop-down list with years 1925-2010

Do you have a university degree?

- ○ yes
- ○ no

What best describes your current situation?

- ○ employed
- ○ self-employed
- ○ looking for a job
- ○ studying
- ○ retired
- ○ none of the above

page break

Branching: if answered 'employed' or 'self-employed' above:

In which occupation are you working?

single line open text answer

Branching: if answered 'retired' or 'looking for a job' or 'none of the above' above:

What is the last occupation you were working in?

single line open text answer

Branching: if answered 'studying' above:

What is the occupation you will most likely work in after your studies?

single line open text answer

page break

Were you born in Italy *[Poland]*?

- ○ yes
- ○ no

page break

Branching: if answered 'no' above:

In which country were you born?

single line open text answer

page break

Was your mother born in Italy *[Poland]*?

- ○ yes
- ○ no

page break

Branching: if answered 'no' above:

In which country was your mother born?

single line open text answer

page break

Was your father born in Italy *[Poland]*?

- ○ yes
- ○ no

page break

Branching: if answered 'no' above:

In which country was your father born?

single line open text answer

C.2 List of characteristics

[NAME][34]	*Italian version:* Alessandro, Andrea, Giulia, Francesca, Chiara, Marco, Giuseppe, Giovanni, Maria, Anna, Laura, Antonio *Polish version:* Jakub, Kamil, Tomasz, Anna, Monika, Ewa, Piotr, MichaÅĆ, Krzysztof, Katarzyna, Agnieszka, Magdalena
[AGE]	31, 35, 38, 42, 48
[RESIDENCE]	*Italian version:* Roma, Abruzzo, Milano, Umbria, Napoli *Polish version:* Warszawie, Bieszczadach, Krakowie, Podlasiu, ÅĄodzi
[EXPERIENCE]	5, 10
[SIZE]	small, medium-sized, large
[ACTIVITY1]	to play tennis, to play golf, to travel, to watch sports events, to run
[ACTIVITY2]	to go hiking, to listen to podcasts on a variety of topics, to engage in volunteering, to play the guitar, to ride a bike
[ACTIVITY3]	to cook together, to go to pub quizzes, to play board games, to watch TV series, to discuss current social issues
[ACTIVITY4]	to read novels, to keep up to date with events and news from around the world, to go to festivals, to keep up to date with the latest technological advancements, to discover new music