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Comparative analysis of occupational mobility between foreign men and women in Brazil's formal labour market

Análise comparativa da mobilidade ocupacional entre homens e mulheres estrangeiros no mercado de trabalho formal brasileiro

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ABSTRACT

In this article we analyse whether: i) foreign women and men exhibit different occupational mobility patterns in Brazil's formal labour market; ii) foreign women are less likely to experience up ward mobility thantheir male peers; and iii) the chances of upward mobility among foreign women and men in Brazil's formal labour market differ by nationality. To examine these questions, we use the data from the Annual Social Information Reports (RAIS) from 1995 to 2015, which refer exclusively to workers employed in the formal labourmarket. The results demonstrate that the chances of mobility of men and women do not differ among all groups of foreigners, since this difference is dependent on the nationality concerned. For those groups that do show differences, the chances of upward mobility are higher amongmen than women.

Keywords: Foreign women and men; Sex; Occupational mobility

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RESUMO

Esse artigo objetiva analisar: i) se mulheres e homens estrangeira(o)s têm padrões de mobilidade ocupacional diferentes no mercado de trabalho formal brasileiro; ii) se as mulheres têm menores probabilidades de mobilidade ascendente, quando comparadas aos seus conterrâneos; iii) e se as chances de mobilidade ascendente entre estrangeiros e estrangeiras no mercado de trabalho formal brasileiro se diferenciam por grupo de nacionalidade. Para tanto, utilizamos os dados das Relações Anuais de Informações Sociais (RAIS) de 1995 a 2015 que se referem somente aos trabalhadore(a)s empregado(a)s no mercado formal. Os resultados evidenciam que não são todos os grupos de estrangeiros que apresentam chances de mobilidade diferentes entre homens e mulheres, pois depende da nacionalidade do indivíduo. Para aqueles que apresentam divergências, as chances de mobilidade ascendente são maiores para os estrangeiros comparados às estrangeiras.
Palavras-chave: estrangeiros e estrangeiras; Sexo; Mobilidade ocupacional

Introduction

Pioneering studies of the occupational mobility of foreigners in a host society, analysing just men, identified a U-curve: an initial decline from the socio-occupational status of the last job in the country of origin to the first job in the destination country, followed by a period of upward career mobility following assimilation and the accumulation of human capital after numerous years living in the new country (CHISWICK 1977, 1978, CHISWICK & PAUL 2005).

However, Portes and Manning (2008) argue that the accumulation of human capital through the immigrant's[1]assimilation is insufficient to explain the mode of integration of foreigners in the destination country, but there are diverse factors that influence this process,classifiable into three types: 1) individual (sex, language proficiency. age, period since arrival, place of birth, and educational level, for example); 2) family (social and economic capital); 3) contextual (government policy, prejudices existing in the host society, among others).

1 In this article, we use the terms immigrant and foreigner to refer to all those workers whose nationality is other than Brazilian. Though aware that these concepts are not synonymous, to avoid repetitions and maintain the fluidity of the text, we consider the two terms interchangeable here given that we are analysing only international immigrants without Brazilian nationality, that is, foreigners.

Furthermore, some studies call attention to a polarization in the occupational structure of immigrants in the host labour market, emphasizingthat a consideration of both the origin and the destination countries of immigrants is fundamental to our understanding of this polarization (SUZIKI 2019, VIRGÍLIO 2019, ADSERÀ& FERRER 2016, ADSERÀ, FERRER & HERRANZ 2020, MAGUID & BUNO 2010).

Respondingto the observed increase in the migratory flows of women and their growing participation in the labour market, there has been anupsurge in studies analysing the processes through which foreign women are integrated into the economically active population, along with their socio-occupational mobility in the host society (POWERS, SELTZER & SHI 1998, AYSA-LASTRA & CACHÓN-RODRIGUEZ 2013A, 2013B, SÁNCHEZ-SOTO & SINGELMANN 2017, ADSERÀ & FERRER 2016, ADSERÀ, FERRER & HERRANZ 2020).

In this context, studies have emerged that question the applicability of the U-curve to women's experiences, identifying other patterns of insertion (AYSA-LASTRA & CACHÓN-RODRIGUEZ 2013B, VIDAL-COSO & MIRET-GAMUNDI 2014, SÁNCHEZ-SOTO & SINGELMANN, 2017). A study undertaken in Spain by Fernández-Mácias et al. (2015) identifies upward mobility among foreign men and downward mobility among foreign women, or the withdrawal of the latter from the labour market. Also in Spain, Aysa Lastra and Chachón-Rodriguez (2013b) identify an L-pattern for immigrant women with an initial drop in occupational status during the first phase and stagnation (immobility) in the second phase of transition in the labour market.

However, there are studies in countries of the Global North and South[2]showing that foreign women experience an upward mobility (ADSERÀ& CHISWICK 2007, ADSERÀ & FERRER 2016, ADSERÀ, FERRER & HERRANZ 2020, MAGUID & BRUNO 2010). According to these studies, the country of origin, as well as the country of destination, are fundamental to comprehen-

2 In terms of classifying foreign workers from the Global South, we assume that these are immigrants born in countries defined by the methodology of the *World Economic Situation and Prospects* as those with a transitional or developing economy. In other words, these are countries that are not part of Europe (whether or not members of the European Union), North America (United States and Canada) or other developed countries like Japan, New Zealand and Australia, southern hemisphere countries defined as belonging to the Global North (UN 2014).

ding the different forms of insertion, occupational mobility and salary progressionof immigrants. However, research shows that, compared to their male counterparts, women tend to have fewer chances of upward mobility (MAGUID & BRUNO 2010, BRUNO 2007).

Specifically in the case of Brazil, Suziki (2019) argues that there are national groups of immigrants who accumulate more disadvantages than others in terms of the probability of acquiring better jobs over time. Foreigners originating from the Global South encounter larger barriers to occupational mobility in the Brazilian labour market than those coming from the Global North. However, the author does not compare the occupational trajectory of men and women. Another point to emphasize is that studies of the occupational mobility of foreigners in Brazil arequite scarce in general.

To add to this debate, in this article we intend to answer the following questions: do foreign women have different patterns of mobility compared to foreign men in Brazil's formal labour market? Are the chances of upward mobility fewer for women compared to male immigrants? Are these differences homogeneousfor all groups of immigrants, irrespective of their country of birth?

We have utilized data from the Annual Social Information Report (RAIS) published by the Ministry of Economy from 1995 to 2015[3], which include information on the registration number in the Social Integration Program (*Programa de Integração Social*: PIS) of each worker, thus enabling a longitudinal panel analysis.It should be stressed that this database refers to workers employed in the formal labour market only.

The article is divided into three sections, in addition to this introduction and the concluding remarks.The first section comprises a review of the literature, seeking to understand the factors that explain the occupational trajectory of immigrants in their host society, emphasizing the impact of the sex variable. Following this debate, we then present the hypotheses to be tested. Next, we explain the methodology used with a description of the dependent and independent variables, as well as the statistical models. In the third section we introduce our results, aiming to demonstrate whether or not the hypotheses were validated.

3 This time frame was selected because: a) the RAIS data became more consistent and precise from 1995 on, as Cavalcanti et al. (2015) point out; b) 2015 was the final year made available by the Ministry of Economy for the Stratification and Labour Study Laboratory of the Federal University of Minas Gerais at the time when this research was undertaken.

1. Comprehending the occupational trajectory of foreigners in the host society

The first studiesof the occupational mobility of foreigners in their host society, which emerged from classic assimilation theory, showed a U-curve in the insertion of immigrants into the labour market. An initial fall in the immigrant's occupational status was seen to occur due to issuesfaced in the destination society, such as language difficulties, or problem in recognizing university qualifications and previous work experience. However, with more time spent living in the host country, combined with theconsolidation of social networks, learning the official language of the host society, and acquisition of social[4]and symbolic capitals,[5] as well as the possibleobtainmentof residence and work permits, along with recognition of academic qualifications, immigrants succeed in improving their occupational status and complete the U-curve (CHISWICK & PAUL 2005, RUEF 2017).

In debate with classic assimilation theory,segmented assimilation theory emerged, premised on the idea that modern societies are diverse and segmented, meaning that the form in which immigrants become inserted into the host society depends on three kinds of conditioning factors: 1) individual variables, including factors relating to the person's exposure tothe host society, such as the ability to speak the language, age on arrival, place of birth, educational level, and racial and gender characteristics; 2) family variables, which relate to social and economic capitals; 3) contextual variables, which concern the diversity found in the country of destination, including the different government policies, values and prejudices existing in the host society (PORTES & MANNING, 2008, EGREJA & PEIXOTO, 2011).

In general, the first studies from both these theoretical approaches analysed samples of foreign men, excluding women, due to evidence that the labour market shows distinct dynamics for men and women and due to the greater participation of men in the labour market compared to women (CHISWICK, 1977 AND 1978, CHISWICK & PAUL, 2005).

4 Social capital can be defined as the investment and use of resources embedded in social relations for expected returns (Lin 2006).

5 The acquisition of symbolic capital by the foreigner is understood as the assimilation of tastes, values, 'ways of communicating,' 'good manners' and other notions prevalent in the destination country.

With the increase in the flows of female migrants and their increasing participation in the labour market, there has been a new wave of analyses of the processes of integrating foreign women into the economically active population, along with their socio-occupational mobility in the destination country (POWERSET AL. 1998, AYSA-LASTRA & CACHÓN-RODRIGUEZ 2013A AND 2013B, SÁNCHEZ-SOTO & SINGELMANN 2017, ADSERÀ & FERRER 2016, ADSERÀ, FERRER & HERRANZ 2020).

Inspired bysegmented assimilation theory, studies have questioned the application of the U-curve model to women's mobility, identifying other patterns that better fit the trajectory of female immigrants in the labour market.These author suggest that immigrant women have different mobility patterns to men, concentrated in precarious jobs with little possibility of upward mobility (POWERS ET AL. 1998, AYSA-LASTRA & CACHÓN--RODRIGUEZ 2013B, VIDAL-COSO & MIRET-GAMUNDI 2014, SÁNCHEZ--SOTO & SINGELMANN, 2017). Aysa-Lastra and Cachón-Rodriguez (2013b) analyse foreign women in Spain and identify an L-shaped mobility pattern, describing an initial drop in occupational status compared to the last job in the country of origin and the first job in the destination country, followed by occupational immobility after insertion in the host labour market. The authors classify the mobility pattern of female immigrants in Spain as 'solid patterns' due to the high rates of stagnation in occupational status. Similarly,Fernández-Mácias et al. (2015),also in Spain, identify that foreign women have more chance of downward mobility and many of them end up leaving the labour market.

However, the studies by Adserà, Ferrer and Herranz (2020), Adseràand Ferrer (2016) andAdseràand Chiswick (2007) demonstrate that this pattern is not the same in other countries such as Canada, the United Kingdom and Sweden,where these authors show that foreign women do not remain stuck in low-skilled jobs. They experienced upward mobility, more quickly among more highly educated women.Over time,foreign women end up occupying jobs that require analytic skills and less physical effort. Furthermore, such studies demonstrate that the countries of origin and destination are fundamental to comprehending the forms of insertion, occupational mobility and salary progression of immigrants.

However, specifically in relation to the group of highly qualified women, some authors indicate that the upward mobility of these foreign women in

the host labour market is even more difficult than for men (PURKAYASTHA, 2005; KOFMAN & RAGHURAM, 2006). The main obstacles to the upward trajectory of women are the many fields in the labour market still dominated by men and, consequently, the devalorisation of roles occupied by women and the domestic responsibilities traditionally attributed to them.

It is worth emphasizing that this international literature refers to research on immigrants moving from developing or developed countries to developed countries (from the South or North to the North), unlike Brazil, which, over recent decades, had taken insome foreigners migrating North-South but mainly South-South.Moreover, many of these studies also analyse the informal labour market, which is not the focus of our analysis. Few studies exist on socio-occupational mobility that compare female and male foreigners originating from South-South migration.

The studies of mobility produced by Bruno (2007), Maguid and Bruno (2010) andVirgílio (2019) comparing South American men and women migrating to Argentina or Chile demonstrate that foreign women move through more unskilled occupations than foreign men, and also that these women tend to present higher chances of downward occupational mobility than their male compatriots.However, there are differences in terms of the pattern of mobility by sex when the country of origin is considered. One example are Bolivian and Paraguayan immigrants in Buenos Aires, where Bolivian women tend to have a higher level of upward mobility than their male compatriots. This is in contrast to Paraguayan women who have much lower levels of upward mobility compared to men from their country. In the case of the latter foreign women, the level of immobility is high and the pattern of concentration in the occupational niche of domestic services is very high, even in the formal labour market, which does not happen with Bolivian women (Maguid & Bruno 2010).

Studies of occupational mobility among foreign workers in Brazil are still scarce, likewise research examining the effects of sex on the labour trajectories of immigrants (PERES, 2012; PERES & BAENINGER, 2017; VILELA, COLLARES & NORONHA, 2015; VILELA, NORONHA & CAMPOS 2019, SUZIKI, 2019). In general, these Brazilian studies analyse the insertionof foreigners in the occupational structure, but do not trackmobility over time (exceptSuziki 2019). On the occupational mobility of immigrant workers in Brazil, Suziki (2019) shows evidence ofunequal paths. Analysing the formal

labour market, the author verifies that some nationalities accumulate higher chances of mobility than others. The barriers to insertion and upward occupational mobility in the labour market are higher in the case of immigrants from the Global South than those encountered by foreigners from the Global North.The immigrant's origin is fundamental to comprehending her or his socio-occupational position in the host society. Nonetheless, the work of Suziki (2019) cannot be extrapolated to the country as a whole given the qualitative methodology used by the author and the absence of any comparative analysis of female and male foreigners, the focus of our article here.

Seeking to complement this debate, we propose to test: i)whether immigrant women have different mobility patterns to men, caused by structural features of Brazil's formal labour market, characterized as sexually segregated; ii) whether foreign women generally have fewer chances of upward mobility than men with similar socioeconomic characteristics; iii) whether,however, the impact of the sex variable is heterogeneous among the differentgroups of nationalities migrating to the country.

2. Data and methods

We used data from the Annual Social Information Report (RAIS) from 1995 to 2015, which characterize the individuals and companies in whichBrazil's formal workforce are inserted. However, this database possesses some limitations that deserve highlighting: 1)it presents only information on workers employedin the formal market and by companies[6], meaning that the article's conclusions apply exclusively to such workers;[7] 2) there is no information onemployers and self-employed workers; 3) the year of entry into Brazil is shown only from 2011 onwards. As a solution we selected for analysis only individuals who appear in the databases from 2011 to 2015; 4) the existence of errors inthe data arising from the fact that the reportsare administrative records that are not checked for consistency (STERNBERG, 2001); 5) there is no information on the foreigner's earlier

6 In other words, it does not include domestic workers employed by individuals, thus excluding domestic workers in family homes. However, it does include cleaners and general service workers.

7 The data from the 2010 Demographic Census indicates that 55.76% of foreigners are employed in the formal labour market.

occupation in the country of origin. In this article, therefore, we do not analyse the potential U-curve trajectory experienced by immigrants. Instead the immigrant's work trajectory is examined solely on the basis of the second phase of the curve, comparing the first occupation in the host country (more precisely, the first that appears in theRAIS records) with the current occupation (again more precisely, the occupation in the last year that the person appears in the database).

The first stage of the methodology relates to the transformation of the RAIS's unit of analysis from the employment relation, as originally construed, to the individual. In so doing, we follow the steps mapped by Noronha (2018), based on the use of the registration number in the Social Integration Program (*Programa de Integração Social*: PIS). We then selected those workers whose trajectory in Brazil's formal labour market appearsover at least three complete years, since this is the minimum period indicated as necessary for the immigrant to show some mobility in the local market (SÁNCHEZ-SOTO &SINGELMANN, 2017).

In addition, the analysis considers just the fourteen groups of foreigners with the highest number of observations (all those over 15,000 observations, representing a minimum of3% of the total). We adopted this strategy for two reasons:1) to maintain a high enough number of countries for a diversified analysis, including the flows of immigrants from both the Global North and South, but not so broad that the fluidity of the text would be compromised; 2) to achieve a more parsimonious model insofar asthe origin variable will be included in the equation as a control variable.

Following these procedures, the panel of data we constructed contains 75,343 individuals over a twenty-one-year period, totalling 499,794 observations. By nationality, this total breaks down as: Portuguese (22%), Argentinean (11%), Chilean (10%), Bolivian (8%), Uruguayan (7%), Haitian (7%),Paraguayan (6%), Italian (5%), Spanish (5%), Japanese (4%), Chinese (4%), American (US) (4%), German (4%), and French (3%).

To test our hypotheses, we used the multi-levelmixed-effects linear regressionmodel. We constructed the database in longitudinal form, classified as unbalanced: in other words, information does not exist for each individual in every year, since there are numerous situations that may remove a worker from the RAIS records, such as entering the informal market, being laid off, leaving to become an entrepreneur, retirement and death.

We based our construction of the dependent variable referring to the measure of socio-occupational mobility on theInternational Socio-Economic Index of Occupational Status (ISEI), an index developed by Ganzeboom, De Graaf and Treiman (1992),which attributes occupation scores in order to maximize occupation as an intervening variableof income and educational level.The index ranges from 16 to 90.

To apply the ISEI to the Brazilian context, we converted the occupational codes recorded in the RAIS (in accordance with the Brazilian Classification of Occupations: CBO 2002)to the International Standard Classification of Occupations (ISCO 88). After classifying all the occupations in accordance withISCO 88, we then builtthe International Socio-Economic Index of Occupational Status, as described by Noronha (2018).The measure of occupational mobility is constructed by subtracting the ISEI of the migrant worker's first occupation recorded in the database from the ISEI ofthe last occupation (the final year in which the person appears in the database).

In terms of independent variables, the models include information relating to: a) the worker's human capital and demographic characteristics; b)the process of assimilation in Brazil and the social and cultural differences; c) the operational sector of the companies employing the foreign workers; d) the status of the first occupation, based on the EGP classification(Carvalhaes 2015).Detailed information on these variables appears in the appendices.

Here it is worth explaining our inclusion of the *predict_Formal* variable as a control in the model, created in order to correct selection bias in the sample. This bias derives from the fact that the RAIS includes only workers from the formal job market. However, a large number of immigrants are known to be employedin informal jobs in Brazil. To correct this bias, the *predict_Formal*variable was estimated, which refers to the probability of a worker being employedin the formal market rather than the informal. To create this variable, datafrom the 2010 Demographic Census relating to individuals in the informal sector was added to each year of the RAIS, and a logistic regression was applied to the data. This logistic regression included the following independent variables: age, sex, schooling, foreign or Brazilian, disabled, and region of the country in which the person is resident. This regression generated a score for the likelihood of the worker being employed in the formal sector, based on the observed variables.

In relation to the statistical models used in the analyses, we initially estimate a model including all the foreign workers.[8]Next, we estimate specific models for each group of foreigners.This process generatedfifteen equations.

3. Results

3.1 Descriptive analysis

The sample analysed comprises 53,692 (71.2%) men and 21,651 (28.8%) women, with the percentages between men (averaging 70%) and women (30%)unvarying over time.The Haitians are the group with the smallest percentage of women(14%) and the Paraguayans with the largest (40%). This result differs from findings in other South American countries like Argentina and Chile, which have higher percentages of foreign women employed in the labour market (Maguid & Bruno 2010, Bruno 2007). One possible explanation may be that we are analysing data exclusively taken from the formal labour market.However, we believe this is not the case, given that these percentages are very close to the percentage of foreigners entering the country, as can be verified in the 2015 OBMIGRA report (Oliveira, Pereira & Quintino 2015).

In relation to occupations with the highest percentages over the years, we identify the position ofadministrative manager among men(3% of the total)and retail seller among women(6%). Four occupational positions stand out with higher percentages for both sexes: administrative manager, retail seller, administrative assistant and office assistant.However, we observe a higher segmentation and polarization of occupations among men:in other words, among those occupations with the highest proportion of foreigners there exist both positions with higher occupational status, like managers, and positions at the base of the occupational rankings, like labourersand production line workers. These findings corroborate the evidence found in studies by Adseràand Ferrer (2016)and Virgílio (2019) in Canadaand Santiago (Chile), respectively, which identify an occupational polarization, as well as an occupational dispersal of immigrants.

8 In the case of this model, the immigrant group of reference are the Portuguese, given their number and the fact of being the group with the least social distance from Brazilians.

We also analysed the existence of occupational niches on entering and leaving the labour market. In terms of entry occupation, neither sex presents high percentages of concentration in lower-skilled occupations – that is, in unskilled manual labour like general services, cleaning or construction.Furthermore, for men and women, there is an increase of foreigners employed in occupational groups in their final job that demand more analytic and management skills compared to their entry job. In the final employment, there is a higher percentage of workers occupying posts such as "directors and managers,""science professionals and intellectuals,""technicians and secondary education professionals." On the other hand, there is a notable decline in all those occupational groups demanding fewer qualifications when we compare the start and end of the labour trajectory.

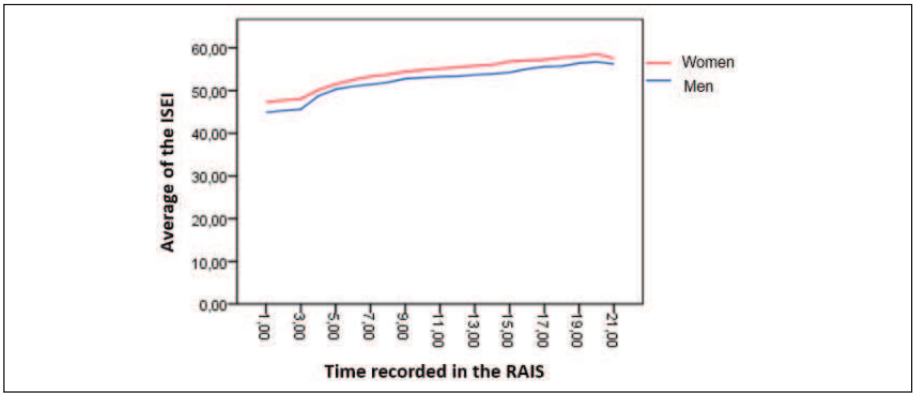
This data suggests that foreign men and women demonstrate a tendency to upward mobility in the Brazilian labour market. These findings closely match the studies of Adserà, Ferrer and Herranz (2020), Adseràand Ferrer (2016),andAdseràand Chiswick (2007),which show that, with the passage of time, foreign women end up occupying jobs that demand more analytic skills and less physical effort.

In addition, we observe that foreign women in the formal market are generally not employed in jobs at the base of the occupational structure, but either in intermediary service activities or as science professionals and intellectuals. This data contradicts some of the literature's predictions, which classify foreign women as secondary workers, employed mainly in care professions.Onepossible explanation for this discrepancycould be that the literature refers to foreigners migrating from poor countries to rich countries, unlike foreigners migrating to Brazil who tend to come from developed or developing countries to a developing country. A second possible explanation is that we are dealing solely with the formal market, while previous studies do not specify whether the type of market is formal or informal, recognizing thatundocumented and heavily exploited foreign women potentially work in the informal sector. Another possible explanation is the fact that Brazil has a labour pool in precarious services (principally the general service, cleaning, and care sectors) generated by internal migration, making this space uncompetitive for foreign workers.

In terms of the average evolution of the ISEI with time recorded in the RAIS (Graph 1), we identified that the ISEI of women remains higher than

those of men over time. The data suggest that the greater the experience on the formal work market, the higher the occupational status, principally for women.This result corroborates previous studies in both developing and developed countries, demonstrating that more experience in work, and more assimilation, increased the occupational status of immigrants (CHISWICKET al., 2005, POWERS et al., 1998). However, the result presents a higher average value of occupational status for women than for men.

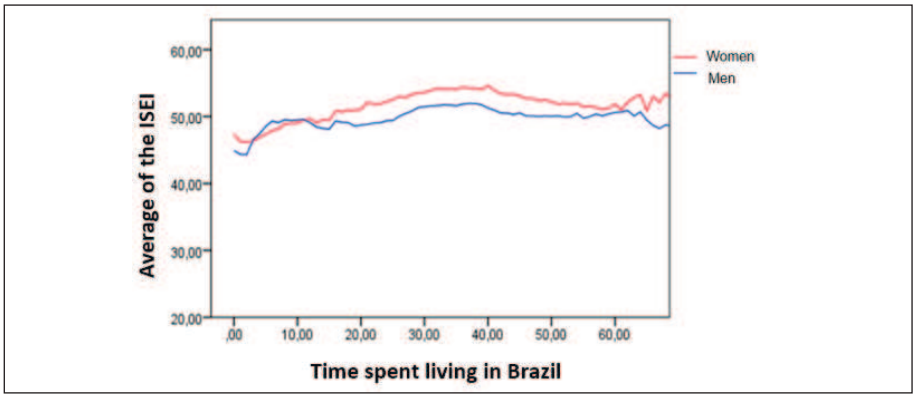
Graph1– Average evolution of the ISEI with time recordedin the RAIS



Source: data elaborated by the authors based on RAIS 1995 to 2015.

On the average evolution of the ISEI with time spentliving in Brazil (Graph 2), there is a tendency for an average increase of the ISEI, with occasional small dips, but without reducing the foreigner's status below the ISEI of the first job. These results run counter to the findings on immigrants in Spain contained in the studies of Vidal-Coso and Miret-Gamundi (2014) and Aysa-Lastro and Cachón (2013) who suggest a pattern of stagnation of immigrants in low-skilled occupations. However, our results corroborate other studies that identify upward mobility in occupational status for men and women (CHISWICK 1977 AND 1978, ADSERÀ& CHISWICK 2005, ADSERÀ& FERRER 2016; VÍRGÍLIO 2019, to cite some examples).

Graph2– Average evolution of the ISEI with time spent living in Brazil



Source: data elaborated by the authors based on RAIS 1995 to 2015.

In terms of the mobility rates obtained through the ISEI,the results indicate thatmen and women are fairly closeacross all dimensions (immobility or upward and downward mobilities: see Table 1),with foreigners in Brazil generally displaying higherrates of immobility.Even so, it is worth highlighting a small percentage (0.06%) higher upward mobility among men compared to women. Based on these descriptive analyses, we can identify that women have average ISEIs higher than those of men and that women's trajectories of mobility are not very different to men's, but they do show a small disadvantage in terms of percentage of upward mobility. We can call attention to the fact that women have a higher percentage of immobility. Perhaps this is not a significant disadvantage for foreign women, given that they present a higher average ISEI than their male peers over time.

Table1 - (Im)mobilityfor foreign men and women, calculated by subtractingthe ISEI of the first job from the ISEI of the last job

Result	Variable (ISEI final – ISEI initial)	
	Women	Men
Immobility Rate	49.6%	49.1%
Upward Mobility Rate	28.8%	29.6%
Downward Mobility Rate	21.6%	21.3%
Total	100%	100%

Source: data elaborated by the authors based on RAIS 1995 to 2015.

Nonetheless, these results do not allow us to infer whether foreign wo-

men have more or fewer chances of upward mobility compared to foreign men in Brazil's formal labour market due to the fact of being women. To verify this possibility, a more advanced analysis is needed, controlling other factors.

3.2 *Advanced analyses: model estimators*

In relation to the results of the econometric model, we foundthat being male has a positive and significant impact on the individual's upward mobility. The estimated coefficient demonstrates that, on average, men have a 0.9-point increase in the upward mobility indicator compared to women (see the result of the coefficient in the appendix for Model 1) Based on this result, we validated the following hypotheses: i) immigrant women have different mobility patterns to men; and ii) foreign women have fewer chances of upward mobility compared to foreign men.These results demonstrate that sex is a factor influencing the trajectory of mobility in the Brazilian labour market.

We also found that immigrant women are not generally concentrated in general service/cleaningor care occupations.On average, they alsohave a higher occupational status than men and higher percentages of immobility, and have fewer chances of upward mobility. Generally speaking, their lower chances of upward mobility corroborate previous studies. It should be stressed that this result concerns immigrants employed in the formal labour market,recognizing that the foreign workforceis characterized by workers with better qualifications and a higher educational level than the informal market.This fact perhaps explains the low concentration of foreign women and men in precarious occupations, divergingfrom other studies(AYSA-LASTRA & CACHÓN, 2013; FERNANDEZ-MACIÁS et al., 2015; VIDAL-COSO & MIRETA-GAMUNDI, 2014; AMONG OTHERS).

In the study by Maguid and Bruno (2010) on the employment and occupational mobility of Bolivians and Paraguayans in the metropolitan area of Buenos Aires, within the formal labour market, Paraguayan women were indeed found to be concentrated in domestic services and did not leave this sector over time, remaining defined by high levels of immobility. However, the same did not occur among Bolivian women who achieved higher levels of upward mobility than their male counterparts. Consequently, the ques-

tion remains: does the inequality between immigrant men and women vary according to the worker's country of birth?

We analysed the distribution of occupational groups at the start of the labour trajectory of foreigners and the occupational groups of the last occupation for each country of the immigrants. In all groups of foreigners, men and women, there is a percentage increase of professionals in the posts of directors and managers at the end of the labour trajectory, except among Haitian women.For immigrants from countries of the Global North, this occupational group presented higher growth compared to other categories in the socio-occupational hierarchy. In other words, for all foreigners from countries of the Global North at the end of the professional career, the category with the highest percentage growth was directors and managers,a finding applicable to both men and women, which corroborates the studies of Suziki (2019).

Among foreign workers from countries of the Global South, three distinct patterns can be perceived. Argentineans, Chileans, Uruguayans and Chinese follow the trend of immigrants from the countries of the Global North where the highest levels of growth are observed among the occupations of directors and managers, over 4%at the end of their career. Among Paraguayans and Bolivians, on the other hand, there is a small growth of approximately 1% only, but other occupational groups stand out.For Bolivians, there is a clear increase at the end of the labour trajectory of "technicians and secondary education professionals,"with the same registered among Paraguayan men. Among Paraguayan women, there is a notable growth in administrative support workers at the end of the career. For Haitians, women can be seen to enter as "service workers, store and market sellers,"especially cleaners (15%), while men enter as "skilled workers, factory workers and building craftsmen, mechanics and other trades" and a growth of both sexes in their final employment as "service workers, store and market sellers."We highlight the fact that Haitian women show a marked expansion in the group of "service workers" with a 9% increase at the end of the career and a reductionof "plant, machine and assembly workers."One possible explanation for the situation of Haitians is the short period ofmigratory flow to Brazil. Some studies (ADSERÀ & FERRER, 2016; ADSERÀ, FERRER & HERRAZ; 2020) argue that a period of 14 to 20 years is needed residing in the country of destination for more skilled occupations to be attained.

The analysis of the mobility rates through the calculation of the ISEIsfor each country of birth of the immigrants indicates that all these groups show higher levels of immobility, except Chilean men and Haitian women who have higher percentages of upward mobility, 38% and 37% respectively. The groups with the highest percentages of immobility are Chinese women and men, with 69% and 64% respectively, followed by Bolivian men and women with 62% and 59%. Meanwhile, downward mobility attainshigher percentages among Haitian men (29%), Chilean men (28%) and Haitian women (27%).

The central finding is that there are different occupational trajectories for men and women among distinct national groups, whether from the Global North or South. We did not identifya downward mobility pattern for foreign women. In general, men have a higher or similar rate of downward occupational mobility to women. But the question remains:is sex a factor that influences these differences?

In the econometric models separated by each nationality, the results indicate that among Argentineans, Paraguayans, Uruguayans, Italians, Japanese and Chinese there is no statistically significant effect on the probability of upward mobility between men and women. Among Bolivians, Chileans, Germans, Spanish, (US) Americans, French and Portuguese, on the other hand, being a man represents a positive effect on the upward mobility of workers, indicating a lower chance for foreign women.Finally, in the case of Haitians, women have the highest probabilities of achieving upward mobility compared to men (see the result of the coefficients in the appendix for Model 2).

These findings corroborate our third hypothesis concerning the heterogeneous impact of the sex variable depending on country of birth of the immigrant. Furthermore, the results show thatwomen are generally either in a similar situation to their male peers or relatively worse in terms of upward mobility.

In this sense, the findings underline the studies that argue that the country of birth is fundamental to our comprehension of the immigrant'semployment situation in the labour market of the host country, whether male or female (ADSERÀ, FERRER & HERRANZ, 2020; VIRGÍLIO, 2019; PORTES & MANNING, 2008). However, it is worth emphasizing that the individual's nationality is more important than whether the immigrant comes from the Global North or South.

4. Final considerations

The results found in this study arefairly significant. They dialogue with the international literature, which affirms that: i) immigrant women, in general, are employed in worse jobs than men; ii)they either tend to present fewer chances of upward social mobility in the labour market of the host society compared to men; iii) or their chances of upward social mobility are null – that is, they do not present chances of mobility in a U-curve pattern but in an L-shape.

We stress that, in the case of our study, it was not possible to measureU--curve upward mobility, as diverse studies have done. This is because our source of data contains no information on the occupation of immigrants in the country of origin. For this reason, we examine the possibility of a J--shaped mobility among international male and female immigrants. In other words, comparing the person's occupation on entry into the Brazilian labour market and the most recentoccupation, we have sought to encounter indicators of upward mobility with an emphasis on gender. The aim is to ascertain whether: i) sex is a variable that influences the trajectory of (im)mobility of the person under study; ii) women are at a disadvantage with regard to the chances of upward occupational mobility; and iii) the chances of social mobility among men and women differ when we consider the nationality of immigrants.

Another point to highlight is that our data has limitations, the most significant being the fact that we analysed only those immigrants employed in Brazil's formal labour market by companies, thus excluding those working for individuals. Our results, therefore, may be quite different from those encountered in previous studies that coverthe labour market as a whole (formal and informal, thus excluding female domestic workers for individuals, an occupation held by many foreign women). Furthermore, the database does not contain any information on employers and self-employed workers, positions occupied by many international immigrants. This fact can generate an underestimation of the upward mobility (in the case of employers) and the upward and downward mobility (in the case of the self-employed) of those individuals being studied.

In the analysed data, in general, we did not observe, as indicated by some earlier studies, a concentration of foreign women in low status occu-

pations in the care sector, except among Haitians, or a concentration of men in unskilled industrial jobs. We did find that the majority of foreign women are employed in Brazil's formal market in non-manual routine occupations, considering the period of assimilation into the host society. One probable explanation for this finding resides in the differences between migrations from poor to rich countries and from rich to poor countries. It was not expected, of course, that foreign women arriving from rich countries, like Germans, French and Americans, would become employedin more low-qualified occupations in Brazil (like the care sector). However, the same was not expected in the case of female immigrants from poor countries, like Bolivian, Paraguayan and Peruvian women, among others, which is what we found. These results differ, therefore, from those encountered by Bruno (2007) andMaguid and Bruno (2010) with regard to Paraguayan and Peruvian women in the metropolitan area of Buenos Aires. Hence, theissue of migration from the Global North or South may not be a good explanation.

Two other possible explanations for this result seem more pertinent, therefore: i) we analyseddocumented women employed in the formal market, who may perhaps be positively selected in relation to human capital and other characteristics valorised on the labour market, unlike foreign women workingin the informal market; ii)Brazil has a labour pool in the service sector generated by internal migration, where foreign women, due to the competition, are unable to become insertedand end up escaping the more precarious services.These are questions that need to be analysed in future studies.

In terms of the insertion of foreign men in the formal market, we can notea concentration of workers in high-level professional posts and a tendency for an increase in male immigrants occupying skilled manual jobs.The explanations are the same as the case for women.

Men and women display a similar pattern in terms of the average evolution of the ISEI according to time recordedin the RAIS, a variable utilized as a proxy for experience in the labour market. It was also foundthat the ISEI of women remains higher than men's over time.For both sexes, there is a tendency for the ISEI to increase on average.

For foreigners as a whole, the sex variable has an effect on comprehending the occupational trajectories of foreigners in Brazil, with men generally showing higher probabilities of upward mobility than women. In other wor-

ds, the model utilized for all foreigners confirms our overall supposition that female immigrants have different mobility patterns to men with lower probability of upward mobility, as shownby the international literature. However, when we analysed the fourteen national groups separately, the difference is positive for men among a higher portion (seven groups). For the six remaining groups no statistical difference is observed.Meanwhile, for Haitians the difference is negative for men. This case should be analysed in more detail in future studies.

This evidence demonstrates that detailed analyses are needed of the situation experienced by foreigners in the Brazilian labour market. In other words, if we only undertake a descriptive analysis of the occupational situation and mobility among men and women, we do not encounter a very different situation between them.In some cases, we might even conclude that women find themselves in a better situation, since, for instance, they presenthigher values of socio-occupational status than men over time.

However, as we proceed deeperinto the analyses, controlling other important variables in order to examine the real effect of sex on occupational mobility, we identify something very interesting: the pattern found among male and female foreigners is that female immigrants do not have more chances of upward mobility than their male counterparts (except for Haitian women).

Moreover, this analysis enables us to counterthe assertion of Aysa-Lastro and Cachón (2013) of the persistenceof an L-shaped model for women, reflecting consistently high levels of stagnation in jobs low on the occupational hierarchy. Our results show that although women do have a pattern of fewer chances of upward mobility than men, they do not remain stagnant in the initial occupations over time. Women present rates of upward mobility and, if we consider some groups, have similar chances as their male counterparts.And as we have seen, this is not only the case for foreign women from countries of the Global North: the same applies to women from the Global South too.

Based on these findings, new questions emerge, which we intend to analyse in future studies. For instance: what is the effect of education on the occupational trajectory of foreign workers? Do educational qualifications in Brazil have a better return on the foreigner's upward mobility compared to those acquired in another country? And what is the effect of colour/race on the immigrant's mobility?

References

ADSERÀ, ALÍCIA; FERRER, ANA M.; HERRANZ, VIRGINIA. Descriptive labour market outcomes of immigrant women across Europe, *Working Paper Series*, No. 18, University of Waterloo, Canadian Labour Economics Forum (CLEF), Waterloo, 2020.

ADSERÀ, ALÍCIA; FERRER, ANA M.; "Occupational Skills and Labour Market Progression of Married Immigrant Women in Canada", *Labour Economics*Vol 39, p. 88-98, April. 2016.

ADSERÀ, A. E B. CHISWICK. "Are There Gender Differences in Immigrant Labor Market Outcomes across European Countries?", *Journal of Population Economics*, 20 (3), 495–526, 2007

AYSA-LASTRA, Maria.; CACHÓN, Lorenzo. Movilidad ocupacional segmentada: el caso de los inmigrantes no cumitarios en España. *Revista Española de Investigaciones Sociológicas (REIS)*, v. 1, p. 23-46, January 2013a. Available at: https://www.ingentaconnect.com/content/cis/reis/2013/00000144/00000001/art00001.

AYSA-LASTRA, Maria., CACHÓN-RODRÍGUEZ, Lorenzo. Determinants of Segmented Occupational Mobility of non-European Union Immigrants in Spain. *71*, v. 2, p. 383-413, 2013-04-24 2013b. Available at: http://revintsociologia.revistas.csic.es/index.php/revintsociologia/article/view/519.

BRUNO, Matías. "Migración y movilidad ocupacional de peruanos en Buenos Aires". *IV jornadas argentinas de estudios de población*". Associación de estudios de población de la Argentina, Córdoba, 2007.

CARVALHAES, Flávio. A tipologia ocupacional Erikson-Goldthorpe-Portocarero (EGP): uma avaliação analítica e empírica. *Soc. estado.*, v. 30, n. 3, p. 673-703, 12/2015 2015. ISSN 0102-6992.

CHISWICK; Barry. The Effect of Americanization on the Earnings of Foreign-Born Men. *Journal of Political Economy,* v. 85, n. 5, p. 897-921, 1978.

CHISWICK, Barry. Longitudinal Analysis of the Occupational Mobility of Immigrants *Proceedings of the 30th Annual Winter Meetings, Industrial Relations Research Association*, p. 20- 27, 1977.

CHISWICK, Barry, PAUL William. Immigrant Earnings: a longitudinal analysis. *Review of Income and Wealth*, v. 51, n. 4, p. 485-503, 2005. ISSN 1475-4991. Available at: http://onlinelibrary.wiley.com/doi/10.1111/1467-9361.00039/abstract

EGREJA, Catarina.; PEIXOTO, João. Caminhos limitados ou mobilidade bloqueada? A mobilidade socioprofissional dos imigrantes brasileiros em Portugal. *Sociologia, Problemas e Práticas*, n. 67, p. 43-64, 2011-09-01T00:00:00+02:00 2011. ISSN 0873-6529. Available at: http://spp.revues.org/586.

FERNÁNDEZ-MACÍAS, Enrique. et al. *Employment and Occupational Mobility among Recently Arrived Immigrants*: The Spanish Case 1997–2007 | SpringerLink. 2015. Available at: https://link.springer.com/article/10.1007/s11113-014-9347-4.

GANZEBOOM, H. B.; DE GRAAF, P. M.; TREIMAN, D. J. A standard international socio-economic index of occupational status. *Social science research,* v. 21, p. 1-56. 1992.

KOFMAN, Eleonor.; RAGHURAM, Parvarti. Gender and global labour migrations: Incorporating skilled workers. *Antipode,* v. 38, p. 282-303, 2006.

LIN, Nil. *Social capital*: a theory of social struture and action. Cambridge: Cambridge University Press, 2006.

MAGUID, Alícia; BRUNO, Sebastian. "Migración, mercado de trabajo y movilidad ocupacional: el caso de los bolivianos y paraguayos en área metropolitana de Buenos Aires". *Población de Buenos Aires*, v. 7, n.12, p. 7-28.

MASSEY, Donald. *Worlds in motion*: understanding international migration at the end of the millennium. Oxford: Clarendon Press, 1998. ISBN 0198294425 9780198294429.

NORONHA, Claudia L. A**.** *Análise longitudinal da mobilidade ocupacional dos estrangeiros no mercado de trabalho brasileiro*. 2018. (Tese de doutorado). Sociologia, UFMG/Belo Horizonte. Available at: https://repositorio.ufmg.br/bitstream/1843/BUOS-B87FJA/1/tese_claudia_l.ayer_noronha_2018_final.pdf

OLIVEIRA, Antonio T.R.de, PEREIRA, Felipe and QUINTINO, Felipe. "O Sistema Nacional de Cadastramento de registro de estrangeiros (SINCRE) e a Migração Regular no País". In: CAVALCANTI, Leonardo; OLIVEIRA, Antonio Tadeu; TONHATI, Tânia (eds.). *A Inserção dos Imigrantes no Mercado de Trabalho Brasileiro*. Relatório Anual 2015. Brasília: Cadernos do Observatório das Migrações Internacionais, Ministério do Trabalho e Previdência Social/ Conselho Nacional de Imigração e Coordenação Geral de Imigração. OBMigra: Brasília, DF, 2015.

ORGANIZAÇÃO DAS NAÇÕES UNIDAS - ONU. "Country Classification". In: World Economic Situation and Prospects 2014, New York: United Nations. Available at: https://unctad.org/en/PublicationsLibrary/wesp2014_en.pdf. Acesso em 03/02/2020.

PERES, Roberta. A imigração de bolivianas na fronteira: desafios teórico-metodológicos. In: BAENINGER, R. (Ed.). *Imigração boliviana no Brasil*. Campinas: NEPO, FAPESP, CNPq, Unfpa, 2012. p.271-295.

PERES, Roberta; BAENINGER, Rosana. Mulheres Latino-americanas e Haitianas no Brasil: perfil na imigração internacional. *0*, 2017-07-27 2017. Available at: http://www.abep.org.br/publicacoes/index. php/ anais/article/view/2681.

PORTES, Alejandro.; MANNING, Robert. The Immigrant Enclave: theory and Empirical Examples. In: GRUSKY, D. B. (Ed.). *Social stratification: class, race, and gender in sociological perspective*. 3. Boulder, CO: Westview Press, 2008. p. 516-528.

POWERS, Marry; SELTZER, William; SHI, Jing. Gender differences in the occupational status of undocumented immigrants in the United States: experience before and after legalization. *International Migration Review*, v. 32, n. 4, p. 1015-1018, 1998. ISSN 01979183. Available at: http://go-galegroup.ez27.periodicos.capes.gov.br/ps/i.do?p=AONE&sw=w&issn=01979183&v=2.1&it=r&id=GALE.

PURKAYASTHA, Bauas. Skilled migration and cumulative disadvantage: the case of highly qualified Asian Indian immigrant women in the US. *Geoforum*, v. 36, p. 181-196, 2005.

RUEF, M. *Occupational Mobility among U.S. Blacks, 1880-1940s*. GRIGORYEVA, A. Duke University: Working Paper, Department of Sociology, 2017.

SUZIKI, Lílian S. do A. "Trajetórias ocupacionais de trabalhadores imigrantes no Brasil: caminhos desiguais". *Soc. Cult.*, vol. 22, n. 1, p. 66-87, 2019.

STERNBERG, Sheila. A RAIS MIGRA como instrumento de análise do mercado de trabalho: um exercício a partir dos dados do Rio Grande do Sul. *Indicadores Econômicos FEE*, v. *28*, p. 183-199, 2001.

SÁNCHEZ-SOTO, Gabriela.; SINGELMANN, Joachim. The Occupational Mobility of Mexican Migrants in the United States. *0*, 2017-08-31 2017. Available at: http://revistarelap.org/ojs/index.php/relap/article/view/166.

VIDAL-COSO, Elena.; MIRET-GAMUNDI, Pau. The labour trajectories of immigrant women in Spain: Are there signs of upward social mobility? *Demographic Research*, v. 31, 2014.

VILELA, Elaine.; COLLARES, Ana.; NORONHA, Claudia. Migrações e Trabalho no Brasil: Fatores étnico-nacionais e raciais. *Revista Brasileira de Ciências Sociais*, v. 30, p. 87, 2015.

VILELA, Elaine; NORONHA, Claudia; CAMPOS, Marden. "Quem leva a pior?" Nordestinos e bolivianos no mercado de trabalho paulista. *Revista Brasileira de Estudos de População*, 2019, 36.

VIRGÍLIO, Pablo B. "Incorporación de inmigrantes sudamericanos em Santiago de Chile: redes migratóiras y mobilidad ocupacional".*Migraciones interancionales*, v. 10, n. 8, 2019.

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Appendices

Appendix1 – Description of the dependent and independent variables used in the models

Dependent variable

Box1 – Variable dependent used for estimation

Variable	Type	Description
Mobility	Continuous	Subtraction of theISEI (International Socio-Economic Index ofOccupational) of the first occupation from the ISEI of the last occupation. That is, Mobility =ISEI last occupation - ISEI first occupation

Source: authors' elaboration

Box2– Independent variables used in the models

Variable	**Type**	**Level**	**Description**
Sex	Binary	2	1= Men
			0= Women
White	Binary	2	1= White
			0= Non-white
Age	Continuous	1	Age of individual, in years
Age2	Continuous	1	Age squared
Education level			
Educ2	Binary	1	1= Complete primary and incomplete secondary education/
			0= Illiterate or incomplete primary education/
Educ3	Binary	1	1=Complete secondary or incomplete higher education/
			0= Illiterate or incomplete primary education/
Educ4	Binary	1	1= Complete higher education/
			0= Illiterate or incomplete primary education/
Educ_Brasil	Binary	1	1= Education acquired in Brazil/
			0= Education acquired abroad
Age on migrating			
17 to 24	Binary	2	1= Group of people who migrated between 17 and 24/
			0= Group of people who migrated aged 16 or under
25 to 40	Binary	2	1= Group of people who migrated between 25 and 40/
			0= Group of people who migrated aged 16 or under
Over 41	Binary	2	1= Group of people who migrated aged 41 and over/
			0= Group of people who migrated aged 16 or under
Time of residence			Time range of residence in Brazil
fx_resid2	Binary	1	1= Time of residence in Brazil between 4 and 5 years/
			0= Time of residence in Brazil between 0 and 3 years
fx_resid3	Binary	1	1= Time of residence in Brazil between 6 and 10 years/
			0= Time of residence in Brazil between 0 and 3 years
fx_resid4	Binary	1	1= Time of residence in Brazil between 11 and 20 years/
			0= Time of residence in Brazil between 0 and 3 years
fx_resid5	Binary	1	1= Time of residence in Brazil over 21 years/
			0= Time of residence in Brazil between 0 and 3 years
TimeEmp	Continuous	1	Time of employment in company
T	Continuous	1	Continuous variable between 0 and 20, corresponding to the years from 1995 to 2015
Time	Continuous	2	Number of times that the foreigner appears in the RAIS database

Continuação

Variable	Type	Level	Description
Employment	Binary	1	1= Active employment/
			0 = Inactive employment
Nationality[1]			
Argentina	Binary	2	1 = Argentinean / 0 = Portuguese
Chile	Binary	2	1 = Chilean / 0 = Portuguese
Bolivia	Binary	2	1 = Bolivian / 0 = Portuguese
Uruguay	Binary	2	1 = Uruguayan / 0 = Portuguese
Haiti	Binary	2	1 = Haitian / 0 = Portuguese
Paraguay	Binary	2	1 = Paraguayan / 0 = Portuguese
Italy	Binary	2	1 = Italian / 0 = Portuguese
Spain	Binary	2	1 = Spanish / 0 = Portuguese
Japan	Binary	2	1 = Japanese / 0 = Portuguese
China	Binary	2	1 = Chinese / 0 = Portuguese
USA	Binary	2	1 = American / 0 = Portuguese
Germany	Binary	2	1 = German / 0 = Portuguese
Class typology of the first occupation (EGP classification)	Continuous		
Egp1	Binary	2	1= High level professionals
			0= Agricultural workers and others in primary prod.
Egp2	Binary	2	1= Low level professionals
			0= Agricultural workers and others in primary prod.
Egp3	Binary	2	1= Non-manual routine, higher education
			0= Agricultural workers and others in primary prod.
Egp4	Binary	2	1= Services and sales
			0= Agricultural workers and others in primary prod.
Egp5	Binary	2	1= Manual work supervisors
			0= Agricultural workers and others in primary prod.
Egp6	Binary	2	1= Skilled manual work
			0= Agricultural workers and others in primary prod.
Egp7	Binary	2	1= Semi-skilled and unskilled manual work
			0= Agricultural workers and others in primary prod.
predict_Formal	Continuous	2	Probability of worker being in the formal sector
Company sector			
Sector2	Binary	1	1 = Rigid sector / 0 = Traditional sector
Sector3	Binary	1	1 = Flexible sector / 0 = Traditional sector
Sector4	Binary	1	1 = Public sector / 0 = Traditional sector
Company size[2]			
Medium	Binary	1	1 = Companies between 40 and 99 employees/
			0 = Companies between 4 and 49 employees
Large	Binary	1	1 = Companies over 100 employees/
			0 = Companies between 4 and 49 employees
Region of the country			
North	Binary	1	1 = North / 0 = Southeast
Northeast	Binary	1	1 = Northeast / 0 = Southeast
Centre-West	Binary	1	1 = Centre-West / 0 = Southeast
South	Binary	1	1 = South / 0 = Southeast

Source: authors' elaboration

1 The Portuguese are the immigrants used as a reference in the majority of the statistical equations since they form part of the group with the highest representativeness in the labour market due to their size, and because this is the group with least social distance from Brazilians.

2 The parameters of the Inter-Union Department of Statistics and Socioeconomic Studies (DIEESE) were used as a reference for this classification.

Appendix 2 –Table of mobility calculated by subtracting ISEI of first job from ISEI of last job in the RAIS, according to nationality and the foreigner's sex

Countries of the Global South		
Result – ARGENTINA	**Men**	**Women**
Immobility	44%	46%
Upward mobility	33%	31%
Downward mobility	23%	23%
Total	100%	100%
Result – BOLIVIA	**Men**	**Women**
Immobility	62%	59%
Upward mobility	21%	25%
Downward mobility	17%	16%
Total	100%	100%
Result – CHILE	**Men**	**Women**
Immobility	34%	38%
Upward mobility	38%	37%
Downward mobility	28%	25%
Total	100%	100%
Result – PARAGUAY	**Men**	**Women**
Immobility	53%	53%
Upward mobility	26%	27%
Downward mobility	22%	21%
Total	100%	100%
Result – URUGUAY	**Men**	**Women**
Immobility	45%	46%
Upward mobility	31%	30%
Downward mobility	24%	24%
Total	100%	100%
Result – HAITI	**Men**	**Women**
Immobility	40%	36%
Upward mobility	31%	37%
Downward mobility	29%	27%
Total	100%	100%
Result – CHINA	**Men**	**Women**
Immobility	64%	69%
Upward mobility	22%	18%
Downward mobility	13%	13%
Total	100%	100%
Countries of Global North		
Result – SPAIN	**Men**	**Women**
Immobility	51%	52%
Upward mobility	27%	27%
Downward mobility	22%	21%
Total	100%	100%
Result – USA	**Men**	**Women**
Immobility	59%	59%
Upward mobility	24%	24%
Downward mobility	17%	17%
Total	100%	100%
Result – FRANCE	**Men**	**Women**
Immobility	55%	59%
Upward mobility	23%	23%
Downward mobility	22%	18%
Total	100%	100%

Result – ITALY	**Men**	**Women**
Immobility	53%	52%
Upward mobility	30%	29%
Downward mobility	18%	20%
Total	100%	100%
Result – GERMANY	**Men**	**Women**
Immobility	53%	53%
Upward mobility	26%	29%
Downward mobility	21%	18%
Total	100%	100%
Result – JAPAN	**Men**	**Women**
Immobility	55%	60%
Upward mobility	27%	23%
Downward mobility	18%	17%
Total	100%	100%
Result – PORTUGAL	**Men**	**Women**
Immobility	47%	49%
Upward mobility	31%	30%
Downward mobility	22%	21%
Total	100%	100%

Source: data elaborated by the authors on the basis of RAIS 1995 to 2015.

Appendix 3 - Results from the estimated econometric models

MODEL 1 –With the sex variable included and Portuguese as group of reference

mob	Coef.	P>z
sex_rev	.9400446	0.000
employment_	-.13534	0.000
age	-.095253	0.000
age2	.0004628	0.000
fx_resid2	.3325094	0.000
fx_resid3	.5317556	0.000
fx_resid4	.7032765	0.000
fx_resid5	.5645567	0.000
time	.2661734	0.000
timeEmp	.0518283	0.000
educ2	5.990765	0.000
educ3	7.695479	0.000
educ4	10.80457	0.000
educ_brasil	-.1211912	0.000
Argentina	-.1346423	0.393
Bolivia	-2.170055	0.000
Chile	-.8119298	0.000
Paraguay	-3.481762	0.000
Uruguay	-1.86363	0.000
Germany	1.515631	0.000
Spain	.4791505	0.025
USA	1.304767	0.000
France	1.080905	0.000
Italy	.4737687	0.024
Haiti	-3771346	0.000
Japan	.1283565	0.564
China	.6359618	0.002
id_17_24	-.7720249	0.000
id_25_40	.0955575	0.365
id_41_over	.8630414	0.000
sector1	.158557	0.000
sector2	-.0194536	0.005
sector4	-.1523418	0.000
medium	.0681097	0.000
large	.2392063	0.000
predict_Formal	-1482776	0.000
white	.3878362	0.002
north	-1.887583	0.000
northeast	-1.490705	0.000
centrewest	-.4391704	0.000
south	-.5837741	0.000
T	.0698628	0.000
egp_11	-14.98428	0.000
egp_12	-12.09424	0.000
egp_13	-6.87955	0.000
egp_14	-5.366256	0.000
egp_15	-6.298378	0.000
egp_16	-2.309984	0.000
egp_17	4.371912	0.000
_cons	13.7644	0.000

Source: data elaborated by the authors on the basis of RAIS 1995 to 2015.

MODEL 2 – For each group of foreigners separately. 14 equations estimated for each foreign nationality

Variables	Argentina		Bolivia		Chile		Paraguay		Uruguay		Germany		Spain	
	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z
sex_rev	.5857855	0.052	1.33604	0.000	1.035268	0.011	.0413195	0.866	.0085034	0.980	1.592791	0.007	1.738868	0.000
employment_	-.1305659	0.000	-.1634908	0.000	-.1539649	0.000	-.0788347	0.000	-.1344345	0.000	-.0680362	0.007	-.0953071	0.000
age	-.1090115	0.000	-.1327049	0.000	-.1287105	0.000	-.0163337	0.143	-.1274501	0.000	-.09894	0.000	-.0854242	0.000
age2	.0004475	0.000	.001152	0.000	.0010632	0.000	-.00049	0.000	.0007727	0.000	.0005137	0.000	.0004792	0.000
fx_resid2	.1857865	0.000	.2611148	0.000	.2513205	0.000	.2636409	0.000	.2357753	0.000	.066856	0.051	.3521559	0.000
fx_resid3	.3109894	0.000	.4685554	0.000	.2772083	0.000	.3395014	0.000	.4515798	0.000	.0777092	0.039	.6230639	0.000
fx_resid4	.3750246	0.000	.5626474	0.000	.0318208	0.550	.3313561	0.000	.4708434	0.000	.2455397	0.000	.9511398	0.000
fx_resid5	.1752701	0.000	.403185	0.000	-.4969359	0.000	.1687521	0.017	.2921537	0.000	.1878564	0.010	1.017923	0.000
time	.3862256	0.000	.2896905	0.000	.1851403	0.000	.3319335	0.000	.3995334	0.000	.3016541	0.000	.1613578	0.000
timeEmp	.0580327	0.000	.0507836	0.000	.0599866	0.000	.0901551	0.000	.0635012	0.000	.0327052	0.000	.0479858	0.000
educ2	8.380169	0.000	5.386785	0.000	7.888004	0.000	3.675377	0.000	5.332294	0.000	11.63822	0.000	7.557214	0.000
educ3	9.914581	0.000	6.738062	0.000	9.317297	0.000	4.937496	0.000	6.73818	0.000	13.13179	0.000	9.789351	0.000
educ4	11.72654	0.000	11.22353	0.000	11.91987	0.000	10.81558	0.000	9.820294	0.000	14.47658	0.000	12.69325	0.000
educ_brasil	-.0166304	0.364	-.1934455	0.000	-.1229829	0.000	-.0775872	0.001	-.1366549	0.000	.2347277	0.000	-.1949891	0.000
age_17_24	-1.860244	0.000	-1.395026	0.000	-2.359755	0.000	-.5962847	0.039	-1.361457	0.002	-.8651002	0.382	.5454577	0.476
age_25_40	.0652602	0.852	-.6006593	0.075	-2.042676	0.000	-.101851	0.742	-.3923457	0.335	1.770989	0.005	.6663238	0.224
age_41_over	.8468313	0.090	-1.590484	0.009	-2.296536	0.003	1.010386	0.104	.3566907	0.571	2.670562	0.001	1.062994	0.134
sector1	.2202289	0.000	-.1722857	0.093	.2197976	0.023	.1799061	0.007	.5084409	0.000	.0304504	0.814	.1327866	0.291
sector2	.0342912	0.067	-.0439166	0.102	.0061655	0.785	.0458709	0.095	.0047438	0.851	-.0438663	0.193	-.0546126	0.126
sector4	-.2840048	0.000	-.0402058	0.414	-.3371867	0.000	-.3892889	0.000	-.1452172	0.076	-.2176256	0.023	-.0710014	0.494
medium	.0374026	0.037	.1080396	0.000	.063098	0.006	-.0195069	0.493	.0725574	0.004	.0893695	0.005	.0592772	0.081
large	.1548786	0.000	.1200317	0.000	.162577	0.000	.0773089	0.004	.1747312	0.000	.1581137	0.000	.2451067	0.000
predict_ Formal	-14.7375	0.000	-15.83122	0.000	-18.42879	0.000	-10.40459	0.000	-10.6254	0.000	-9.460943	0.000	-15.06422	0.000
white	.7568354	0.093	.1880646	0.419	1.660551	0.002	.009357	0.975	-.1088032	0.856	.8752406	0.493	1.458947	0.056
north	-1.576926	0.000	-.9131432	0.000	-2.039032	0.000	-1.123227	0.000	-2.070088	0.000	-.9206387	0.000	-1.518884	0.000
northeast	-1.246871	0.000	-1.334928	0.000	-2.034292	0.000	-.9951977	0.000	-1.110435	0.000	-.7029403	0.000	-1.070441	0.000
centrewest	-.3602747	0.000	-.4694101	0.000	-.573867	0.000	-.2073307	0.039	-.2577782	0.026	-.2814619	0.130	-.6829768	0.000
south	-.5116362	0.000	-.4115575	0.000	-.8168158	0.000	-.3980755	0.000	-.559402	0.000	-.2361882	0.002	-.2762065	0.012
T	.1242386	0.000	.0763595	0.000	.0947112	0.000	.0872796	0.000	.0696932	0.000	.0650122	0.000	.0310111	0.005
egp_11	-13.75812	0.000	-14.50444	0.000	-18.63406	0.000	-14.73492	0.000	-13.27389	0.000	-9.248045	0.018	-21.75564	0.000
egp_12	-11.19343	0.000	-9.771419	0.000	-14.78479	0.000	-10.34571	0.000	-10.26141	0.000	-5.536422	0.159	-18.40574	0.000
egp_13	-5.542224	0.002	-6.297217	0.000	-8.380754	0.007	-5.75142	0.000	-4.466467	0.000	-.9170717	0.816	-13.72079	0.001
egp_14	-5.299162	0.002	-3.820175	0.002	-6.794898	0.028	-4.423356	0.000	-3.043248	0.004	.5368868	0.893	-10.95339	0.008
egp_15	-4.9291	0.006	-7.441494	0.000	-7.976746	0.010	-7.876886	0.000	-3.526325	0.003	1.552786	0.695	-12.01816	0.003
egp_16	-1.81427	0.300	-4.958443	0.000	-4.52673	0.141	-2.26597	0.000	-.2296847	0.829	6.032828	0.130	-9.76671	0.017
egp_17	6.425312	0.000	3.510647	0.006	6.58345	0.036	3.229143	0.000	6.646897	0.000	19.77399	0.000	-1.761991	0.677
_cons	10.26746	0.000	14.89936	0.000	18.41782	0.000	6.994824	0.000	8.295176	0.000	-2.407989	0.561	17.7502	0.000

Source: data elaborated by the authors on the basis of RAIS 1995 to 2015.

MODEL 2–For each group of foreigners separately. 14 equations estimated for each foreign nationality (continuation)

Variables	USA		France		Italy		Haiti		Japan		China		Portugal	
	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z
sex_rev	1.172722	0.008	2.009644	0.000	.5604758	0.282	.6232441	0.008	.6598557	0.179	.2661975	0.404	1.14511	0.000
employment_	-.0629879	0.003	-.057248	0.015	-.0429936	0.029	-.0106439	0.057	-.1581109	0.000	-.0893214	0.000	-.1158013	0.000
age	-.0603658	0.000	-.0931152	0.000	-.0390738	0.000	-.0027266	0.766	-.0428429	0.000	-.0977171	0.000	-.1170215	0.000
age2	.000538	0.000	.0006032	0.000	.0004806	0.000	-.0001683	0.177	.0001808	0.026	.0004551	0.000	.000767	0.000
fx_resid2	.1066042	0.000	.1407133	0.000	.2231886	0.000	-.0135823	0.200	.1927897	0.000	.136142	0.000	.3080377	0.000
fx_resid3	.1985823	0.000	.2460084	0.000	.3859209	0.000	-.2018088	0.000	.2115506	0.000	.2032928	0.000	.5830549	0.000
fx_resid4	.255285	0.000	.3354644	0.000	.7365618	0.000	-.6280878	0.000	.3742763	0.000	.2330882	0.000	.6872239	0.000
fx_resid5	.2329662	0.002	.2532556	0.001	.9339258	0.000	-1.299549	0.000	.3875345	0.000	.1662735	0.000	.4315264	0.000
time	.161845	0.002	.1491489	0.006	.1474775	0.000	.9500244	0.000	.2539145	0.000	.3691002	0.000	.2278762	0.000
timeEmp	.0210656	0.022	.0210156	0.025	.048055	0.000	.0885405	0.000	.0264899	0.000	.0375053	0.000	.0463868	0.000
educ2	2.273647	0.000	-4.03856	0.000	6.885034	0.000	1.165731	0.000	6.598882	0.000	4.163308	0.000	5.62822	0.000
educ3	.870782	0.000	3.814256	0.000	8.324261	0.000	1.460179	0.000	7.930562	0.000	5.162042	0.000	7.632162	0.000
educ4	5.916326	0.000	5.506977	0.000	10.09806	0.000	4.73503	0.000	10.3257	0.000	6.488519	0.000	11.00713	0.000
educ_brasil	-.2344682	0.000	.1979825	0.000	-.1102774	0.000	.019571	0.002	-.134858	0.000	-.1657043	0.000	-.3159074	0.000
age_17_24	.0582041	0.940	.2954544	0.753	-.601733	0.415	-1.01354	0.063	.9975954	0.175	-.5414362	0.244	-.0742866	0.807
age_25_40	-.3158023	0.567	1.390034	0.051	.6794078	0.171	-1.513929	0.004	2.18833	0.000	-.6495137	0.099	.3988359	0.138
age_41_over	.1909108	0.783	1.131042	0.181	1.154892	0.073	-2.032151	0.000	3.202526	0.000	-.4852099	0.403	1.311371	0.001
sector1	-.0713572	0.324	-.0806428	0.303	-.0259847	0.797	-.0428005	0.100	.5671288	0.000	.0878369	0.126	.1073717	0.072
sector2	-.0398814	0.269	-.0489547	0.135	-.1262496	0.000	.0113771	0.106	-.0233413	0.432	-.032525	0.093	-.165286	0.000
sector4	-.1663374	0.060	-.2577875	0.002	-.0247035	0.737	-.6325358	0.000	-.2055953	0.028	.0097857	0.871	-.1058038	0.003
medium	-.0130424	0.660	.0690689	0.021	.0236035	0.325	-.0191747	0.027	.0647555	0.031	-.0770787	0.000	.0763065	0.000
large	.0416387	0.159	.053157	0.071	.1746159	0.000	.0132621	0.055	.1972152	0.000	-.031556	0.111	.2708742	0.000
predict_ Formal	-4.789523	0.000	-6.352354	0.000	-10.94898	0.000	-5.044194	0.000	-12.1176	0.000	-8.463535	0.000	-12.35327	0.000
white	1.564567	0.016	1.43386	0.065	.4312268	0.563	-.670869	0.012	.5846788	0.459	.7654111	0.208	.7458334	0.030
north	-.0773877	0.775	-.8925722	0.000	-1.034424	0.000	-.5893707	0.000	-1.172827	0.000	-.7634518	0.000	-1.406065	0.000
northeast	-.0905975	0.408	-.6459581	0.000	-1.040969	0.000	-.508381	0.000	-1.596036	0.000	-.973576	0.000	-1.387432	0.000
centrewest	-.1339927	0.302	-.7530597	0.000	-.4152739	0.000	-.1341252	0.000	-.5016869	0.003	-.0875373	0.237	-.4977145	0.000
south	.3287293	0.000	-.3677194	0.000	-.3707007	0.000	-.2082032	0.000	-.7837468	0.000	-.3951828	0.000	-.5777848	0.000
T	-.0020739	0.855	.041445	0.000	-.0096011	0.258	.1346404	0.000	.0422386	0.000	.0874255	0.000	.0265625	0.000
egp_11	-8.267028	0.191	-13.39707	0.028	-17.24214	0.000	-16.7069	0.000	-14.21682	0.000	-9.579801	0.000	-17.91139	0.000
egp_12	-5.964797	0.346	-10.29528	0.093	-14.91429	0.000	-19.80729	0.000	-13.11424	0.000	-7.094557	0.001	-14.40534	0.000
egp_13	.5058169	0.936	-5.267739	0.390	-10.06337	0.006	-10.23693	0.000	-6.90266	0.000	-4.068353	0.065	-9.298283	0.000
egp_14	4.179955	0.512	-2.822449	0.646	-8.373979	0.022	-9.666305	0.000	-4.449661	0.011	-3.892127	0.077	-7.924575	0.000
egp_15	3.201587	0.616	-2.775107	0.652	-8.043129	0.027	-20.72828	0.000	-3.927411	0.026	-2.757399	0.224	-7.56695	0.000
egp_16	10.97056	0.087	-.2084275	0.973	-5.694565	0.117	-2.620913	0.001	-1.262348	0.468	-.7818305	0.725	-5.190809	0.000
egp_17	17.21272	0.009	13.47183	0.035	7.006102	0.064	.9996694	0.221	6.981973	0.001	10.74704	0.000	5.844057	0.000
_cons	2.961655	0.643	8.415937	0.174	12.46909	0.001	3.042995	0.005	8.806003	0.000	8.227137	0.000	14.5737	0.000

Source: data elaborated by the authors on the basis of RAIS 1995 to 2015