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OCCUPATIONAL AND WAGE ASSIMILATION OF IMMIGRANTS IN THE SPANISH LABOUR MARKET

ASIMILACIÓN OCUPACIONAL Y SALARIAL DE LOS INMIGRANTES EN EL MERCADO LABORAL ESPAÑOL

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RESUMEN

La integración y asimilación de los inmigrantes es un proceso complejo que puede aumentar la desigualdad de no aplicarse las medidas adecuadas. Este trabajo se centra en España, un país sin fuerte tradición migratoria que ha recibido grandes flujos en un corto período. Examina la inserción laboral, movilidad ocupacional y asimilación salarial de los inmigrantes desde una perspectiva de género, cubriendo un periodo de 15 años. Este amplio período permite entender este proceso, al poder los inmigrantes adquirir suficiente experiencia laboral. Además, comprueba si los países de recepción más recientes reproducen patrones similares a aquellos con larga trayectoria migratoria. Usando la Muestra Continua de Vidas Laborales, se construyen tablas de movilidad para estudiar la movilidad absoluta y relativa. También se analiza la ratio entre las bases de cotización de inmigrantes y nativos a lo largo del periodo para estudiar la asimilación salarial. La investigación concluye que los inmigrantes ocupan los puestos más bajos de la escala ocupacional y sufren una brecha salarial, que es mayor entre los hombres. El mercado laboral segmentado además limita las oportunidades de los inmigrantes de ascender profesional y salarialmente. Contrariamente a lo esperado, aunque la brecha salarial se reduce lentamente, ésta persiste en el tiempo.

PALABRAS CLAVE

Immigrants; inequality; occupational mobility; wage assimilation

ABSTRACT

The integration and assimilation of immigrants is a complex process that can lead to increased inequality if appropriate measures are not implemented. This paper focuses on Spain, a country without a strong tradition of migration that has received large flows in a short period. It examines the initial job insertion, occupational mobility and wage assimilation of immigrants from a gender perspective over a 15-year period. This extended period allows for a better understanding of this process, as immigrants gain sufficient work experience. Moreover, the results show whether new migrant-receiving countries reproduce similar patterns to those with a longer history of immigration. Using the Continuous Working Life Survey, mobility tables are constructed to study absolute and relative mobility. The evolution of the ratio between the average contribution bases of immigrants and natives over the period allows to analyse wage assimilation. The research concludes that immigrants occupy positions at the lower end of the occupational ladder and suffer a wage gap compared to natives, which is higher among men. The existence of a segmented labour market limits migrants' opportunities for upward occupational mobility and wage increases. Contrary to expectations, this wage gap narrows slowly with the length of residence, but persists over time.

KEYWORDS

Inmigrantes; desigualdad; movilidad ocupacional; asimilación salarial

1. INTRODUCTION

Migration is currently a major public concern. The European Union hosts more than 60 million of foreign-born people, around 14% of the total EU population. Germany leads the ranking in receiving immigrants, followed by France, Spain and Italy[1].

Spain is a quite unique case. It has welcomed large inflows in a short period. The share of migrants increased from 3.6 in 2000 to 18.2 in 2024. The total Spanish population would have grown by barely 2% without the contribution of the immigrant population, but thanks to them, it has reached up to 20% over the last two decades. In terms of origin, almost one in four comes from the rest of the former EU28, more than a third from South America (38.2%), and 17.2% from Africa. Morocco, Colombia, Venezuela, Romania, and Ecuador are the main suppliers of foreigners[2].

Emigration is frequently motivated by professional considerations (34% of all first residence permits issued in the EU are for work-related reasons), resulting in a more demographically diverse labour market. This heterogeneity can lead to labour market inequalities in terms of job position and wage gaps, as foreign-born workers often face different conditions than native-born workers, with barriers to occupational mobility and, consequently, to full integration.

Immigrant's economic assimilation to the host country has been extensively studied. Immigrants tend to have higher unemployment rates and lower employment probabilities compared to their native counterparts at arrival (Chiswick et al., 1997 for the US; Price, 2001 and Clark and Lindley, 2005 for the UK; Amuedo-Dorantes and De la Rica, 2007, and Fernández and Ortega, 2008 for Spain; Aleksynska and Algan, 2010, Gorodzeisky and Semyonov, 2017, and Lee et al., 2020 for Western Europe). Even though this is the general trend, Peri and Rutledge (2020) paint a different picture, finding no employment probability disadvantage for Mexicans and Central Americans in the US.

Nevertheless, most authors agree that immigrants' employment rates tend to converge with those of native-born workers over time, reflecting a process of economic assimilation and gradual integration into the host country's labour market (Chiswick et al., 1997; Peri and Rutledge, 2020). However, these results are inconclusive, as some authors even detect dis-assimilation for some immigrant groups, with lower employment rates after a few years after arrival. In this sense, Luthra et al. (2018) explain the existence of different occupational integration patterns across Europe, linking distinct trajectories and outcomes of migrants to diverse migration motivations.

Moreover, immigrants are generally concentrated in low-level occupations, with lower earnings and high overqualification rates (Palencia-Esteban and Del Río, 2020 for 12 European countries). Nonetheless, second-generation migrants have a higher probability of accessing highly ranked occupations (Aleksynska and Algan, 2010 and Gorodzeisky and Semyonov, 2017 for Western European countries). In the Spanish context, Amuedo-Dorantes and De la Rica (2007) and Rodríguez-Planas (2012) show that immigrant men and women have a lower occupational attainment than their native counterparts, except for EU15 nationals, even after several years of residence. Education plays an important role in this convergence process: immigrants with high

[1] Eurostat (https://doi.org/10.2908/MIGR_POP3CTB).

[2] Population Continuous Statistics, National Statistics Institute (INE).

school and university degree start their foreign work experience in low-skilled jobs, but move to higher-skilled occupations after some years. The most educated people are those with the fastest occupational assimilation (Rodríguez-Planas, 2012). Brücker et al. (2021) highlight that recognising immigrants' foreign qualifications can improve their labour market outcomes.

Wage assimilation has also been the focus of the literature on immigration. These studies come to similar conclusions: Chiswick (1978), Borjas (1985;1995), Friedberg (1992), Card (2005), and Peri and Rutledge (2020) for the US; Pischke (1992), Dustmann (1993), Constant and Massey (2003), and Okoampah (2016) for Germany; Clark and Lindley (2005) for the UK; Rodríguez-Planas (2012) for Spain; and Aleksynska and Algan (2010) for Western Europe. They find a significant initial earning gap between immigrants and natives, which progressively narrows over time. Adsera and Chiswick (2007) also find full assimilation for the former EU15.

Different theories attempt to explain the different behaviour of natives and immigrants in the labour market. Human capital theory and labour market segmentation theory are probably the two that have received the most attention. The former explains the differences in terms of individuals' attributes and skills. This classic assimilation model argues that immigrants' initial disadvantages in the labour market are largely due to limited access to information and social networks, lack of knowledge of the receiving country's culture and language, inadequate professional skills, unrecognised foreign qualifications, and lack of work experience in the host country (Lee et al., 2020). However, over time, and as a result of vocational training, labour market experience acquired in the host country, language acquisition, the development of social networks, and the accumulation of other forms of socio-cultural capital, immigrants generally converge with natives in terms of labour outcomes (Schieckoff and Sprengholz, 2021). That is, as immigrants' human capital improves, occupational and wage gaps narrow.

In the case of the segmented assimilation model, there are different patterns of assimilation, related to the degree of opportunities or disadvantages depending on the origin country, race and ethnicity, not considering immigrants to be homogeneous (Lee et al., 2020). Likewise, group-specific reception contexts and migrants' labour market capital endowments are important (Schieckoff and Sprengholz, 2021). Segmented labour markets may perpetuate occupational and wage gaps and limit upward mobility.

Most of the studies have been carried out for historical destination countries and little is known about the integration of immigrants in more recent host countries.

This paper focuses on Spain with the aim of elucidating whether a large influx of immigrant population leads to unequal opportunities between native and foreign-born workers in a labour market historically composed of native labour. It examines the initial job insertion, occupational mobility and wage assimilation of immigrants from a gender perspective over a 15-year period. The study is based on the Spanish Continuous Working Life Survey, which includes Spanish Social Security records, with information on the contracts of all individuals legally working in the Spanish labour market and allows differentiation by origin and gender. The results will show whether new migrant-receiving countries reproduce similar patterns to those with a strong migration tradition.

Thus, it helps to better understand the economic integration and assimilation of foreign-born workers, and it contributes to the literature on migration in two different ways. Firstly, Spain can

be an interesting case study to shed light on the process of labour integration in countries with similar economic structures and migration histories. Secondly, the previous studies carried out for Spain have not been able to draw conclusive results on the assimilation process of immigrants due to their short stay in the country. The longer time period covered in this paper allows for a better understanding of this process, as immigrants gain sufficient work experience.

The paper is structured as follows. The second section presents the data source and the methodology, and the third, the data analysis. The fourth section shows the main results. Finally, concluding remarks are provided.

2. DESIGN AND METHOD

The main aim is to study the initial job insertion, occupational mobility and wage assimilation of immigrants using longitudinal data.

Several hypotheses are set out. First, the Spanish labour market is segmented by origin and gender. Immigrants are more likely than natives to enter lower-skilled and lower-paid occupations. Moreover, female immigrants may face a double disadvantage. Second, this behaviour may also differ according to the time of entry and the immigrant's country of origin. Third, as immigrants integrate into the labour market, occupational mobility and some wage convergence are possible, as has happened in other countries with a strong migration tradition. For Spain, this employment behaviour is not expected to differ much from those countries.

2.1 DATA SOURCE

This paper uses data from the 2019 edition of the Spanish Continuous Working Life Survey (MCVL-2019). This is a set of anonymised microdata from the Spanish Social Security Directorate-General that constitutes a representative sample of all persons who were affiliated to the Social Security in 2019.

The MCVL provides access to the complete employment history of the workers as well as their contribution bases since their entry into the labour market, allowing the study of the occupational and wage assimilation of immigrants, something that is lacking in cross- sectional databases[3].

2.2. METHODOLOGY

The analysis of occupational assimilation focuses on vertical mobility, treated through the change of positions in the scale of professional categories, which are based on the contribution groups registered in the Social Security. Each group (from G1 to G10) is associated with a certain level of qualification[4]. Low-numbered groups correspond to higher-skilled jobs and high-numbered groups to lower-skilled jobs (Table 1).

[3] The data only cover legally employed workers, as informal employment is not registered in the Social Security system. This may introduce bias into the analysis, particularly regarding the lowest occupational categories. Therefore, while the results provide a reliable estimate of the formal segment of the immigrant labour market, they should be interpreted in light of the data source's inherent limitations.

[4] Group 11 is not considered, as this group includes those under 18 years of age "whatever their occupational category", and hence the implications of a mobility are unknown. They account for only 0.07%

Table 1. Contribution groups registered in the Social Security

G1-Engineers and University Graduates
G2-Engineering Technicians and Qualified Assistants
G3-Administrative and Workshop Managers
G4-Unqualified Assistants
G5-Administrative Officials
G6-Subordinates
G7-Administrative Assistants
G8-First and second degree skilled workers
G9-Third degree skilled Workers and Specialists
G10-Unskilled Workers
GD-Domestic Employees
GSW-Self-employed Workers

This indicator of the type of work (skilled and unskilled) does not necessarily correspond to the worker's qualification, since some workers may be registered in a lower category than the one corresponding to their qualification. This may partly justify a certain degree of labour mobility over time, as they progress to occupations that are more aligned with their level of qualification.

In addition to these 10 contribution groups, domestic employees (GD) and self-employed workers (GSW), who are not assigned to those specific contribution groups, are included. Their inclusion is pertinent, as they account for around 20% of immigrant affiliates in 2019.

Any change from GD to another occupational group is considered to be an improvement in the employee's employment situation. Self-employed workers, nonetheless, being a group that may have different levels of educational attainment, is treated separately[5]. With the information of the sample, it is not known whether these individuals have moved up or down the career ladder, nor whether a change from self-employment to paid-employment (or vice versa) has led to an improvement or worsening of their working conditions.

In order to analyse occupational assimilation, each individual's first occupation is compared with their last occupation in 2019, through their changes of position on the scale of the 10 (+2) occupational groups.

Mobility tables are constructed. They are double-entry tables (contingency tables), whose rows show the occupational category at entry (i=1…g) and the columns indicate the last category (j=1…g), where g=12. They show the change or no change in the immigrant's employment situation.

This information can be used to summarise both absolute and relative mobility. Let n_{ij} be the number of immigrants who started in category i and ended in category j, and n the total number of immigrants affiliated to Social Security.

of the total sample (0.01% of immigrants).

[5] Around 20% of those who enter the labour market as self-employed workers have no formal education, around 30% have only primary education and just over 20% have a university degree.

In terms of absolute mobility, the percentage of immigrants moving from category *i* to category *j* (n_{ij}/n) can be obtained[6]. Additionally, the Shorrocks Mobility Index (Shorrocks, 1978), which represents the mobility of a group in a single figure, can be calculated from the elements of the main diagonal of the mobility table:

$$MI = \frac{g - tr(P)}{g - 1} = \frac{\sum_{i=1}^{12} 1 - p_{ii}}{g - 1}$$

where tr(P) is the trace of the matrix P made up of the elements $p_{ij} = n_{ij}/n_{i.}$ (n_i is the number of immigrants who started in category i, $n_{i.} = \sum_{i=1}^{12} n_{ij}$). $0 \leq MI \leq 1$, with values closer to one when mobility is higher (MI = 1 perfect mobility, i.e. all employees have changed occupational category) and values closer to zero when mobility is lower (*MI* = 0 immobility, i.e. workers remain in the same positions over time).

Absolute mobility should be complemented by relative mobility, which provides information on the different opportunities for immigrants to change occupational category depending on their initial occupational category. It thus allows examining the probability of moving up or down from one category to another, without taking into account the occupational structure. The tool used to quantify relative mobility is the odds ratio. It shows the relative probability that two immigrants from two different initial categories (i, R, with R as the reference category) end up in one (j) rather than the other (R) category in their last contract, and can be calculated as:

$$odds\ ratio = \alpha_{ij} = \frac{n_{ij}/n_{iR}}{n_{Rj}/n_{RR}}$$

Odds ratios are equal to 1 with perfect mobility, that is, when two immigrants entering the labour market in two different categories have the same probability of ending up in one or the other category in their final contract. A higher (lower) ratio indicates that individuals in one group are more (less) likely to move up or down compared to the other group (R), reflecting higher inequality among immigrants.

Finally, in order to analyse wage assimilation, the contribution base to the Social Security system is considered as a proxy of the worker's salary[7]. However, the analysis focuses only on the General Regime, including groups G1 to G10. The self-employed are not included, since they can choose their contribution base regardless of their activity and the income they earn and, therefore, the contribution bases may not be closely related to wages.

The analysis is conducted over the period 2004-2019, which starts in a favourable economic context, but also includes the economic crisis and subsequent recovery. 15 years may be a sufficiently long period to answer questions related to the assimilation of wages by immigrant workers.

[6] The main diagonal of the contingency table shows immigrants who have not changed occupational category since entering the labour market ($\sum_{i=1}^{12} n_{ii}$). The remaining positions correspond to those who have changed status ($n - \sum_{i=1}^{12} n_{ii}$), moving up if they are below the diagonal ($\sum_{i,j=1}^{12} n_{ij}\ si\ i > j$) and down if they are above ($\sum_{i,j=1}^{12} n_{ij}\ si\ i < j$).

[7] From now on, both terms (contribution base and salary) will be used interchangeably.

As an indicator, the study relies on the ratio between the average contribution base of immigrants and the average contribution base of natives over the three lustrums. A ratio equal to one (or very close to it) implies the absence of an immigrant-native wage gap in the Spanish labour market. Ratios far from the unity entail the opposite.

This study therefore conceptualizes assimilation primarily in terms of quantifiable dimensions such as occupational categories and wage levels -variables provided by Social Security records. However, it does not capture other qualitative factors that significantly shape integration processes, such as workplace discrimination, access to social capital, cultural barriers, and social recognition (Agudelo, 2009; Ahonen et al., 2009; Roman et al., 2024; Albertín, 2025). Labour market integration must be understood through both objective and subjective indicators, and although the omission of these qualitative dimensions introduces a certain analytical bias, this approach remains effective for identifying structural patterns within the Spanish labour market and contributes to a broader understanding of immigrant assimilation[8].

3. FIELDWORK AND DATA ANALYSIS

The Spanish Continuous Working Life Survey contains all the variables required for this analysis. The data represent nearly 4% of the reference population (31,743,051 individuals), 14.51% of foreign origin, who may contribute as workers or unemployed, or receiving a pension. This paper focuses only on active affiliates.

Immigrants are defined as foreign-born individuals. Immigrants affiliated to the Social Security system come mostly from countries outside the EU (around 70%), although 12% are born in the former EU15 countries. Romania, Morocco, Ecuador and Colombia are the main origins (36.4%). Even though gender differences are not very significant for immigrants as a whole, Latin American women outnumber men, in contrast to those born in the EU. Differences are greater among Africans, since slightly over 70% are male. This profile influences their insertion into the labour market.

Regarding education, although the data should be interpreted with caution -since the educational level is missing for around 10% of individuals in the sample- it is revealing that 17% of immigrants registered in the MCVL hold a university degree. However, just over 20% of them obtain their first contract in one of the three highest contribution groups, while 30% are concentrated in the lowest groups (G8–G10). This suggests a pattern of over-education upon entering the Spanish labour market.

[8] Qualitative studies offer a valuable complementary perspective to our analysis, as they can capture migrants' views on the difficulties of validating their qualifications, their experiences of discrimination, and the confinement many face in informal employment -even when highly qualified.

4. RESULTS

The employment situation of migrants in the host country is analysed in terms of occupational distribution, occupational mobility and wage assimilation. Gender, cohort and origin of migrants are taken into account.

4.1. OCCUPATIONAL DISTRIBUTION OF IMMIGRANTS

Mobility tables are an excellent source of data on the occupational distribution of workers at two points in time: entry into the labour market and last position.

Immigrant mobility table (in a percentage, n_{ij}/n) shows that the lowest Social Security contribution groups, requiring less qualification, are the ones with the highest number of immigrants in their access to the labour market (71.55% including G8 to G10, plus GD) and, although to a lesser extent, they are still currently the main recipients of these workers (57.29%). Only in G10, 34.33% of immigrants are found on arrival (almost 14% in GD), while just 4% work in G1 and G2. The latter is 6.04% when looking at the last contract (Table 2).

Table 2. Percentage of Immigrants by Initial Contribution Group and Last Contribution Group. Mobility Table

		LAST CONTRACT												
	Group	**G1**	**G2**	**G3**	**G4**	**G5**	**G6**	**G7**	**G8**	**G9**	**G10**	**GD**	**GSW**	**Total**
FIRST CONTRACT	**G1**	**2.15**	0.10	0.07	0.03	0.09	0.01	0.06	0.02	0.01	0.02	0.00	0.32	**2.89**
	G2	0.20	**0.58**	0.05	0.01	0.06	0.01	0.05	0.02	0.01	0.01	0.00	0.13	**1.14**
	G3	0.13	0.06	**0.48**	0.03	0.08	0.01	0.05	0.05	0.03	0.03	0.00	0.18	**1.15**
	G4	0.10	0.05	0.05	**0.43**	0.10	0.04	0.15	0.14	0.18	0.17	0.02	0.21	**1.64**
	G5	0.29	0.15	0.16	0.11	**1.28**	0.09	0.41	0.26	0.21	0.21	0.03	0.56	**3.77**
	G6	0.05	0.06	0.04	0.06	0.15	**0.59**	0.24	0.24	0.28	0.30	0.04	0.25	**2.32**
	G7	0.48	0.25	0.29	0.25	1.08	0.27	**3.06**	0.64	0.64	0.70	0.12	1.14	**8.91**
	G8	0.14	0.09	0.16	0.19	0.37	0.29	0.64	**3.84**	1.12	1.15	0.11	1.52	**9.62**
	G9	0.18	0.13	0.20	0.32	0.63	0.46	1.06	2.30	**4.23**	2.11	0.26	1.79	**13.68**
	G10	0.28	0.22	0.25	0.44	0.88	0.80	3.07	4.96	4.36	**15.32**	0.74	3.01	**34.33**
	GD	0.06	0.08	0.06	0.18	0.36	0.54	1.09	1.06	1.33	2.66	**5.62**	0.88	**13.92**
	GSW	0.14	0.07	0.07	0.07	0.17	0.11	0.27	0.61	0.40	0.63	0.06	**4.04**	**6.63**
	Total	**4.20**	**1.84**	**1.89**	**2.11**	**5.27**	**3.22**	**10.16**	**14.15**	**12.80**	**23.33**	**7.01**	**14.04**	**100**

Upward occupational mobility
Downward occupational mobility

The representation index (RI) complements these results (Table 3)[9]. The categories classified as immigrant-specific are those that require less qualification: GD, G10 and G9. On the contrary, this group is underrepresented in the categories that occupy the first positions (G1-G5). The rest of the categories, however, cannot be characterised by the worker's origin. Among natives, the

[9] RI is the quotient between the percentage of individuals of a group in an occupation and the percentage of individuals of that same group in total employment. When RI>125 (RI<75), the group is overrepresented (underrepresented) in the occupation (Dueñas et al., 2016). It is used to characterise occupations as belonging to specific groups, thereby identifying their labour niches.

marked underrepresentation of domestic workers stands out. Natives are not uniformly distributed across the contribution groups, but differences are more pronounced for immigrants.

Table 3. Distribution of Social Security affiliates (native and immigrant) by contribution group (last contract). Representation index

Group	Representation index (%)		Representation index (%)	
	Immigrant	Native	Female	Male
G1	55.19	110.21	96.72	102.87
G2	31.20	115.68	126.32	76.94
G3	51.61	111.03	87.58	110.88
G4	66.22	107.70	107.97	93.02
G5	53.80	110.53	127.42	75.99
G6	86.57	103.06	108.76	92.33
G7	86.16	103.15	132.10	71.88
G8	101.14	99.74	56.02	138.52
G9	139.30	91.04	89.52	109.18
G10	169.41	84.18	89.18	109.48
GD	359.37	40.89	203.05	9.74
GSW	90.85	102.08	82.89	114.99

Note group overrepresented in the category, group underrepresented in the category, category not characterised by origin or gender

Looking at the representation of immigrants according to gender, GD is female-dominated (followed by G7, G5 and G2). In contrast, the group G8 is male-dominated. The other categories are gender integrated.

Table 4. Percentage of Female Immigrants by Initial Contribution Group and Last Contribution Group. Mobility Table

		LAST CONTRACT												
	Group	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	GD	GSW	Total
FIRST CONTRACT	G1	**1.94**	0.11	0.06	0.03	0.11	0.01	0.08	0.02	0.01	0.01	0.00	0.24	**2.63**
	G2	0.20	**0.74**	0.06	0.02	0.08	0.02	0.08	0.02	0.01	0.02	0.00	0.12	**1.37**
	G3	0.09	0.06	**0.41**	0.03	0.08	0.01	0.07	0.04	0.02	0.03	0.00	0.14	**0.97**
	G4	0.10	0.07	0.04	**0.47**	0.13	0.06	0.18	0.11	0.18	0.16	0.04	0.21	**1.73**
	G5	0.31	0.19	0.20	0.14	**1.60**	0.12	0.62	0.23	0.21	0.21	0.05	0.49	**4.37**
	G6	0.05	0.10	0.04	0.06	0.18	**0.59**	0.31	0.16	0.22	0.26	0.08	0.21	**2.27**
	G7	0.57	0.34	0.37	0.33	1.58	0.35	**4.33**	0.61	0.78	0.85	0.24	1.35	**11.70**
	G8	0.13	0.10	0.09	0.16	0.39	0.22	0.76	**1.93**	0.80	0.75	0.20	0.92	**6.44**
	G9	0.17	0.16	0.13	0.30	0.77	0.44	1.40	1.40	**3.98**	1.90	0.52	1.43	**12.59**
	G10	0.26	0.23	0.14	0.37	0.93	0.66	3.18	1.66	2.78	**11.50**	1.42	1.66	**24.78**
	GD	0.11	0.14	0.09	0.33	0.68	0.92	2.09	1.48	2.17	4.66	**11.55**	1.35	**25.57**
	GSW	0.13	0.08	0.04	0.06	0.18	0.10	0.32	0.27	0.30	0.46	0.11	**3.52**	**5.59**
	Total	**4.06**	**2.33**	**1.65**	**2.28**	**6.71**	**3.50**	**13.42**	**7.92**	**11.46**	**20.80**	**14.23**	**11.63**	**100**

Upward occupational mobility
Downward occupational mobility

Mobility tables by gender reinforce the above results (Table 4 and Table 5). Even though men and women are concentrated in the categories that require less qualification, the percentages

are higher for men than for women: 69.73% of men and 43.81% of women are in the groups G8-G10 in their first contract (59.11% and 40.18% in the last contract). Notable differences can be seen in GD: 25.57% of women concentrate in this activity at arrival, but only 3.71% of men. Over time, they change their activity, but 14.23% of women still continue to work in the domestic sector today. The female concentration is also substantially higher in G7 (13.42 compared to 7.3%). It is therefore clear that GD is a labour niche for immigrants and, especially, for women: domestic care is one of the most common gateway for female immigrants into the Spanish labour market.

Table 5. Percentage of Male Immigrants by Initial Contribution Group and Last Contribution Group. Mobility Table

		LAST CONTRACT												
	Group	**G1**	**G2**	**G3**	**G4**	**G5**	**G6**	**G7**	**G8**	**G9**	**G10**	**GD**	**GSW**	**Total**
FIRST CONTRACT	**G1**	**2.33**	0.09	0.08	0.03	0.08	0.01	0.04	0.03	0.02	0.02	0.00	0.39	**3.12**
	G2	0.19	**0.44**	0.04	0.01	0.05	0.01	0.02	0.02	0.00	0.01	0.00	0.15	**0.95**
	G3	0.16	0.07	**0.55**	0.03	0.08	0.01	0.04	0.06	0.04	0.04	0.00	0.22	**1.30**
	G4	0.10	0.04	0.07	**0.39**	0.08	0.03	0.11	0.16	0.17	0.19	0.00	0.22	**1.56**
	G5	0.27	0.11	0.13	0.08	**1.00**	0.07	0.23	0.30	0.22	0.20	0.00	0.62	**3.24**
	G6	0.06	0.03	0.05	0.06	0.12	**0.59**	0.18	0.32	0.33	0.34	0.01	0.28	**2.36**
	G7	0.40	0.17	0.22	0.19	0.64	0.19	**1.95**	0.66	0.51	0.58	0.01	0.96	**6.48**
	G8	0.15	0.08	0.22	0.21	0.36	0.34	0.55	**5.51**	1.40	1.51	0.03	2.04	**12.40**
	G9	0.19	0.10	0.27	0.33	0.51	0.47	0.77	3.09	**4.46**	2.30	0.04	2.10	**14.63**
	G10	0.31	0.21	0.35	0.50	0.84	0.92	2.97	7.84	5.75	**18.66**	0.15	4.20	**42.70**
	GD	0.03	0.02	0.04	0.06	0.07	0.21	0.21	0.69	0.60	0.91	**0.42**	0.46	**3.71**
	GSW	0.15	0.05	0.09	0.07	0.17	0.12	0.23	0.91	0.48	0.78	0.01	**4.50**	**7.55**
	Total	**4.32**	**1.42**	**2.09**	**1.96**	**4.00**	**2.97**	**7.30**	**19.59**	**13.98**	**25.54**	**0.68**	**16.14**	**100**

Upward occupational mobility
Downward occupational mobility

Several questions emerge from these results: is there an occupational mobility of immigrants that leads them to assimilate with natives over time? Are there differences by entry cohort? And, by country of origin?

4.2. ABSOLUTE OCCUPATIONAL MOBILITY OF IMMIGRANTS

In order to answer these questions mobility tables are again used, as they provide a valuable insight into how workers move between occupational categories. Each individual's first occupation is compared with their last occupation in 2019 through their changes of position in the scale of professional groups. GSW is treated separately. In addition, absolute occupational mobility by gender, cohort and origin of immigrants is analysed.

Even though 41.62% remain in the same contribution group with which they entered the labour market (see main diagonal of Table 2), 58.38% change groups. Of the latter, 34.12% experience progress in their professional group (left of the main diagonal), and only 11.67% have vertical downward mobility (right of the main diagonal). Additionally, 2.59% of all workers entered as self-employed but ended up in another group, and 10% of those who started in other groups opted to end up working as self-employed.

These data can be summarised into a single figure using the Shorrocks Mobility Index (MI). The MI is 0.6327, which provides evidence of a moderate degree of mobility between occupational categories, but also the possible existence of certain obstacles or barriers limiting full mobility (Table 6).

Table 6. Shorrocks Mobility Index by gender, cohort and origin

TOTAL	**0.6327**	**TOTAL**	**0.6327**
GENDER		**ORIGIN**	
MEN	0.6694	EU15	0.6086
WOMEN	0.6242	EU Enlargement countries	0.6008
COHORT		Latin America	0.6424
<2004	0.8031	Africa	0.6748
2004-2007	0.7560		
2008-2013	0.7046		
2014-2019	0.4460		

Table 2 proves that some immigrants advance up the occupational ladder. In fact, they are less present in the lowest categories and more present in the highest ones in their last contract. Thus, 71.55% started their contracts in the groups G8-G10 and GD, while only 57.29% are currently employed in these groups. Their presence in the top three groups (G1-G3), nonetheless, has gone from 5.18% to almost 8%. Hence, these immigrants seem to be able to spread themselves more evenly along the occupational ladder as they integrate into the labour market.

The most stable group is G1, since 74.39% of the immigrants who entered this group remain in it at present[10]. Another 11.07% chose to be self-employed. Barely 2% have entered the four lowest groups (G8-G10 and GD).

However, only one in four remains in G4 and G6 in their last contract, and around 48% regress to the lower categories.

Regarding domestic employees, 40.37% of those who entered this category remain nowadays, 36.28% have moved to groups G8-G10, and even 1.44% are now employed in the three highest groups.

In addition, 44.62% of those who joined G10 remain in it. Whereas 2.16% go to GD, the rest go on to occupy positions mainly in groups G8-G9 (27.15%) and self-employed workers group (8.77%). Therefore, career progression occurs mostly among contiguous groups, in the same "labour segment". Nevertheless, 2.18% managed to place themselves in the top 3 contribution groups.

Analysis according to the last contract shows that, in general, the lowest-ranked groups have nurtured each other[11]. However, a high percentage of workers who are in the highest groups entered as administrative workers in G7 (11.43% in G1, 13.59% in G2 and 15.34% in G3),

[10] Note that they cannot move up the career ladder. Likewise, those who enter the lowest category cannot be relegated further. In other words, there is a "ceiling effect" and a "floor effect".

[11] 65.66% of the current G10 started with the same category, another 11.4% as domestic workers and 9.04% in the group G9. Likewise, 80.17% of the current domestic workers were in the same position when they signed their first contract, and 10.56% belonged to the G10 group.

and a small percentage came from the lowest groups[12]. It is clear, then, that some immigrants enter the labour market in lower groups, which are their gateway to higher categories. Although mobility occurs mainly between contiguous groups, some workers have also made significant progress up the career ladder.

Additionally, almost 30% of those lastly self-employed were also self-employed in their first job, and 45% were in the G8-G10 groups. It is evident therefore that this group has been nourished mainly by groups with the lowest qualification requirements, with around 5% coming from the first three groups in the professional hierarchy. Self-employed workers play an important role in the immigrant labour market and become more entrenched as they familiarise with the labour market.

4.2.1. Occupational mobility of immigrants by gender

Patterns of mobility and assimilation generally differ by gender. In fact, the Shorrocks Mobility Index (Table 6) is higher for men, reflecting greater occupational mobility for men than for women.

Women's mobility table shows that 42.57% of women (40.8% of men) do not move, but 34.83% move up the career ladder (Table 4). Moreover, while one in four immigrants enters the domestic care sector when signing their first contract in the host country, many subsequently transition to other jobs that require higher qualifications as they integrate into the labour market. This leads to their presence in this group falling to 14.23% (even so, 95% of migrants dedicated to these tasks are women in 2019). Almost another 25% of the females are absorbed by G10, a similar percentage when analysing the last contract situation (20.80%)[13].

Regarding men (Table 5), it is also G10 where migrants work most frequently when they formalise their first contract (42.70%). In fact, almost 70% work in the three lowest groups (G8-G10). Nevertheless, they show progress in their career, as this percentage is not so high at present (59%), and their presence in GD is testimonial, 0.68%. In addition, there is considerable mobility from employees to self-employment, with almost 12% of men who start in different contribution groups ending up as self-employed.

Taking the last contract as a reference, a high percentage of female workers who are in the highest categories entered as administrative workers (G7), a percentage that in some cases doubles the percentage of men in these categories (22.42% of women compared to 10.53% of men in G3, for instance). In consequence, it seems that G7 is the origin of a notable percentage of immigrant women who are lastly in the highest categories (even though it is also the destination of some who entered the lower categories)[14].

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[12] This is the first evidence that justifies our decision to use the G7 as a reference group in the analysis of relative occupational mobility.

[13] Although their presence in G10 does not differ significantly, the internal sectorial distribution has changed. Thus, when they enter the labour market, around half of the employees are engaged in three sectors (agriculture 18.93%, hospitality 18.30%, and administrative activities and auxiliary services 14.64%). However, this percentage increases to 70% when looking at their last contract.

[14] This evidence reinforces our decision to take the G7 as the reference group in the analysis of relative occupational mobility.

4.2.2. Occupational mobility of immigrants by entry cohort

The moment of entry into the labour market can also condition the final situation of immigrants. Our starting hypothesis is the existence of greater labour integration of immigrants the longer they remain in the labour market, and less integration for those who have entered more recently. Based on the last 15 years, several periods of entry can be distinguished: 2004-2007 (22.21% of migrant arrivals), 2008-2013 (21.44%) and the post-crisis 2014-2019 (33.17%). 23.18% were settled in the previous years.

Table 7. Distribution of immigrants according to entry cohort by contribution group in their first and last contracts. Concentration index 2004-2019 (%)[15]

Entry in:	2004-2007		2008-2013		2014-2019	
Group	**First Contract**	**Last Contract**	**First Contract**	**Last Contract**	**First Contract**	**Last Contract**
G1	1.45	2.59	3.00	4.03	3.94	4.75
G2	0.54	1.20	0.92	1.44	1.34	1.81
G3	0.78	1.57	0.86	1.50	1.43	1.76
G4	1.02	1.70	1.57	1.87	2.43	2.52
G5	2.64	4.29	3.07	4.19	4.45	5.71
G6	1.65	3.20	2.25	2.94	2.84	3.16
G7	6.26	8.82	7.10	9.28	11.37	12.65
G8	11.19	18.01	8.11	12.43	9.43	10.96
G9	13.32	13.23	12.97	12.80	14.16	14.76
G10	38.09	23.90	34.57	24.40	31.31	26.28
GD	18.75	7.04	19.16	11.45	8.75	6.09
GSW	4.31	14.45	6.41	13.66	8.56	9.56
TOTAL	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

How does newly arrived immigrants' integration evolve over time? There are clear changes in the initial labour market insertion patterns of immigrants, depending on their period of entry (Table 7). Even though G10 is the main recipient of newcomers, there is a shift in the occupational distribution among the different groups as the century progresses. Thus, for example, only 1.45% of those who entered between 2004 and 2007 were hired in G1, but this percentage rose to 3.94 for those who entered after the economic crisis. On the contrary, the percentage fell from 38.09 to 31.31 in G10, and from 18.75 to 8.75 in GD.

Moreover, the more they know about the labour market, the more the presence of immigrants in the lowest groups decreases. Progress can also be seen in the highest groups.

Note that immigrants who joined Social Security between 2004 and 2007 have managed, in addition to resisting the impact of the crisis, to advance in their professional categories. Nonetheless, although only 4% started out as self-employed, the current figure is around 15%, so the recourse to self-employment has been present among these immigrants, probably as a reaction to an adverse economic and labour context.

Furthermore, although nearly 60% of workers in the 2014–2019 cohort remain in the same professional category, this percentage drops to 32.12% for the 2004–2007 cohort, among whom

[15] The concentration index is calculated as the quotient between the workers of a demographic group in an occupation and the total workers in that group.

41.53% experienced upward mobility. In contrast, only 23.04% of those who entered the labour market between 2014 and 2019 moved up the occupational ladder[16]. This suggests that more recent entrants have had less time to progress in their careers.

Therefore, a longer length of service implies a greater upward mobility of the worker, as immigrants have more time to adapt to the host labour market conditions. In fact, the Shorrocks Mobility Index (Table 6) is lower for the later cohorts (MI = 0.446) than for the earlier ones (MI = 0.756).

4.2.3. Occupational mobility of immigrants by country of origin

The initial insertion and progress of immigrants in the Spanish labour market can also be conditioned by their country of origin (Table 8). In fact, the highest categories (G1-G5) are workplaces for immigrants from the EU15, who show a profile closer to native-born workers (33% of both populations are concentrated in these categories). This may be indicative of why the group is less mobile than, for instance, Latin Americans, almost 40% of whom move up the career ladder.

Table 8. Distribution of immigrants affiliated to the SS according to contribution group and origin in their first and last contracts. Concentration Index (%)

	EU15		EU Enlargement Countries		Africa		Latin America		Rest of the World	
Group	First contract	Last contract	First contract	Last contract	First contract	Last contract	First contract	Last contract	First contract	Last contract
G1	7.94	10.54	0.78	1.21	0.59	0.90	2.76	4.08	3.59	5.64
G2	3.68	4.64	0.35	0.72	0.34	0.58	0.85	1.71	1.46	2.29
G3	3.39	4.57	0.38	0.92	0.37	0.76	0.99	1.72	1.30	2.25
G4	2.57	2.76	0.87	1.21	0.82	1.20	1.72	2.29	2.24	2.90
G5	8.45	10.46	1.54	2.73	1.27	1.83	3.76	5.69	4.72	5.95
G6	2.25	2.31	1.55	2.51	1.32	1.84	2.71	4.31	3.06	3.22
G7	15.71	11.48	4.12	8.46	3.73	8.73	9.85	11.40	10.92	9.05
G8	12.39	12.92	10.17	17.99	6.19	13.46	9.77	14.17	9.91	12.08
G9	12.89	7.83	12.47	12.68	10.77	14.04	14.57	14.02	15.94	12.50
G10	15.05	7.81	48.85	34.20	61.92	44.85	26.96	19.13	27.19	14.75
GD	1.15	0.95	10.79	7.22	8.76	3.47	21.96	10.72	11.62	5.62
GSW	14.54	23.73	8.15	10.15	3.93	8.33	4.10	10.76	8.05	23.75
TOTAL	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Africans and affiliates coming from the EU enlargement countries are underrepresented in highest categories, but overrepresented in the lowest group (G10). The group of domestic employees is the gateway for Latin Americans, where Africans are underrepresented and those from the EU15 even more.

Permanence in the labour market entails, however, progress for all groups, as they tend to be more homogeneously distributed among the professional categories. Even so, according to their latest contract, the lowest groups (G8-G10) include 72% of Africans, 65% of those from the EU enlargement countries, and 47% of Latin Americans.

[16] Mobility tables by cohort are available upon request.

4.3. RELATIVE OCCUPATIONAL MOBILITY OF IMMIGRANTS

To complete the study, odds ratios are used to examine whether immigrants, regardless of their category of origin, have the same probability of reaching one occupational category rather than another.

The *G7* contribution group is taken as a reference, since *G7* is the origin of several immigrants who end up in the higher groups and the destination of some who started in the lower groups[17]. This category could be seen as the boundary between two segments of the labour market: G1-G6, with higher skill requirements (primary segment), and G8-G10 (plus GD) with lower requirements (secondary segment).

The odds ratios are generally very far from unity, indicating large inequalities in reaching a destination depending on the starting category of the worker (Table 9).

Table 9. Relative occupational mobility (odds ratio) of immigrants between Initial Contribution Group and Last Contribution Group

		LAST CONTRACT											
	Group	**G1**	**G2**	**G3**	**G4**	**G5**	**G6**	**G7**	**G8**	**G9**	**G10**	**GD**	**GSW**
FIRST CONTRACT	**G1**	**217.44**	19.97	12.01	5.28	4.22	1.76	-	1.87	1.13	1.20	0.52	13.55
	G2	26.88	**151.59**	10.84	3.79	3.76	2.67	-	2.37	0.66	1.37	1.05	7.59
	G3	15.27	14.21	**95.39**	6.16	4.01	2.46	-	4.52	2.80	2.69	1.22	9.12
	G4	4.30	4.38	3.95	**35.34**	1.96	3.47	-	4.58	5.79	5.14	3.42	3.95
	G5	4.47	4.41	4.18	3.17	**8.76**	2.50	-	3.07	2.46	2.18	1.56	3.63
	G6	1.43	3.22	1.87	3.02	1.80	**28.30**	-	4.89	5.58	5.52	4.49	2.77
	G7	-	-	-	-	-	-	-	-	-	-	-	-
	G8	1.39	1.68	2.58	3.50	1.64	5.09	-	**28.66**	8.38	7.80	4.47	6.33
	G9	1.08	1.51	2.05	3.57	1.68	4.94	-	10.43	**19.16**	8.66	6.31	4.53
	G10	0.59	0.89	0.88	1.72	0.81	2.99	-	7.77	6.83	**21.73**	6.21	2.64
	GD	0.37	0.88	0.62	2.02	0.93	5.73	-	4.68	5.88	10.63	**132.20**	2.16
	GSW	3.38	3.06	2.60	2.99	1.81	4.70	-	10.98	7.12	10.22	5.80	40.54

These ratios are higher in the main diagonal than in the other cells of the table (regardless of gender, cohort and origin)[18], indicating that the probability of remaining in the same contribution group is higher than the probability of changing groups. Moreover, on average, this probability is greater in the higher groups than in the lower groups. The exception is domestic workers, for whom the probability of reproducing the category is very high. The highest value generally corresponds to α_{11}, which can be explained by the fact that there is no possibility of upgrading. That is, the probability of ending up in G1 (and not *G7*) is higher when starting in G1 than when starting in any other group. Furthermore, the chances of ending up in the highest category are higher for those who entered with higher categories, but lower as the entry occupational category decreases.

The odds ratios close to the diagonal are also generally higher than the rest, showing more mobility between contiguous contribution groups. There is intense fluidity between groups G1 and

[17] Although the ratios differ slightly, the overall results are robust to the choice of the reference group.

[18] Results are available upon request to the authors.

G2, as the ratios between different groups are the highest, suggesting the existence of an upper sub-segment within the primary segment.

On average, the ratios are higher within segments (19.95 and 18.11 in primary and secondary, respectively) than outside segments (2 and 2.9), which shows that it is more likely to end up in the occupational segment in which one entered the labour market, than to get a new contract in the other occupational segment.

In other words, the chances of higher (or lower) occupational categories differ according to the category of entry into the labour market, reflecting the existence of certain barriers between occupational segments. Moreover, within segments, although it is more likely to remain in the same contribution group, mobility is in both directions. However, on average, there are more opportunities for promotion than for downgrading.

4.4. WAGE ASSIMILATION OF IMMIGRANTS

The analysis of immigrants' integration into the labour market should also consider wage-related aspects, including potential disparities with native workers and the extent of their wage assimilation over time.

The MCVL reveals an average total contribution base of 1,904€ in 2019, although with notable differences depending on the worker's origin. Natives, in general, are above average and immigrants are below it (Table 10)[19].

Foreign-born workers have a contribution base almost 20% lower than that of natives (1,966.34€). Romania, Morocco, Colombia and Ecuador, the main suppliers of workforce to the Spanish society, provide workers with gross salaries far below average. In fact, along with China and Bolivia, they are at the bottom of the ranking (China occupies the last place, with 1,185€).

[19] These results are consistent with the data published by the Social Security for December 2019: an average total contribution base in the system of 1,875.67€, being 22.66% lower for those of foreign nationality. The Social Security uses nationality as a criterion to define the immigrant, but this research uses origin and, therefore, the results are not entirely comparable.

Table 10. Contribution bases (€) by Contribution Group, 2019

Group	NATIVES	IMMIGRANTS		
		Total	EU15	Non-EU
G1-Engineers and University Graduates	3259.62	3265.03	3337.36	3243.37
G2-Engineering Technicians and Qualified Assistants	2808.71	2643.05	2696.56	2610.29
G3-Administrative and Workshop Managers	2870.53	2619.48	2991.17	2449.59
G4-Unqualified Assistants	2444.81	1872.38	2339.83	1743.16
G5-Administrative Officials	2236.34	2012.96	2255.54	1917.04
G6-Subordinates	1760.86	1518.79	1747.00	1488.95
G7-Administrative Assistants	1642.06	1454.35	1721.15	1416.99
G8-First and second degree skilled workers	1932.18	1665.58	1769.79	1650.97
G9-Third degree skilled Workers and Specialists	1726.13	1518.46	1596.97	1511.88
G10-Unskilled Workers	1435.86	1363.49	1426.58	1368.35
Total system mean				
-male and female	**1966.34**	**1575.60**	**1888.47**	**1530.72**
-male	**2014.74**	**1608.71**	**1935.48**	**1561.38**
-female	**1903.89**	**1529.39**	**1823.88**	**1487.14**
Gender gap (total system)	**5.50**	**4.93**	**5.76**	**4.75**

Note: gender gap= (males Contribution Base - females Contribution Base)/ males Contribution Base

At the opposite side, the EU15 nationals earn gross salaries similar to or above the average. France is at the top of the ranking, while the UK, Italy and Portugal are at the bottom.

Hence, immigrants do not earn the same in the Spanish labour market depending on their country of origin. Considering the extremes, around 1,000€ separate the salaries of French and Chinese.

The results by contribution group reflect the general patterns, with higher contribution bases for natives than for immigrants, except in group G1, where university graduates are concentrated.

If gender is included in the analysis, average contribution bases are higher for men than for women, although non-EU workers have a narrower gap (4.7%) than those from the EU15 (5.8%) and natives (5.5%).

These data raise the question of whether this wage gap by origin and gender has remained constant since immigrants entered the labour market, or whether it reflects a process of wage assimilation over time. Consequently, the analysis takes 2004 as a starting point and examines the wage evolution of immigrant workers compared to their native counterparts up to 2019, with the aim of assessing whether the gap has widened or narrowed as immigrants' tenure in the Spanish labour market has increased.

Precise conclusions on immigrants' wage assimilation require the analysis of the evolution of the same cohort of individuals. Thus, the study focuses on different entry cohorts (2004 cohort, 2008 cohort and 2012 cohort) and track their wages up to the present day[20].

Focusing on the 2004 cohort, the data reveal that immigrants' wage at entry into the host labour market (890.03€ in current prices) is not only lower than that of natives (1304.49€), but also

[20] Subsequent cohorts have not been considered due to their low representativeness in the different contribution groups (many newcomers also entered the labour market as self-employed workers, not considered in this analysis).

lower than that of other immigrants who arrived earlier (1104.11€). These differences are even greater when focusing on non-EU newcomers (882.26€). Thus, on average, immigrants earn around 32% less at arrival than native-born workers.

Table 11 shows that the ratios between the average contribution bases of immigrants and natives deviate significantly from a value of unity in 2004. Nevertheless, despite the existence of a notable wage gap at entry (68.23% in 2004), it narrows over time. The justification lies in the growth rate of wages, which is higher for immigrants than for natives. Both the intrinsic attributes of the immigrant and the structural characteristics of the job and the company can influence the worker's wage assimilation. On the one hand, training processes, greater linguistic competencies, recognition of immigrants' qualification by the employer and, in general, better understanding of the labour market as they perform their jobs may justify this higher wage growth. Moreover, the human capital acquired in Spain exhibits a higher marginal return than that accumulated in the country of origin. On the other hand, employers having identified workers' productivity, remunerate them accordingly.

Table 11. Immigrants' Contribution Base / Native's Contribution Base Ratio (2004 cohort), 2004-2019

Group	2004	2008	2012	2016	2019	2004		2019	
						women	men	women	men
G1	0.8402	0.9305	0.9815	1.0152	1.0377	0.7154	0.9345	1.0341	1.0446
G2	0.7212	0.8276	0.8482	0.8724	0.9315	0.6321	0.8307	0.8954	0.9840
G3	0.7510	0.8498	0.8692	0.8202	0.8257	0.6678	0.8395	0.8639	0.8116
G4	0.6168	0.7457	0.8123	0.8041	0.8792	0.7281	0.5722	0.9605	0.8467
G5	0.7565	0.8180	0.8383	0.8919	0.9173	0.7941	0.7095	0.9480	0.8765
G6	0.6997	0.7720	0.7934	0.8294	0.8606	0.7469	0.6612	0.9148	0.8157
G7	0.7876	0.8436	0.8067	0.8507	0.8917	0.8144	0.7259	0.8924	0.8918
G8	0.7992	0.8669	0.8648	0.8644	0.8868	0.9036	0.7964	0.9704	0.8773
G9	0.8145	0.8714	0.8648	0.8839	0.9168	0.8895	0.7861	1.0048	0.8778
G10	0.8719	1.0168	0.9758	0.9707	0.9807	0.8978	0.8456	0.9985	0.9645
Total	**0.6823**	**0.8016**	**0.7869**	**0.7938**	**0.8145**	**0.6559**	**0.7046**	**0.8169**	**0.8117**

Furthermore, the crisis had a relatively limited impact on this cohort. There was indeed a slight drop in the ratio of contribution bases in the lower groups, but this decline has been rectified during the period of economic growth.

Our results reveal that, fifteen years later, complete assimilation of this cohort has not yet been achieved. Full integration is observed in the extreme groups, but there is still room for improvement, for example, in groups G3, G6 and G4, since this cohort earns a salary of 17.4%, 13.9% and 12.9%, respectively, lower than that of native workers.

In addition, the ratios tend to be higher for women than for men (except for groups requiring higher qualifications). That is, while the gender pay gap (with lower wages for women) is evident in almost all contribution groups, the gap between immigrant and native workers is smaller among women.

This wage gap widens for non-EU immigrants and narrows considerably for those from the EU15[21]. In fact, the latter seems to be fully integrated into the Spanish labour market. There are slight differences by country of origin and gender but, on average, their behaviour is similar to that of natives in terms of salary. French and German show full integration, but the UK, Italy and Portugal are countries that send workers whose wages are slightly lower than those of natives.

Analysing the successive cohorts (Table 12), their entry ratios are, on average, lower than those of the preceding cohorts. The entry ratio for the 2012 cohort is 0.6188, compared to 0.6551 for the 2008 cohort and 0.6823 for the 2004 cohort. This leads us to believe that the economic crisis affected to a greater extent the immigrants who entered the labour market during this stage, particularly in the lowest groups. The construction sector, which employs a significant number of immigrants, was one of the sectors hardest hit by the economic crisis. It is therefore clear that immigrants suffered a penalty in accessing the labour market.

Regardless of the cohort, wage gaps at entry are more pronounced in the central groups. For example, the 2004 cohort earns 38.62% less than natives in G4 in that year. Moreover, this percentage increases to 43.52% for the 2012 cohort.

Table 12. Immigrants' Contribution Base / Natives' Contribution Base Ratio at first and last contract

	First contract			Last contract		
Group	**2004 cohort**	**2008 cohort**	**2012 cohort**	**2004 cohort**	**2008 cohort**	**2012 cohort**
G1	0.8402	0.9117	0.7942	1.0377	1.0273	0.9973
G2	0.7212	0.8052	0.7244	0.9315	0.9216	0.8809
G3	0.7510	0.8030	0.9087	0.8257	0.8841	0.8689
G4	0.6168	0.6066	0.5648	0.8792	0.7015	0.6828
G5	0.7565	0.7093	0.7195	0.9173	0.8964	0.8676
G6	0.6997	0.7505	0.7052	0.8606	0.8366	0.7995
G7	0.7876	0.7671	0.6600	0.8917	0.8626	0.8931
G8	0.7992	0.7730	0.7194	0.8868	0.8504	0.8052
G9	0.8145	0.7993	0.7715	0.9168	0.8728	0.8703
G10	0.8719	0.8501	0.8383	0.9807	0.9470	0.9346
Total system mean	**0.6823**	**0.6551**	**0.6188**	**0.8145**	**0.7801**	**0.7657**

After several years in the labour market, later cohorts, with less experience, exhibit lower ratios than earlier cohorts. The only exception is the group G7: regardless of the number of years in the labour market, these individuals end up earning 86-89% of what natives earn. There appears to be a wage gap of 11-14% that persists over time, thus ruling out wage assimilation in this group. The high level of occupational mobility within this group could justify this persistent pay gap.

In summary, the evidence reveals that immigrants' initial insertion in the labour market occurs mainly in the lowest categories, with some occupations being more specific to immigrant women. Although there is some mobility between occupations, it tends to be between those that are closely related.

The Spanish labour market is, in consequence, segmented by origin. While immigrants are more concentrated (and overrepresented) in the lowest professional categories, natives are more pre-

[21] Results are available upon request to the authors.

sent in those requiring higher qualifications. Focusing on foreign-born workers, there is also a clear segmentation by gender, with domestic service dominated by women.

In addition even though there is a convergence of wages between natives and immigrants, full assimilation is not achieved even after 15 years in the labour market. The exceptions are the workers in the extreme groups (G1 and G10), but not in the intermediate groups. Consequently, there is still room for improvement if pay equity is to be achieved.

5. DISCUSSION AND CONCLUSIONS

The results obtained in this study demonstrate that origin and gender are sources of inequality in the Spanish labour market.

Foreign-born workers fill the lower rungs of the occupational ladder when they enter the labour market, often in occupations characterised by gender norms. Foreign women face a double disadvantage, by gender and migrant status. Domestic care is one of the most common gateways for non-EU immigrant women, mainly Latin Americans. Administrative Assistants is also another entry point for a significant proportion currently in the highest categories. Men are more concentrated in Unskilled Workers (62% of Africans' first contracts). However, EU15 nationals show a profile closer to native-born workers, with similar salaries and a greater presence in positions requiring higher qualifications.

Nonetheless, some integration occurs over time as their skills are recognised, they become more fluent in the language, they have a better understanding of the labour market and their human capital is generally improved. This allows them to advance the professional ladder to some extent, although the less time they have spent in the labour market, the less time they have to move up. This result was suggested by Aysa-Lastra and Cachón-Rodríguez (2013), who found that almost half of immigrants remained in the same occupational category using the 2007 National Immigrant Survey. Given that the great waves of immigrants arrived in Spain at the beginning of the 21st century, it seems that they had little time to change category before 2007. Our research provides new evidence due to a more extensive period of analysis.

Their career progression occurs over time, although not along the entire occupational ladder, but within the same labour segment, that is, among adjacent groups. This reflects that occupational mobility is of short distance. These findings are in line with Aysa-Lastra and Cachón-Rodríguez (2013), Simón et al. (2014) and Arranz et al. (2017). The Spanish case contrasts with other advanced countries, where immigrants experience an initial downgrading on arrival but a later occupational progress during their stay in the host country (Chiswick, 1978 for the US; Vidal-Coso, 2019 for Switzerland).

Furthermore, as time goes on, for the new cohorts, the number of workers entering the labour market in the lowest groups is decreasing. Their entry facilitated the filling of the jobs least valued by the native population (in construction and services) during the period of economic prosperity. It also facilitated the incorporation of native women into the labour market, by outsourcing part of the domestic and care work to foreign-born workers. Nevertheless, the Spanish population is ageing and there are currently shortages of some skills that cannot be satisfied by local workers.

Barriers to entry, hitherto unthinkable, may be breaking down and giving way to immigrant workers (some highly qualified) to fill these vacancies.

The economic assimilation of immigrants is also reflected in their wage behaviour. Immigrants suffer a penalty when accessing the labour market, which is exacerbated in unfavourable economic contexts such as the 2008 crisis. Over time, however, immigrants improve their relative position and wage differentials narrow (they only disappear for EU15 nationals). This wage gap is smaller for women than for men, hence origin seems to affect men to a greater extent.

How long does it take to achieve convergence? The answer is not straightforward. After 15 years in the labour market, full integration is only observed in the extreme groups: G1 (which includes senior managers, engineers and university graduates) and G10 (unskilled labourers, who generally earn the statutory minimum wage). In the other groups, there is a rapprochement without, far from it, reaching the wages of their native counterparts. Education therefore plays an important role in the convergence process.

Previous papers using a short time interval (Aysa-Lastra and Cachón-Rodríguez, 2013; Simon at al., 2014) have justified the lack of wage convergence by the short time immigrants have been in Spain. However, our research sheds new light by showing that the wage gap persists over a longer period of time with slow wage convergence. This behaviour differs from that observed in other countries, where wage convergence is observed after a few years of immigrants' insertion into the labour market.

In conclusion, origin and gender as sources of inequality in the labour market hinder progress towards SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities), which seek equal opportunities for all.

The integration and assimilation of immigrants is an intricate process that differs in different territorial areas with different economic and social structures and policies. For example, in Western European labour markets, over-qualification and high levels of occupational segregation remain common challenges, despite some upward occupational and earnings mobility among immigrants (Luthra et al., 2018). In Southern Europe, Spain -traditionally a country without a strong migratory history- has received large inflows of immigrants over a relatively short period. These immigrants mainly occupy positions at the lower end of the occupational scale and suffer a wage gap compared to natives. Although some career progression occurs over time, it is within the same occupational segment. Furthermore, contrary to expectations, the wage gap narrows slowly with length of residence, but persists over time.

The existence of a segmented labour market limits migrants' opportunities for upward occupational mobility and wage increases. It hinders the full integration of immigrants into the labour market. Since collective agreements apply equally to all employees, one possible explanation could be that immigrants are relegated to the lowest paid tasks, despite being part of the same contribution group. In this sense, there would be an occupational discrimination that would justify the lack of wage convergence with natives belonging to the same contribution group. Prejudices against some immigrants may still exist in Spain, a country with less developed integration frameworks. Discrimination, insufficient social recognition and even cultural barriers, qualitative factors not directly studied in this article, could also reinforce the limited occupational mobility

and slow wage assimilation over time. Their consideration could provide a solid foundation for future lines of research.

These results differ from those found in other countries with established immigration policies and with immigrant wages that tend to increase more rapidly over time. This is the case of Australia and Canada, where selective immigration systems and strong policies supporting the recognition of foreign credentials contribute to more favourable initial labour market integration and faster wage assimilation (Hawthorne, 2010; OECD, 2019). However, recent findings suggest that similar mechanisms are increasingly relevant in certain European contexts. For example, Brücker et al. (2021) show that in Germany, the formal recognition of immigrants' foreign qualifications significantly improves their labour market outcomes, leading to notable wage gains. Likewise, Gorshkov (2024) identifies Denmark as a case where substantial earnings growth occurs during the first 5–10 years of residence, particularly among immigrants facing the greatest initial disadvantages—such as women and individuals from non-OECD countries. Therefore, it seems that new migrant-receiving countries do not always reproduce similar patterns to those with a strong migration tradition.

In addition, these results serve to characterise other countries with similar economic structures and migration trajectories to those of Spain, such as those in Southern Europe.

Many efforts still need to be made to ensure equal opportunities for everyone, regardless of gender and origin. The strong commitment of the European Union to achieve a fair and inclusive Europe through the European Pillar of Social Rights requires a major effort on the part of society and all private and public actors. Effective integration policies for foreign-born workers are needed, with particular attention to non-EU women, the most disadvantaged group. In turn, the International Organisation for Migration's (IOM) Institutional Strategy on Migration and Sustainable Development recognises that well-managed migration can be both a development strategy and a development outcome. It also highlights the importance of adopting a holistic approach to migration governance.

6. REFERENCES

Adsera, A., & Chiswick, B.R. (2007). Are there gender and country of origin differences in immigrant labor market outcomes across European destinations? Journal of Population Economics 20, 495–526. https://doi.org/10.1007/s00148-006-0082-y

Aleksynska, M., & Algan, Y. (2010). Assimilation and Integration of Immigrants in Europe. Discussion Paper No. 5185. IZA - Institute of Labor Economics. https://docs.iza.org/dp5185.pdf

Ahonen, E.Q., Porthé, V., Vázquez, M.L., García, A.M., López-Jacob, M.J., Ruiz-Frutos, C., Ronda-Pérez, E., Benach, J., & Benavides, F.G. (2009). A qualitative study about immigrant workers' perceptions of their working conditions in Spain. Journal of Epidemiology and Community Health 63(11), 936-942. https://doi.org/10.1136/jech.2008.077016

Agudelo, A., Gil, D., Ronda, E., Porthé, V., Paramio, G., García, A.M., & Garí, A. (2009). Discrimination, work and health in immigrant populations in Spain, Social Science & Medicine, 68(10), 1866-1874 https://doi.org/10.1016/j.socscimed.2009.02.046

Albertín, P. (2025). Mujeres migrantes en economía sumergida: experiencias de trabajo doméstico y de cuidados en Cataluña. Castalia - Revista de Psicología de la Academia 43, 113-131. https://doi.org/10.25074/07198051.43.2838

Amuedo-Dorantes, C., & De la Rica, S. (2007). Labour Market Assimilation of Recent Immigrants in Spain. British Journal of Industrial Relations 45(2), 257-284. https://doi.org/10.1111/j.1467-8543.2007.00614.x

Arranz, J.M., Carrasco, C., & Massó, M. (2017). La movilidad laboral de las mujeres inmigrantes en España (2007-2013). Revista Española de Sociología 26(3), 329-344. https://doi.org/10.22325/fes/res.2017.26

Aysa-Lastra, M., & Cachón-Rodríguez, L. (2013). Determinantes de la movilidad ocupacional segmentada de los inmigrantes no comunitarios en España. Revista Internacional de Sociología 71(2), 383-413. https://doi.org/10.3989/ris.2012.05.519

Borjas, G.J. (1985). Assimilation, Changes in Cohort Quality, and the Earnings of Immigrants. Journal of Labor Economics 3(4), 463-489. JSTOR. http://www.jstor.org/stable/2534922

Borjas, G.J. (1995). Assimilation and Changes in Cohort Quality Revisited: What Happened to Immigrant Earnings in the 1980s? Journal of Labor Economics 13(2), 201-245. https://doi.org/10.1086/298373

Brücker, H., Glitz, A., Lerche A., & Romiti, A. (2021). Occupational Recognition and Immigrant Labor Market Outcomes. Journal of Labor Economics, 39(2), 497-525. https://doi.org/10.1086/710702

Card, D. (2005). Is the New Immigration Really so Bad? The Economic Journal 115(507), 300-323. https://doi.org/10.1111/j.1468-0297.2005.01037.x

Chiswick, B. (1978). The Effect of Americanization on the Earnings of Foreign-born Men. Journal of Political Economy 86(5), 897-921. https://doi.org/10.1086/260717

Chiswick, B., Cohen, Y., & Zach, T. (1997). The Labor Market Status of Immigrants: Effects of the Unemployment Rate at Arrival and Duration of Residence. ILR Review 50(2), 289-303. https://doi.org/10.1177/001979399705000206

Clark, K., & Lindley, J. (2005). Immigrant Labour Market Assimilation and Arrival Effects: Evidence from the Labour Force Survey. Sheffield Economic Research Paper Series, No. 2005004. University of Sheffield. https://eprints.whiterose.ac.uk/id/eprint/9911/1/SERP2005004.pdf

Constant, A., & Massey, D.S. (2003). Self-selection, earnings, and out-migration: A longitudinal study of immigrants to Germany. Journal of Population Economics 16, 631-653. https://doi.org/10.1007/s00148-003-0168-8

Dueñas, D., Iglesias, C., & Llorente, R. (2016). ¿Por qué las mujeres no se distribuyen de forma homogénea en el mercado de trabajo español? El "efecto rechazo" y el "efecto atracción". El Trimestre Económico 83(330), 339-369. https://doi.org/10.20430/ete.v83i330.202

Dustmann, C. (1993). Earnings adjustment of temporary migrants. Journal of Population Economics 6, 153-168. https://doi.org/10.1007/BF00178559

Fernández, C., & Ortega, C. (2008). Labor market assimilation of immigrants in Spain: employment at the expense of bad job-matches? Spanish Economic Review 10, 83-107. https://doi.org/10.1007/s10108-007-9032-4

Friedberg, R.M. (1992). The Labor Market Assimilation of Immigrants in the United States: The Role of Age at Arrival. Brown University.

Gorodzeisky, A., & Semyonov, M. (2017). Labor force participation, unemployment and occupational attainment among immigrants in West European countries. PLoS ONE, 12(5): e0176856. https://doi.org/10.1371/journal.pone.0176856

Gorshkov, A. (2024). Job ladders and labour market assimilation of immigrants. Labour Economics 90, 102594. https://doi.org/10.1016/j.labeco.2024.102594

Hawthorne, L. (2010). How Valuable is "Two-Step Migration"? Labor Market Outcomes for International Student Migrants to Australia. Asian and Pacific Migration Journal, 19(1), 5-36. https://doi.org/10.1177/011719681001900102

Lee, T., Peri, G., & Viarengo, M. (2020). The Gender Aspect of Immigrants' Assimilation in Europe. Discussion Paper No. 13922. IZA - Institute of Labor Economics. https://docs.iza.org/dp13922.pdf

Luthra, R., Platt, L., & Salamońska, J. (2018). Types of Migration: The Motivations, Composition, and Early Integration Patterns of "New Migrants" in Europe. International Migration Review 52 (2), 368-403. https://doi.org/10.1111/imre.12293

OECD (2019). Recruiting Immigrant Workers: Canada 2019, Recruiting Immigrant Workers, OECD Publishing. https://doi.org/10.1787/4abab00d-en

Okoampah, S. (2016). Estimating earnings assimilation of immigrants to Germany: Evidence from a double cohort model. Ruhr Economic Papers, No. 630. Leibniz Information Centre for Economics. https://doi.org/10.4419/86788732

Palencia-Esteban, A., & Del Río, C. (2020). The earnings effects of occupational segregation in Europe: The role of gender and migration status. Working Papers 533, Society for the Study of Economic Inequality. ECINEQ. https://www.ecineq.org/milano/WP/ECINEQ2020-533.pdf

Peri, G., & Rutledge, Z. (2020). Revisiting Economic Assimilation of Mexican and Central Americans Immigrants in the United States. Discussion Paper No. 12976. IZA - Institute of Labor Economics. https://docs.iza.org/dp12976.pdf

Pischke, J.S. (1992). Assimilation and the Earnings of Guest workers in Germany. ZEW Discussion Papers, No. 92-17, Zentrum für Europäische Wirtschaftsforschung. https://www.econstor.eu/handle/10419/29366

Price, S. (2001). The employment adjustment of male immigrants in England. Journal of Population Economics 14, 193-220. https://doi.org/10.1007/s001480050165

Rodríguez-Planas, N. (2012). Wage and Occupational Assimilation by Skill Level: Migration Policy Lessons from Spain. IZA Journal of European Labor Studies 1 (8). https://doi.org/10.1186/2193-9012-1-8

Roman, G., Berasategi, N., Idoiaga, N., & Legorburu, I. (2024). Migrant Perceptions of Their Social Inclusion, Social Networks, and Satisfaction with Life in Northern Spain. Societies 14(1), 3. https://doi.org/10.3390/soc14010003

Schieckoff, B., & Sprengholz, M. (2021). The labor market integration of immigrant women in Europe: context, theory, and evidence. SN Social Sciences 1(276). https://doi.org/10.1007/s43545-021-00279-3

Shorrocks, A. F. (1978). The measurement of mobility. Econometrica 46(5), 1013-1024. https://doi.org/10.2307/1911433

Simón, H., Ramos, R. & Sanromá, E. (2014). Immigrant Occupational Mobility: Longitudinal Evidence from Spain. European Journal of Population 30(2), 223-255. https://doi.org/10.1007/s10680-014-9313-1

Vidal-Coso, E. (2019). Employment Trajectories of recent Immigrants in Switzerland in Steiner, I. and Wanners, P. (eds), Migrants and Expats: The Swiss Migration and Mobility Nexus. IMISCOE Research Series, SpringerOpen. https://doi.org/10.1007/978-3-030-05671-1_6