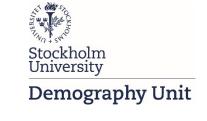
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# Language Distance, Language Abilities, and Labour Market Outcome of Migrants by Gender

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## Language Distance, Language Abilities, and Labour Market Outcome of Migrants by Gender

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### Abstract

This paper examines the distinct effects of linguistics distance and language literacy on the labor market integration of migrant men and women. Using data from the Programme for International Assessment of Adult Competencies (PIAAC) 2018 in 19 countries of destination and more than 110 languages of origin, we assess migrant labor force participation, employment, working hours, and occupational prestige. The study finds that linguistics distance between the first language studied and the destination language has a significant negative association with labor force participation and employment of migrant women. This holds true even after controlling for their proficiency in their destination language and their educational level. In contrast, linguistics distance is only negatively associated with migrant men's working hours. This suggests that linguistic distance serves as a proxy for cultural distance and hence shapes the labor market integration of migrant women due to cultural factors rather than human capital. We suggest that the gender aspect of the effect of language proximity is essential in understanding the intersectional position of migrant women in the labor force.

**Keywords:** language distance, language ability, first generation migrants, gender, integration, intersectionality, labour market

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#### 1. Introduction

This paper aims to understand the importance of language distance for the labor market integration of immigrants. Language distance between origin and destination was found to be associated with overall migration flows, migrants' language acquisition at the destination, social integration, and labor market outcome. Along the same line, language abilities and literacy are among the most critical aspects of migrants' integration at their destination, and several migration studies show that language ability and literacy substantially affect migrants' labor market performance. While some studies indicate that the effect of linguistics distance on labor market outcome is a result of lower host country language acquisition of migrants, others focus on linguistics distance as a proxy for cultural distance. Thus, language is usually an overlooked form of cultural capital. Moreover, studies examining heritage language use in the context of the gender-immigration nexus argue that it is associated with gender norms that shape migrant women's integration into the labor market. This might indicate that literacy captures a fraction of migrants' social assimilation, shaping migrants' economic integration. While linguistics distance captures additional aspects, which might be associated with an accent, orientation, and norms, potentially affecting labor market outcomes, such as labor force participation, employment, working hours, and occupational prestige. In this paper, we ask whether linguistics distance has a distinct effect from the host country's language proficiency on migrants' labor market assimilation due to its role as a proxy for cultural distance and cultural capital. We pay specific attention to gender differences in the relation between linguistics distance and labor market outcome due to the unique position of migrant women.

#### 2. Theoretical Background

#### 2.1. Language Distance and Labor Market Outcome: Human or Cultural Capital?

Researchers have identified an association between the language distance between a migrant's origin and destination and various aspects of the migration experience. This includes the overall volume of migration flows (Isphording & Otten, 2013; Ovchinnikova et al., 2022; Sprenger, 2021), the ability of migrants to acquire the language of their destination country (Beenstock et al., 2001; Isphording & Otten, 2013, 2014; van Tubergen & Kalmijn, 2005), their degree of social integration (Ghio et al., 2023), and their outcomes in the labor market (Ghio et al., 2023; Wong, 2023).

Regarding the economic integration of migrants, language distance can shape integration in three primary ways. First, it may indirectly impact migrant economic integration through its influence on language acquisition. Many studies have found that greater linguistic distance is associated with larger disparities in language proficiency and often the slower acquisition of the destination language (see for example: Isphording & Otten, 2014; van Tubergen & Kalmijn, 2005). These findings have been consistently observed in studies using a single-country approach (Beenstock et al., 2001; Chiswick & Miller, 2005; Isphording & Otten, 2014), a multiple origin-multiple destination design in a double comparative approach (van Tubergen & Kalmijn, 2005), and with alternative measures of linguistic distance. This supports the notion that learning languages that are linguistically distant from one's mother tongue is more challenging. The association between language proficiency and immigrants' labor market outcomes has been widely studied in many countries, mostly indicating a direct causal effect on earnings, with the size of the effect ranging from 5 to 30 percent (for an overview of empirical findings, see Chiswick & Miller, 2015).

Second, language distance can directly impact the economic integration of migrants in their destination country. Individuals with greater language distance may find it difficult to obtain employment and have better occupations and higher wages, as the transferability of human capital is more accessible when the linguistic gap is smaller (Helgertz, 2013; Strøm et al., 2018; Wong, 2023).<sup>1</sup> Additionally, migrants may choose occupations where their language barrier is less influential for their success (Ghio et al., 2023). Interestingly, the effect of language distance on migrant integration is evident even in the long term and for childhood immigrants who are expected to have time to learn the native language. For example, it was found that linguistic distance interacts with age at arrival to shape the occupational outcomes and choice of college major of childhood immigrants from different countries (Bacolod & Rangel, 2017).

Lastly, some studies perceive language distance as a source of discrimination rather than a proxy for cultural differences (Creese & Kambere, 2003). According to this tradition of studies, the linguistic distance between the immigrant and the host country's language serves as a cultural signal that enables employers to discriminate against the immigrant even if his or

<sup>&</sup>lt;sup>1</sup> Surprisingly, proximity to English was not found to have a consequence on economic integration, stressing the importance of being fluent in the local language (Wong, 2023).

her host country's language proficiency is high (Man, 2004).<sup>2</sup> Hence, language distance or proximity should be regarded as a form of cultural capital or linguistic capital.<sup>3</sup>

All three perspectives suggest that language distance directly or indirectly affects immigrants' labor market outcomes. Unfortunately, most studies do not empirically control for language ability to assess the clean effect of linguistic distance on labor market outcomes. In addition, several questions remain unanswered. For instance, does language distance still affect the labor market outcome of migrants once their language proficiency is taken into account? Does language distance have different impacts on various labor market outcomes, such as labor market participation, employment, working hours, and occupational prestige? Additionally, what are the effects on the labor market outcomes of migrant men and women?

We hypothesize that language distance may not only impact labor market outcomes through facilitating language acquisition but also through its association with cultural capital and have a distinct effect by gender. Hence, this study aims to investigate the impact of linguistic distance by looking at the first language studied at home, which serve as an indicator of cultural differences, on the labor force status of migrants stratified by gender. Specifically, we explore how linguistic distance, independent of literacy skills in the destination country language, influences migrants' labor force participation, working hours, and occupational prestige. In the following section, we will delve into the potential gender variations regarding the correlation between linguistic distance and the labor market integration of migrants.

#### 2.2. Culture and Migrant Women Labor Market Integration

Migration and feminist scholars have extensively studied the unique experiences of migrant women in the association of gender and migration using different terms. The first is "double disadvantage," which refers to labor market disadvantages migrant women have compared to both male migrants and native women. It was suggested that since migrant families tend to invest more in the husbands' labor force assimilation, married migrant women, especially with children, are more prone to suffer more from double disadvantage (Bevelander & Groeneveld,

<sup>&</sup>lt;sup>2</sup> Some of the literature promoting this perspective incorporates terminology from linguistic anthropology, such as the concept of "linguistic racism," which refers to the use of language as a resource for discriminatory purposes. While this primarily pertains to the native language, certain studies also examine the performative elements of language, such as accents and word choice concerning discrimination.

<sup>&</sup>lt;sup>3</sup> In line with this argument, recently (Schmaus, 2020) investigated the differential impact of language skills on labor market success among various groups of migrants, considering variations in their level of associated distaste by employers. They suggest language proficiency might also be linked to taste discrimination against specific ethnic groups.

2012; Donato et al., 2014; Vidal-Coso, 2018). The second term is "intersectionality," which refers to the unique experience of disadvantaged subgroups (for example, women) within a minority or disadvantaged group. Following this tradition, immigrant women face different barriers but also opportunities than native women and immigrant men (Arai et al., 2016; Di Stasio & Larsen, 2020). Both traditions call for examining the experience of migrant women in light of gender perceptions and family roles.

There are two primary mechanisms by which language distance might shape the integration of migrant women (somewhat different than men) in the labor market. From what we term the *cultural capital perspective*, language difference is seen as a form of cultural advantage. The ability to pass as a native, or to come from a similar background as locals, becomes the basis for discrimination in the labor market (Dovchin, 2019; Man, 2004). On the other hand, scholars who adopt the *cultural distance* approach perceive language differences as a measure of cultural characteristics that are important in the labor market. These scholars mainly highlight the cultural trait of family-work division, which might be reflected in language distance (Gay et al., 2018; Salari, 2020).

Starting with cultural capital perspective within the context of labor market assimilation. The performative effect of language, or the perception of the host country's language as cultural capital, is expected to affect women more than men. Studies have shown that women, and immigrant women are no exception in this regard, tend to concentrate in occupations where communication skills are more important, for example, in the service industry than their male counterparts (Elo et al., 2020; Lörz et al., 2011; Pinxten et al., 2014). This implies that immigrant women are more prone to be discriminated against in the labor market due to language distance since their position in the labor market is highly dependent on communication skills (Glick et al., 1995). Indeed, Ghio et al. (2023) recent study finds that limited proficiency in the Italian language had a more detrimental effect on immigrant women's labor market outcomes than immigrant men. Additionally, migrant women encountered more significant language barriers to their participation in the labor force, particularly in terms of speaking and comprehension skills (Ghio et al., 2023). Interestingly, discrimination related to language use against immigrant women exists for both high and low-skilled workers, albeit in different forms. In Canada, for example, Man (2004) describes a process of "deskilling" of immigrant women of Chinese background with high skills. This is done by various institutionalized processes, such as a demand for "Canadian experience" for eligibility to

feminine occupations (Man, 2004). This kind of discrimination, especially in occupations that require intensive communication skills which are traditionally feminine, was found in various other countries (Barrett et al., 2022; Creese & Kambere, 2003; Dovchin, 2019). For instance, the role of language in the discrimination of migrant women was demonstrated in Australia, where Dovchin (2019) described how Mongolian women, some of them with high proficiency in English, experienced racism and discrimination due to their heavy accents, which perceived as "broken English" (Dovchin, 2019).

Within the *cultural distance* perspective, numerous studies have attempted to tackle the issue of migrant women's participation in the labor force in their destination and how they are influenced by the characteristics of their countries of origin. Most of these studies have been conducted in the US and demonstrate that differences in female labor force participation rates across source countries can account for disparities in the labor market behavior of immigrant women at their destination (Antecol, 2000; Blau et al., 2011; Blau & Kahn, 2015; Fernández & Fogli, 2009; McManus & Apgar, 2019). These studies highlight that disparities arise due to differences in cultural perceptions regarding women's roles, which ultimately influence the labor market behavior of immigrant women (Antecol, 2000; Apgar & McManus, 2019; Kanas & Müller, 2021; McManus & Apgar, 2018).

Most of these studies majored cross-country variations in cultural beliefs regarding women's roles by using women's labor force participation in their source countries. For example, Blau and Kahn (2015) use female-to-male LFP ratios as a cultural proxy to investigate the effect of human capital and culture on the labor supply and wages of immigrant women in the US. They found that women from source countries with higher FLFP have higher working hours in the US, and this effect remains after controlling for the immigrant's own pre-migration labor supply. In addition, it was found that the effect of source country culture trickles down to second and higher-generation and persists in the long run (Antecol, 2000; Blau et al., 2011, 2013). Interestingly, gender role attitudes are found to be transmitted across cultural boundaries, from foreign-born mothers-in-law to native women, and it affects their labor supply decisions (Bredtmann et al., 2020). <sup>4</sup>

<sup>&</sup>lt;sup>4</sup> While most of these studies have been done in the US framework, recently, a few studies have addressed this question also in Europe (Apgar & McManus, 2019; Bredtmann et al., 2020; Neuman, 2018). Bredtmann and Otten, (2023) explore the effect of source-country culture on the labor supply of female immigrants in different European countries. They found a positive correlation between the female-to-male labor force participation ratio in the source country and immigrant women's labor supply. However, they find that the cultural effect

Migrant families might maintain their origin cultures in several ways, and speaking their heritage language is one way to do so (Tsai et al., 2012). A heritage language is not only a means for the intergenerational preservation of culture but also an indicator of cultural assimilation (Salari, 2020). Recent studies suggest that heritage language can be used as an indicator of cultural traits related to the division of work in the family (Gay et al., 2018; Jakiela & Ozier, 2018; Lien & Zuloaga, 2021; Salari, 2020).<sup>5</sup> It was found that second-generation migrant women who use their heritage language at home were less prone to participate in the labor market and work fewer hours (Salari, 2020). Along the same line, speaking a language with gender-based grammatical roles was associated with lower labor market participation and working hours of migrant women (Gay et al., 2018; Jakiela & Ozier, 2018).<sup>6</sup>

Both the *cultural capital* and *cultural distance* perspectives predict that immigrant women will have higher language-related disadvantages in the labor market due to linguistic distance. Moreover, these perspectives also predict that the effect of language distance on immigrant women's performance in the labor market will be net of linguistic proficiency in the host country's language. Essentially, the critical distinction between these approaches lies in the role of agency: while the former scholars place greater emphasis on labor market discrimination and the employers' tendency to prefer native language speakers, the latter emphasizes the agency of immigrants and their cultural preferences.

#### 3. Comparison Strategy and Expectations

Our previous study demonstrated that migrant women who use a different language at home are more likely to experience over-education (Author). We hypothesized that language use at home (controlling for language proficiency) might influence over-education in two ways: firstly, it may be associated with other aspects of cultural capital, such as accent and other

does not persist through the second generation, contrary to previous evidence found in the US (Bredtmann & Otten, 2023).

<sup>&</sup>lt;sup>5</sup> For an overview of linguistic structures as determinants of economic phenomena, including potential ways of conceptualizing the effect of linguistic structures on decision-making and empirical evidence on the four linguistic structures of grammatical gender, tense, personal pronouns, and mood and their association with behavior outcome see (Mavisakalyan & Weber, 2018).

<sup>&</sup>lt;sup>6</sup> Recently, there has been an ongoing debate regarding the causal effect of gender language on the labor market outcomes of migrant women. Some argue that the observed effect may be influenced by self-selection and intergenerational transmission of norms rather than solely attributed to the language itself (Beblo et al., 2020). Whether or not there is a direct causal effect of a language type, it appears that the utilization of different languages in the destination country impacts the integration of migrant women.

performative aspects of language acquisition (as suggested by the *cultural capital perspective*), and secondly, it may serve as an indicator for the preservation of traditional gender norms and division of labor at home (as suggested by the *cultural distance perspective*). To distinguish between these two mechanisms, this paper focuses on the labor force participation, labor supply and occupational prestige of migrant men and women and utilizes linguistic distance as a more direct measure of cultural differences, controlling for language abilities.

In this regard, the literature leads to the following hypotheses:

H<sub>1</sub>: Higher linguistics distance will be associated with lower levels of LFP, employment, working hours, and occupational prestige of migrants controlling for their actual language abilities.

H<sub>2</sub>: Migrant women will have lower levels of LFP, employment, working hours, and occupational prestige when the linguistic distance is larger relative to migrant men due to the association of cultural distance and gender norms.

H<sub>3</sub>: If the *cultural capital perspective* is the primary mechanism that shapes migrant women's integration, we expect to see the effect of linguistic distance on migrant women's integration in the labor market in terms of LFP, employment, and occupational prestige and, to a lesser degree on working hours.

H<sub>4</sub>: If the *cultural distance perspective* is the primary mechanism that shapes migrant women's integration, we expect to see the effect of linguistic distance on migrant women's LFP, employment, working hours, and, to a lesser degree on occupational prestige. Specifically, we propose that the first three outcomes are associated with labor supply decisions, whereas occupational prestige primarily reflects the demand side of the labor market.

#### 4. Data, Variables, and Methods

#### 4.1. Data and Sample

In order to test these expectations, we use the Programme for International Assessment of Adult Competencies (PIAAC) 2018 which contains information from 36 countries and territories. We restricted the sample to immigrants at their prime working age, resulting in 4,263 observations in 19 countries of destination (mainly form Europe, but also Israel, Peru and South Korea) coming from more than 110 languages of origin, from which we have information on linguistics distance and sufficient numbers of migrants.<sup>7</sup> The benefit of using the PIAAC data set relative to alternative data, which have information on the labor market outcome of migrants (such as the EU-LFS or the ESS), is that the PIAAC data contain an assessment of actual linguistic literacy. In addition, individuals in the PIAAC data were asked about their mother tongue and could name up to two options.<sup>8</sup> We used this information as the basis for matching the linguistic distance.<sup>9</sup>

#### 4.2. Variables

In order to obtain the language distance variable, we applied the dataset created by Melitz and Toubal for language proximity (Melitz & Toubal, 2014). The dataset is a matrix that contains information on the common language spoken in each country and its linguistics proximity with every other country, calculated using ASJP scoring of similarity Bakker et al. (2009)<sup>10</sup>. The scale of the linguistics distance ranges from zero to one, with a larger value representing greater linguistics distance. Using data obtained from the Alveo Virtual Laboratory (Cassidy et al., 2014), which match languages to countries, we assigned each language in the PIAAC dataset to the relevant country and added the proximity score for each migrant based on their declared language learned at home resulting in an origin language by host country language score for each individual. For example, the smallest distance is between speaking Croatian in Slovenia (0.13), while the largest distance is between speaking Burmese in Norway (0.89) or Eritrean in the UK (0.88).<sup>11</sup> In addition, to have a more balanced distribution of linguistics distance, cases in which individuals spoke the same language at the origin and the host country were omitted from the analysis.

As our focus lies on examining the impact of linguistic distance on the measured literacy of the destination language, we incorporate various control variables. Firstly, we account for

<sup>&</sup>lt;sup>7</sup> Appendix Table 3 present the share of migrant in the sample in each destination.

<sup>&</sup>lt;sup>8</sup> The question asked by the PIACC questioner reads, "What is the first language you learned at home in childhood?"

<sup>&</sup>lt;sup>9</sup> Note that an alternative option could have been to match individuals with the main language used in their country of origin. However, this option would be less beneficial in our case since a significant number of cases lack information on the place of birth (or have information only on the region/continent of birth), and it would substantially reduce the size of our data.

<sup>&</sup>lt;sup>10</sup> This method compares the lists of between 100 to 200 words in two languages to identify cognate words and calculates the percentage of similar words (see: (Swadesh, 1952).

<sup>&</sup>lt;sup>11</sup> The most frequent language used in the country determines the host country's language. Cases where the respondent learned more than one language were treated by the first language the respondent learned and still speaks.

individual scores on the literacy test. Additionally, we consider the duration of migrants' stay at their destination, age, educational attainment, and whether their highest level of education was obtained abroad. Finally, as we are interested in aspects related to gender, we also controlled for living with a partner and having children in the household. Appendix 1 provides a descriptive table of all the variables used in the analysis by gender.

#### 4.3. Methods

To unravel the mechanisms underlying the relationship between linguistic distance and labor market outcomes among migrant men and women, our analysis was conducted in several stages. Initially, we examined the association between linguistic distance and labor force participation, employment, working hours, and occupational prestige for both male and female migrants. In these analyses, we placed particular emphasis on gender differences regarding the impact of linguistic distance on these outcomes, controlling for language abilities. For labor force participation and employment outcomes, we employed linear probability models, incorporating country-fixed effects, for all individuals and next including the gender interaction with linguistic distance. Subsequently, we conducted separate analyses by gender. Similarly, we utilized linear regression models with country-fixed effects for the working hours and occupational prestige outcomes, following the same steps as for labor force participation and employment.

#### 5. Findings

The subsequent section provides a comprehensive overview of our findings. Initially, we examine the impact of linguistic distance on labor force participation and employment, trying to establish a significant relationship between language distance and the economic integration of migrants. Subsequently, we investigate the association between linguistic distance and working hours, an aspect documented in the literature to be more associated with individual preference variables rather than a consequence of discrimination (Salari, 2020). Finally, we present the outcomes of our analysis concerning occupational standing (ISEI), an indicator that, according to existing literature, is more influenced by discriminatory practices directed towards migrants (Ubalde & Alarcón, 2020).

Table 1 presents the findings pertaining to labor force participation. As can be seen from Model 1, the language distance decreases the probability of participation in the labor

market significantly, net of language proficiency and gender, as well as all the other sociodemographic characteristics. The effect of gender is significant, indicating that migrant women are less likely to participate in the labor market than migrant men, net of language distance.

1	-		•	
	(1)	(2)	(3)	(4)
VARIABLES	Âĺl	Aĺl	Women	Men
Linguistics distance	-0.168***	0.021	-0.481***	0.165***
	(0.049)	(0.060)	(0.072)	(0.063)
Female	-0.147***	0.117**		
	(0.013)	(0.050)		
Female X Linguistics distance		-0.373***		
		(0.068)		
BA	0.068***	0.065***	0.056**	0.055**
	(0.018)	(0.018)	(0.025)	(0.026)
MA+	0.120***	0.119***	0.083***	0.154***
	(0.018)	(0.018)	(0.027)	(0.024)
Literacy competence	0.000**	0.000**	0.001***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Education at origin country	0.027*	0.026*	-0.014	0.070***
	(0.014)	(0.014)	(0.021)	(0.019)
Age	-0.002***	-0.002***	-0.001	-0.004***
	(0.001)	(0.001)	(0.001)	(0.001)
having children	-0.023	-0.024	0.041*	-0.115***
	(0.017)	(0.017)	(0.023)	(0.025)
Leaving with a partner	-0.023	-0.028*	-0.003	-0.044*
	(0.016)	(0.016)	(0.022)	(0.024)
Up to 10 years in country	-0.012	-0.009	-0.021	0.015
	(0.017)	(0.017)	(0.024)	(0.022)
Constant	0.902***	0.768***	0.876***	0.811***
	(0.072)	(0.076)	(0.104)	(0.093)
Observations	4,263	4,263	2,414	1,849
Countries	19	19	19	19
R-squared	0.071	0.078	0.074	0.088

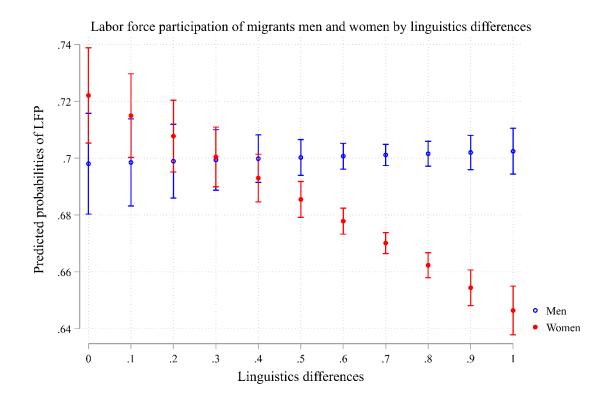
Table 1: Labor force participation of migrants by linguistics differences

Individual age 25–65, all models control for include country fixed effect. Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Nevertheless, with the inclusion of an interaction term in the model (Model 2), the initial significance and strength of the main effect of language distance diminishes. Instead, the interaction term emerges as negative and statistically significant, indicating that language distance disproportionately affects migrant women while having no discernible impact on migrant men. Moreover, the main effect of gender is now positive and significant, indicating

that in the absence of any language distance between their native language and the host country's language, migrant women do not face a significant disadvantage. Fig. 1 visually depicts these outcomes based on Model 2, illustrating that while the probability of labor force participation remains unaffected by language distance for migrant men, it decreases for migrant women as language distance increases, thereby widening the gap by gender in terms of labor force participation.

Figure 1



These findings are further substantiated in Model 3 and Model 4, where the sample is disaggregated by gender. Specifically, the influence of language distance on labor market participation for migrant men is positive and significant, whereas for migrant women, it exhibits a substantial, negative, and statistically significant effect. The unexpected discovery of a positive correlation between linguistic distance and migrant men's labor market participation challenges our initial research hypotheses. Several potential explanations arise from this finding. Firstly, it is plausible that there is a substantial positive selection among male immigrants hailing from countries with greater linguistic disparities. Additionally, the necessity for men to engage in the labor market to provide for their families could play a role in this phenomenon. However, it is crucial to acknowledge that labor market participation

encompasses individuals actively seeking employment and those currently employed. Therefore, our subsequent analysis will narrow its focus to employment specifically.

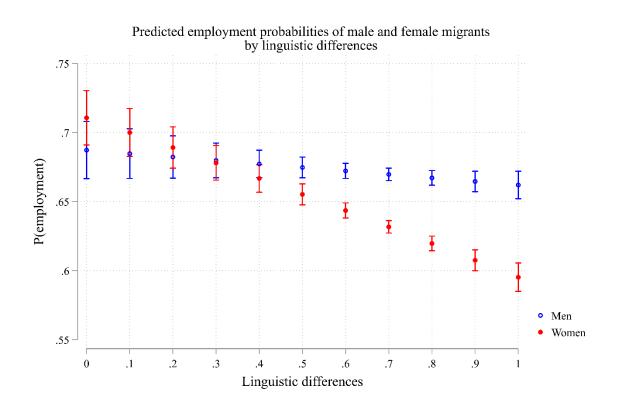
Table 2 provides an analogous model to Table 1, focusing on actual employment instead of labor force participation. Consistent with the findings in Table 1, language distance exhibits a negative impact on the likelihood of employment, even after accounting for language proficiency (Model 1). Additionally, the interaction term (Model 2) remains significant and negative, indicating the compounded disadvantage experienced by migrant women. However, it is noteworthy that the main effect of language distance almost lost its significant once the interaction term is included.

1	, 0	, ,		
	(1)	(2)	(3)	(4)
VARIABLES	All	All	Women	Men
Linguistics distance	-0.318***	-0.115*	-0.522***	-0.070
	(0.056)	(0.068)	(0.078)	(0.077)
Female	-0.171***	0.112**		
	(0.015)	(0.057)		
Female X Linguistics distance	9	-0.400***		
		(0.078)		
BA	0.071***	0.068***	0.091***	0.015
	(0.021)	(0.021)	(0.028)	(0.032)
MA+	0.153***	0.151***	0.105***	0.203***
	(0.021)	(0.021)	(0.029)	(0.030)
Literacy competence	0.001***	0.001***	0.001***	0.000
<b>v</b>	(0.000)	(0.000)	(0.000)	(0.000)
Education at origin country	0.039**	0.038**	-0.003	0.082***
<i>.</i>	(0.016)	(0.016)	(0.022)	(0.023)
Age	0.001	0.001	0.002	-0.002*
C .	(0.001)	(0.001)	(0.001)	(0.001)
having children	-0.036*	-0.037*	0.092***	-0.198***
C	(0.019)	(0.019)	(0.025)	(0.031)
Leaving with a partner	-0.044**	-0.049***	0.009	-0.103***
	(0.019)	(0.019)	(0.024)	(0.030)
Up to 10 years in country	0.022	0.025	-0.008	0.086***
1 5 5	(0.019)	(0.019)	(0.026)	(0.027)
Constant	0.686***	0.542***	0.567***	0.704***
	(0.083)	(0.087)	(0.114)	(0.116)
Observations	4,263	4,263	2,414	1,849
Countries	19	19	19	19
R-squared	0.098	0.103	0.083	0.149

Table 2: Employment of migrants by linguistics differences

Individual age 25–65, all models control for include country fixed effect. Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 Figure 2 presents a graphical representation of the outcomes derived from Model 2. It demonstrates that, for migrant men, the employment probabilities remain unaffected by language distance. However, in the case of migrant women, their employment probabilities decrease as the language distance increases, leading to a widening gender gap in employment probabilities. This observation is further reinforced by Model 3 and Model 4, which disaggregate the analysis by gender, revealing that while language distance has a substantial influence on migrant women, it does not affect migrant men. By considering the disparities between labor force participation and actual employment as indicative of the gap between labor preferences (supply) and employability (demand), we can infer that while language distance influences both aspects of the employment equation for women. For men, language distance positively influences the supply side (labor force participation and most probably the active looking for work) while practically not affecting their employment. In this context, language distance affects both the supply side (labor preferences) and the demand side (employability) of employment dynamics for women and less so for men.

Figure 2



We turn now to the effect of language distance on weekly working hours. Table 3 presents the results of linear regression models where the dependent variable is working hours. According

to Model 1, migrant women work 6 hours less than migrant men. Language distance reduces working hours by almost 5 hours for the maximum distance.

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Female $-6.070^{***}$ $-7.782^{***}$ (0.448)(1.763)Female X Linguistics distance2.423(2.413)BA $-1.541^{**}$ $-1.533^{**}$ $0.652$ )(0.652)(0.892)(0.652)(0.652)(0.892)MA+ $-0.143$ $-0.134$ $0.013$ (0.613)(0.904)Literacy competence $0.027^{***}$ $0.027^{***}$
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Literacy competence 0.027*** 0.027*** 0.015** 0.038***
(0.004)  (0.004)  (0.007)  (0.006)
Education at origin country 0.579 0.578 0.411 0.878
(0.501)  (0.501)  (0.727)  (0.676)
Age 0.061** 0.062** 0.116*** 0.005
(0.026)  (0.026)  (0.040)  (0.034)
Having children 2.230*** 2.244*** 4.629*** 0.168
(0.597) $(0.597)$ $(0.821)$ $(0.896)$
Leaving with a partner -3.293*** -3.271*** -2.003*** -4.252***
(0.579)  (0.580)  (0.775)  (0.917)
Up to 10 years in country -0.193 -0.215 -0.617 -0.686
$(0.604) \qquad (0.604) \qquad (0.902) \qquad (0.802)$
Constant 32.730*** 33.533*** 24.859*** 34.591***
(2.575) (2.697) (3.614) (3.367)
Observations2,8892,8891,5181,371
Countries 19 19 19
R-squared 0.145 0.146 0.082 0.169

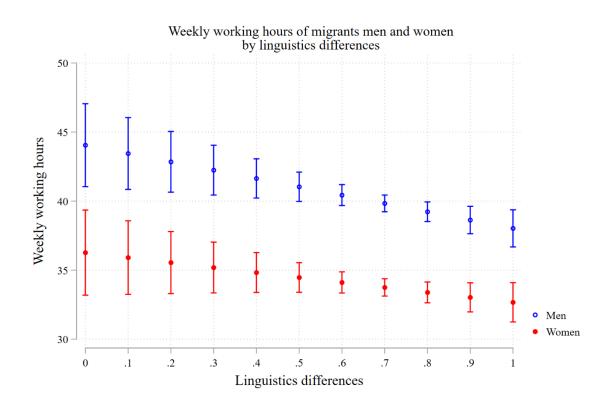
Table 3: Working hours of migrants by linguistics differences

Employed individual age 25–65, all models control for include country fixed effect. Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 3 presents the results from Model 2 in Table 3, which includes interaction between gender and language distance. On average, migrant women work considerably fewer hours than migrant men, and interestingly, language distance does not seem to have an impact on the weekly working hours of migrant women. It is plausible that the absence of an impact of linguistic distance on working hours can be attributed to floor effects, particularly considering the low work volume among women. It is observed that when immigrant women are already

engaged in the labor market, they tend to choose part-time employment irrespective of their linguistic distance. Since, as noted, working hours usually represent individual preferences rather than discrimination, this contrasts to some extent with the cultural distance hypothesis. Conversely, for immigrant men, linguistic distance appears to reduce their working hours.

Figure 3



Lastly, Table 4 presents the results of the linear regression analyses, with ISEI (occupational standing) as the dependent variable. Across all models, the impact of language distance does not reach statistical significance when accounting for factors such as gender, education, language proficiency, and socio-demographic characteristics. Notably, when examining the sample stratified by gender (Models 3 and 4), the effect of linguistic distance remains insignificant for both men and women. The finding that linguistic distance does not influence occupational prestige aligns with the cultural distance perspective, which suggests that linguistic proximity serves as a proxy for cultural traits associated with the division of work and family responsibilities. Specifically, once we control for the decision to participate in the

labor market (as these models focus on employed individuals), linguistic distance has no significant effect on the type of occupation in which migrant women (and men) are employed.<sup>12</sup>

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Linguistics distance $0.531$ $-3.455$ $3.172$ $-3.038$ Female $-5.702^{***}$ $-11.680^{***}$ $(3.068)$ $(3.133)$ Female X Linguistics distance $8.561^{***}$ $(2.083)$ BA $8.186^{***}$ $8.200^{***}$ $6.738^{***}$ $10.599^{***}$ MA+ $17.553^{***}$ $17.576^{***}$ $19.688^{***}$ $15.731^{***}$ Literacy competence $0.088^{***}$ $0.088^{***}$ $0.097^{***}$ $0.081^{***}$ Literacy competence $0.088^{***}$ $0.088^{***}$ $0.097^{***}$ $0.081^{***}$ Guodo (0.006) $(0.006)$ $(0.008)$ $(0.008)$ $(0.008)$ Education at origin country $-2.952^{***}$ $-2.937^{***}$ $-3.393^{***}$ $-2.536^{***}$ $(0.624)$ $(0.623)$ $(0.873)$ $(0.894)$ Age $0.009$ $0.010$ $-0.007$ $0.021$ having children $1.984^{***}$ $2.034^{***}$ $1.424$ $2.587^{**}$ $(0.742)$ $(0.741)$ $(1.007)$ $(1.206)$ Leaving with a partner $-3.987^{***}$ $-3.921^{***}$ $-3.506^{***}$ $(0.742)$ $(0.741)$ $(1.064)$ $(1.045)$ Constant $19.267^{***}$ $22.166^{***}$ $7.659^{*}$ $21.733^{***}$ $(3.092)$ $(3.237)$ $(4.136)$ $(4.361)$		(1)	(2)	(3)	(4)		
$(2.183)$ $(2.557)$ $(3.068)$ $(3.133)$ Female $-5.702^{***}$ $-11.680^{***}$ $(0.562)$ $(2.083)$ Female X Linguistics distance $8.561^{***}$ $(2.873)$ BA $8.186^{***}$ $8.200^{***}$ $6.738^{***}$ $10.599^{***}$ $(0.800)$ $(0.799)$ $(1.037)$ $(1.278)$ MA+ $(0.780)$ $(0.778)$ $(1.124)$ $(1.088)$ Literacy competence $0.088^{***}$ $0.097^{***}$ $0.081^{***}$ $(0.006)$ $(0.006)$ $(0.008)$ $(0.008)$ Education at origin country $-2.952^{***}$ $-2.937^{***}$ $-3.393^{***}$ $-2.536^{***}$ $(0.624)$ $(0.623)$ $(0.873)$ $(0.894)$ $(0.032)$ $(0.032)$ $(0.046)$ having children $1.984^{***}$ $2.034^{***}$ $1.424$ $(0.762)$ $(0.761)$ $(1.007)$ $(1.206)$ Leaving with a partner $-3.987^{***}$ $-3.931^{***}$ $-3.922^{***}$ $(0.745)$ $(0.744)$ $(0.931)$ $(1.276)$ Up to 10 years in country $-3.936^{***}$ $-4.031^{***}$ $-4.473^{***}$ $(0.742)$ $(0.741)$ $(1.064)$ $(1.045)$ Constant $19.267^{***}$ $22.166^{***}$ $7.659^{*}$ $21.733^{***}$ $(3.092)$ $(3.237)$ $(4.136)$ $(4.361)$	VARIABLES	All	All	Women	Men		
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$\begin{array}{llllllllllllllllllllllllllllllllllll$	BA	8.186***	8.200***	6.738***	10.599***		
$\begin{array}{llllllllllllllllllllllllllllllllllll$		(0.800)	(0.799)	(1.037)	(1.278)		
Literacy competence $0.088^{***}$ $0.088^{***}$ $0.097^{***}$ $0.081^{***}$ Education at origin country $-2.952^{***}$ $-2.937^{***}$ $-3.393^{***}$ $-2.536^{***}$ $(0.624)$ $(0.623)$ $(0.873)$ $(0.894)$ Age $0.009$ $0.010$ $-0.007$ $0.021$ $(0.032)$ $(0.032)$ $(0.046)$ $(0.045)$ having children $1.984^{***}$ $2.034^{***}$ $1.424$ $2.587^{**}$ $(0.762)$ $(0.761)$ $(1.007)$ $(1.206)$ Leaving with a partner $-3.987^{***}$ $-3.931^{***}$ $-3.922^{***}$ $-3.506^{***}$ $(0.745)$ $(0.744)$ $(0.931)$ $(1.276)$ Up to 10 years in country $-3.936^{***}$ $-4.031^{***}$ $-4.055^{***}$ $-4.473^{***}$ $(3.092)$ $(3.237)$ $(4.136)$ $(4.361)$ Observations $2,386$ $2,386$ $1,254$ $1,132$ Countries $19$ $19$ $19$ $19$ $19$	MA+	17.553***		19.688***	15.731***		
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Education at origin country $-2.952^{***}$ $-2.937^{***}$ $-3.393^{***}$ $-2.536^{***}$ Age $(0.624)$ $(0.623)$ $(0.873)$ $(0.894)$ Age $0.009$ $0.010$ $-0.007$ $0.021$ having children $1.984^{***}$ $2.034^{***}$ $1.424$ $2.587^{**}$ $(0.762)$ $(0.761)$ $(1.007)$ $(1.206)$ Leaving with a partner $-3.987^{***}$ $-3.931^{***}$ $-3.922^{***}$ $(0.745)$ $(0.744)$ $(0.931)$ $(1.276)$ Up to 10 years in country $-3.936^{***}$ $-4.031^{***}$ $-4.055^{***}$ $(0.742)$ $(0.741)$ $(1.064)$ $(1.045)$ Constant $19.267^{***}$ $22.166^{***}$ $7.659^{*}$ $21.733^{***}$ $(3.092)$ $(3.237)$ $(4.136)$ $(4.361)$	Literacy competence	0.088***	0.088***	0.097***	0.081***		
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Ç .	(0.624)	(0.623)	(0.873)	(0.894)		
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Up to 10 years in country $-3.936^{***}$ $-4.031^{***}$ $-4.055^{***}$ $-4.473^{***}$ (0.742)(0.741)(1.064)(1.045)Constant19.267^{***}22.166^{***}7.659*21.733^{***}(3.092)(3.237)(4.136)(4.361)Observations2,3862,3861,2541,132Countries19191919		(0.745)	(0.744)		(1.276)		
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Observations 2,386 2,386 1,254 1,132   Countries 19 19 19 19	Constant						
Countries 19 19 19 19		(3.092)	(3.237)	(4.136)	(4.361)		
Countries 19 19 19 19		~ /	× /	× /	× /		
Countries 19 19 19	Observations	2,386	2,386	1,254	1,132		
P. squared 0.417 0.410 0.454 0.295	Countries	· · ·	· · · · · · · · · · · · · · · · · · ·				
N-Squarcu 0.417 0.434 0.383	R-squared	0.417	0.419	0.454	0.385		

Table 4: Occupational prestige of migrants by linguistics differences

Employed individual age 25–65, all models control for include country fixed effect. Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>&</sup>lt;sup>12</sup> Appendix 2 presents regression models of the association between the literacy competence of migrants and linguistics differences by gender. The purpose of this table is to demonstrate that while the relationship between language proficiency and various measures of labor market integration differs between men and women, the effect of language proficiency on the linguistic abilities of both genders does not differ. In other words, language proficiency is equally significant for language acquisition for both genders, but it has a much greater impact on labor market disadvantage for women. These findings again illustrate how language serves as a more significant barrier for women than men and the marginalization of women in the labor market.

#### 6. Conclusion

This study aimed to investigate how linguistic distance as an indicator of cultural differences shapes migrants' labor market status, focusing on gender differences. Specifically, we examine how linguistic distance, independent of literacy skills, influences migrants' labor force participation, working hours, and occupational prestige of migrant men and women. Our findings indicate that linguistics distance shape labor market outcomes net of language skills and education, mainly for women. Thus, we claim that linguistic distance serves as a proxy for cultural distance and hence is related to labor market integration not due to merits but due to social distance. The gender aspect of the effect of language distance is essential. In line with previous studies (Espín, 2013), we show that migrant women from countries more linguistically remote from their destination are less prone to take part in the labor market and be employed. By controlling for language ability and education, we can identify that the roots of migrant women's double disadvantage are probably social and cultural rather than human capital.

One important question that our findings raise is the mechanism through which language distance affects labor market integration. Scholars of cultural capital would perceive language distance as a form of cultural capital. The inability "to pass" as native (or as coming from a similar origin to natives) serves as a basis for labor market discrimination (Dovchin, 2019). Women, who are more likely to work in occupations that require communication skills (Lörz et al., 2011; Pinxten et al., 2014), are more vulnerable to such discrimination. On the other hand, scholars coming from the cultural distance approach view language distance as a measurement of cultural traits that are important to the labor market. Such scholars primarily identify home-work preferences as a cultural trait that is captured by language distance (Gay et al., 2018; Salari, 2020). Hence, language distance is expected to have a stronger effect on women than on men. In essence, the difference between these approaches is in the agency: while the former scholars put more emphasis on labor market discrimination and the ability of employers to prefer native language speakers over other employees, the latter put more emphasis on the agency of the immigrants and their cultural preferences.

Our results support both theories to a degree. We found that the impact of language distance is evident in labor force participation and employment, which supports the cultural distance hypothesis but not on migrant women working hours. Entry into the labor market and working hours preferences are usually regarded as a result of preference rather than discrimination. However, the effect is not evident when the dependent variable is occupational status, which aligns with our expectation based on the cultural distance hypothesis. Under the cultural distance approach, we would expect not to see an effect on occupational prestige as the selection process in entry to the labor market would result in a positive effect of language distance on occupational scores (since only the most skillful migrant women would enter the labor market, their gains would be higher when there is no discrimination against them). At the same time, the findings also provide support for the cultural capital perspective, as evidenced by the lack of effect on migrant women's working hours. To gain a deeper understanding of the mechanisms underlying the relationship between language distance and labor market integration by gender, further investigations are necessary. These tests should consider cultural distance, particularly in terms of gender norms. While beyond the scope of this paper, such analysis would make a valuable contribution to the relatively limited body of literature on this topic.

Our findings suggest that language distance is an important factor for both men and women in their ability to acquire the destination language (see Appendix 3). However, the impact of language distance on labor market integration is much greater for women than men. This means that women are more likely to experience labor market disadvantages if they have a considerable language distance, regardless of their proficiency in the language used in their destination. These results suggest that migrant women are more likely to face additional barriers in the labor market. It is plausible that decisions regarding the division of work within the family play a significant role in shaping the labor market outcomes of migrant women, particularly in terms of their participation and employment. Nonetheless, discrimination and bias related to cultural distance might also exacerbate the impact of language distance on migrant women's career prospects.

Overall, these findings highlight that while policies and programs that support language acquisition might improve the language abilities of migrant men and women, they may not effectively combat the gendered barriers women face in the labor market. By promoting equal opportunity and addressing issues and cultural norms related to the division of work and care within the family, we can help create a more equitable and inclusive labor market for migrant men and women. It is important to address both linguistic and gendered barriers to ensure that all individuals have an equal chance to succeed in the labor market.

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#### 7. References

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	Men	Women	All
N	1,864	2,426	4,290
	(43.4%)	(56.6%)	(100.0%)
% Labor force attachment	0.830	0.725	0.771
% Worked last week	0.710	0.579	0.636
ISEI score	42.926	39.585	41.174
	(17.097)	(18.864)	(18.119)
Highest level education			
% Low	0.642	0.572	0.602
% BA	0.196	0.272	0.239
% MA+	0.163	0.156	0.159
Literacy score	244.001	244.406	244.230
	(58.645)	(56.315)	(57.332)
% Foreign education	0.532	0.572	0.555
Age	41.055	40.904	40.970
	(13.160)	(12.423)	(12.747)
Having children			
% Yes	0.712	0.772	0.746
% No	0.288	0.228	0.254
Living with spouse or partner			
Yes	0.784	0.766	0.774
No	0.216	0.234	0.226
Years since migration			
% Up to 10 years	0.332	0.350	0.342
% More than 10 years	0.668	0.650	0.658

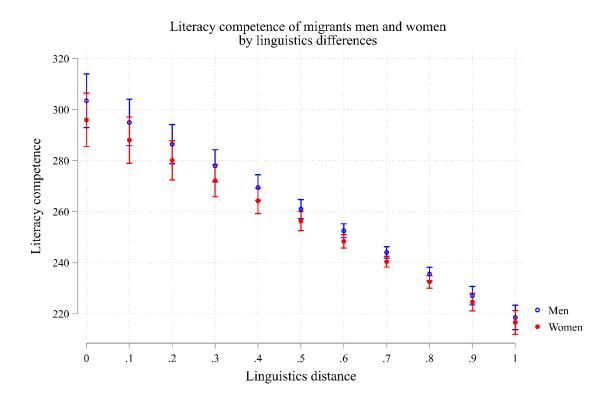
Appendix 1: Descriptive statistics of the sample included in our analysis by gender: Migrants men and women aged 25-65

Standard errors in parentheses

	(1)	(2)	(3)
VARIABLES	All	Women	Men
Linguistics distance	-84.862***	-70.813***	-90.296***
	(7.416)	(8.212)	(8.981)
Female	-7.452		
	(6.267)		
Female X Linguistics distance	5.501		
2	(8.555)		
BA	34.842***	40.645***	26.318***
	(2.254)	(2.823)	(3.756)
MA+	53.218***	55.603***	50.412***
	(2.179)	(2.869)	(3.347)
Education at origin country	-3.912**	-1.824	-6.832**
	(1.805)	(2.385)	(2.764)
Age	-0.811***	-0.886***	-0.786***
-	(0.088)	(0.117)	(0.134)
having children	6.662***	8.587***	4.028
-	(2.132)	(2.688)	(3.645)
Leaving with a partner	-1.836	-0.679	-3.373
	(2.039)	(2.536)	(3.570)
Up to 10 years in country	-13.864***	-18.239***	-7.816**
	(2.094)	(2.786)	(3.205)
Constant	316.868***	308.269***	317.323***
	(9.721)	(12.057)	(14.116)
Observations	4,263	2,414	1,849
Countries	19	19	19
R-squared	0.226	0.240	0.225

Appendix 2: Literacy competence of migrants by linguistics differences

Individual age 25–65, all models control for include country fixed effect. Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



	Men	Women	All	
N	43.4%	56.6%	4,265	
BEL	3.3%	3.1%	3.2%	
CHL	0.2%	0.1%	0.1%	
CYP	2.5%	5.6%	4.3%	
CZE	1.8%	2.4%	2.2%	
DNK	21.6%	20.6%	21.1%	
ESP	5.9%	4.6%	5.2%	
FIN	0.6%	1.2%	0.9%	
FRA	7.9%	6.0%	6.8%	
GBR	8.0%	9.4%	8.8%	
GRC	1.0%	3.9%	2.6%	
ISR	17.1%	17.1%	17.1%	
KAZ	1.7%	1.7%	1.7%	
KOR	0.1%	0.4%	0.3%	
LTU	1.4%	1.5%	1.5%	
NLD	4.4%	5.0%	4.7%	
NOR	10.5%	8.0%	9.1%	
PER	0.3%	0.0%	0.1%	
SVK	1.2%	1.2%	1.2%	
SVN	10.5%	8.0%	9.1%	

Appendix 3: Sample of migrant included in our analysis by gender and country of destination: Migrants men and women aged 25-65

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