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### *Descriptive Finding*

**The ethnic wage penalty in Western European regions: Is the European integration model confirmed when differences within countries are considered?**

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## **The ethnic wage penalty in Western European regions: Is the European integration model confirmed when differences within countries are considered?**

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### **Abstract**

#### **BACKGROUND**

The European model of integration of recent immigrants is characterised by a trade-off between employment and job quality, which takes different forms in Southern and Continental Europe. In Mediterranean countries, migrants have similar employment opportunities as natives, but they have high risks of entering the lowest strata of the occupational structure. In Continental Europe the trade-off is reversed: Migrants have lower employment opportunities, but once employed, they face a lower penalisation in terms of job quality than the one faced by immigrants living in Southern Europe.

#### **OBJECTIVE**

This work focuses on the regional heterogeneity of the model of inclusion of recent immigrants in the European labour markets, analysing how migrant–native gaps in wages and in the probability of (dependent) employment change across areas of the same country. Is the trade-off between employment and job quality confirmed when regional differences are considered? Are there gender differences in the models of inclusion?

#### **METHODS**

We used European Labour Force Survey (EU-LFS, 2009–2016) data and applied probit models with sample selection, estimated separately by region and gender.

#### **RESULTS**

Results show substantial regional heterogeneity in the ethnic penalties in Germany and in Southern Europe, especially in Greece and Italy. Moreover, when regional differences within countries were considered, the trade-off model of inclusion was confirmed only among men, while immigrant women's model of inclusion turned out to be more mixed,

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with some European areas conforming to a ‘double-penalty’ model, whereas other areas showed patterns of immigrant disadvantage in line with an ‘integration’ model.

## **CONTRIBUTION**

This work extends the literature by studying differences in the ethnic penalties at the regional level, focusing on both (dependent) employment probability and wage – an alternative indicator of migrants’ economic integration. Our results also suggest the importance of taking gender differences into account.

## **1. Introduction**

A growing body of literature focuses on the processes of labour market integration of immigrants in Western Europe, highlighting a systematic disadvantage of immigrants, especially when coming from Africa and the Middle East (Koopmans 2016), compared to the native population. Empirical studies investigate the migrants’ penalty by estimating regression models with controls for human capital variables (e.g., education) as well as for occupation, economic sector, and job-related variables. The ‘ethnic penalty’ has thus been defined as any remaining difference between migrants and natives after these characteristics (and others, such as age, marital status, and so on) have been controlled for (Heath and Cheung 2007).

European comparative studies show remarkable cross-country heterogeneity in the magnitude and characteristics of the ethnic penalty, identifying two main models of inclusion of immigrants in the European labour markets (Kogan 2006; Reyneri and Fullin 2011; Panichella 2018a). The first model characterises Mediterranean countries, where foreign workers have similar employment and unemployment rates as the native population but are concentrated in unskilled, nonstandard, and poorly rewarded job positions in the secondary labour market (Reyneri and Fullin 2011). This trade-off between a low employment penalty and a high penalty on job quality mainly depends on the large underground economy and the segmentation of the Southern European labour market (Ambrosini 2018; Fellini and Guetto 2019), where the extensive and growing demand for the so-called ‘three D jobs’ (dirty, dangerous, and demanding) is barely satisfied through the native workforce (Reyneri 1998). Hence, more than elsewhere, in Italy, Spain, Portugal, and Greece foreign workers tend to fill the jobs in the lowest strata of the occupational hierarchy with low chances of upward social mobility (Fellini and Guetto 2019; Panichella, Avola, and Piccitto 2021).

The second model is that of Continental Europe, where the trade-off between employment and job quality is reversed. In these countries, migrants are more strongly penalised in terms of unemployment risks, but once employed, they face a lower

penalisation in terms of job quality than the one faced by immigrants living in Southern Europe due to the higher qualification of the labour demand (Ballarino and Panichella 2015). In other words, although foreign workers are allocated in the secondary labour market in Continental Europe as well, especially in more volatile economic sectors with unskilled and unstable occupations (e.g., construction and manufacturing), their job quality penalty is lower compared to their counterparts in the Mediterranean countries. The United Kingdom can be included in this model, albeit the ethnic penalty in this country should be somewhat in between the two models: The flexibility of the British labour market facilitates immigrants' labour market access (Kogan 2006), whereas the selective immigration policy favours the entry of highly educated workers in specific sectors (Guetto 2018).

The empirical evidence presented in this work contributes to the literature from three points of view. First, research on the European models of inclusion of recent immigrants almost exclusively considers the occupational position (e.g., class attainment) as a measure of job quality (Reyneri and Fullin 2011), whereas comparative analyses of ethnic wage differentials – which can be considered as an alternative indicator of job quality and immigrants' economic integration – are scant (Cantalini, Guetto, and Panichella 2022).

Second, previous studies seldom consider within-country differences despite the high degree of internal heterogeneity in labour market structures and economic performances of European countries, which may produce differences in the size of the ethnic penalties across different regions of the same country. For instance, Germany is still characterised by strong within-country economic differences, even 30 years after the unification process: Average earnings are still much higher in ex–West Germany, whereas (male) unemployment levels are much higher in ex–East Germany regions (Trappe and Sørensen 2005). Southern Italian regions are economically more similar to other Mediterranean countries, primarily Greece, whereas the Northern Italian ones are similar to Western German regions (Felice 2015; Panichella 2018b), and this difference may also affect the magnitude and pattern of immigrant disadvantage in these two areas of Italy (Avola 2015). Beyond acknowledging regional economic heterogeneity, focusing on within-country differences represents a stronger empirical test for the hypothesis of the existence of a European model of immigrant integration characterised by a trade-off between employment and job quality, which takes different forms in Southern Europe and Continental Europe. Differences between Southern and Continental countries are usually traced back to institutional and labour market characteristics (Ballarino and Panichella 2015; Guetto 2018). However, cross-country heterogeneity in the ethnic penalties may be due to compositional differences regarding migration inflows (e.g., areas of origin and reasons for migration) as well as by national cultures, such as attitudes

toward immigrants. Within-country comparisons represent a way to reduce the impact of these contextual confounders.

Finally, existing research does not pay enough attention to possible gender differences in the European model of immigrant integration: Is the trade-off between employment and job quality, measured in terms of income, confirmed among both men and women? There are theoretical reasons to expect the ethnic penalty at the regional level to show important gender differences (Ballarino and Panichella 2018; Cantalini, Guetto, and Panichella 2022). In fact, the magnitude of the migrant–native gap in the employment probability among women crucially depends on the level of female labour market participation of the natives, which might substantially vary across European regions. Moreover, the allocation of immigrant women in specific labour market sectors (e.g., personal care and services), where chances of upward income mobility are low, can vary across regions, leading to substantial heterogeneity in the models of inclusion of migrants that can hardly be highlighted with an analysis of differences between countries.

## **2. Data and methods**

We used data from the European Labour Force Survey (EU-LFS, 2009–2016). The analytical sample included 5,068,593 individuals aged 25 to 54 (2,255,895 men and 2,812,698 women), 3,340,541 (65.9%) of which are employed as employees. We excluded those who moved to the country of destination more than ten years before ( $N = 139,988$ ), thus focusing on only recent migrants (who migrated after age 15), as done by previous studies (Reyneri and Fullin 2011).

We measured the ethnic penalty with a simultaneous estimation of the probability of being in dependent employment and wage. The first variable, measured on the whole analytical sample, was a dummy, coded 1 for the (dependent) employed and 0 for the unemployed and the inactive. The second, measured only among the employees, was the monthly net income decile of the main dependent job after deduction of income tax and national social security contributions. We modelled the probability of being above the fifth decile (the median) of the wage distribution. Compared to other thresholds (e.g., 30<sup>th</sup>, 60<sup>th</sup>, 70<sup>th</sup>, and 80<sup>th</sup> percentiles, whose results are available upon request), this choice allowed having both natives and migrants well distributed in both categories of the dependent dummy variable (i.e., below and above the median).

The main independent variable was geographical origin, distinguishing migrants from the native population based on the country of birth, except for Germany, where we used nationality because information on the country of birth was not available. We focused on migrants from Asia, Africa, Latin America, and Eastern Europe, whereas

Western migrants from North America, Western Europe, and Australia have been included in a residual category whose results are available upon request.

All models controlled for age groups (six 5-year dummies), survey year dummies, and educational attainment (lower secondary or less (ISCED 0–2), upper secondary or postsecondary nontertiary (ISCED 3–4), or tertiary (ISCED 5–6)). The selection equation – that is, the model estimating the probability of being an employee (see below) – also included a combination between marital status (single; married; or widowed, separated, or divorced) and the number of dependent children in the household (no children, one child, two children, or three or more). Patterns at the regional level estimated from the wage equation do not substantially change if the occupation and several job characteristics of the respondent are controlled for.

We applied probit models with sample selection, estimated separately by region of residence (NUTS-2) and sex. These models were characterised by two dependent variables: the binary outcome  $y_i$  (i.e., wage above the median) and a binary variable indicating if the individual is observed in the sample (i.e., being a dependent worker), which were modelled jointly through the simultaneous estimation of two probit models for the wage equation and the selection equation. We considered interaction effects between marital status and number of dependent children in the household as exclusion restriction. It should be noticed that, due to the type of statistical model applied to the data, we had to exclude self-employed workers from the selection equation – that is, from the analysis of the employment penalty. This limitation is partly counterbalanced by the possibility, provided by our modelling strategy, to control for the selection into (dependent) employment when studying migrant–native gaps in job quality (in terms of income), a problem usually overlooked in the ethnic penalty literature.

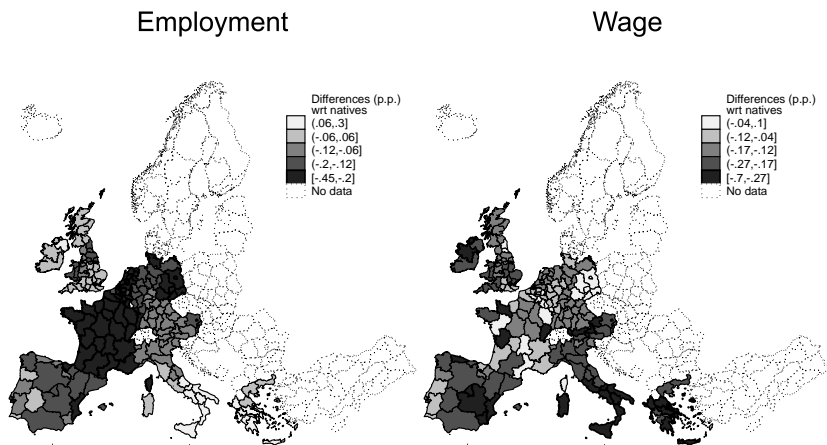
### 3. Empirical evidence

Figures 1 and 2 present regional differences in the predicted probabilities of being a dependent employed (left panel) and being above the 50<sup>th</sup> percentile of wage (right panel) between migrants and natives among men and women, respectively. The darker the region, the higher the ethnic penalty.

Among men, Italy, Greece, and Germany are the countries where internal differences in the ethnic penalties are stronger. For instance, migrants have high employment levels but strong wage penalties in Southern Italian regions, whereas they face higher employment penalties but comparatively lower wage penalties in Central and, primarily, Northern areas (Avola 2015). This internal heterogeneity, which also resembles the socioeconomic dualism between North and South, makes the Italian case peculiar, with Northern regions more similar to the Continental model (high EP-low JQP

equilibrium), and Southern regions more consistent with the Mediterranean model (low EP-high JQP equilibrium). In addition, although the ‘reversed’ trade-off model occurs in all German regions, the largest employment penalties coupled with the lowest wage penalties can be found in the ex-Democratic Republic. Less within-country heterogeneity is found in Ireland and the United Kingdom, as well as in Austria and Belgium, whereas France is characterised by internal homogeneity in terms of migrants’ employment penalties, but stronger differences in terms of wage.

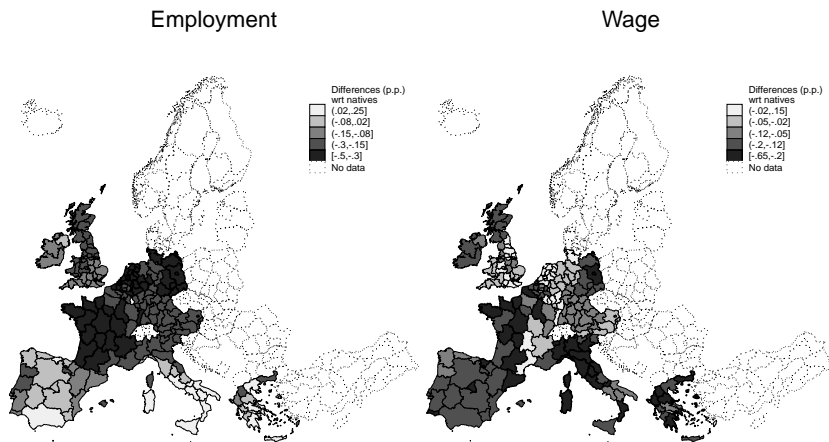
**Figure 1: Ethnic penalty on employment and wage, by region (NUTS-2): men. Probit models with sample selection. Average marginal effects (with regard to natives) on the probability of being a dependent employed (left panel) and in top 50% of the wage distribution (right panel). Controls: age, year of survey, and education**



Notes: p. p. = percentage points; wrt = with regard to.  
Source: Own elaboration on EU-LFS data (2009–2016).



**Figure 2: Ethnic penalty on employment and wage, by region (NUTS-2): women. Probit models with sample selection. Average marginal effects (with regard to natives) on the probability of being a dependent employed (left panel) and in top 50% of the wage distribution (right panel). Controls: age, year of survey, and education**



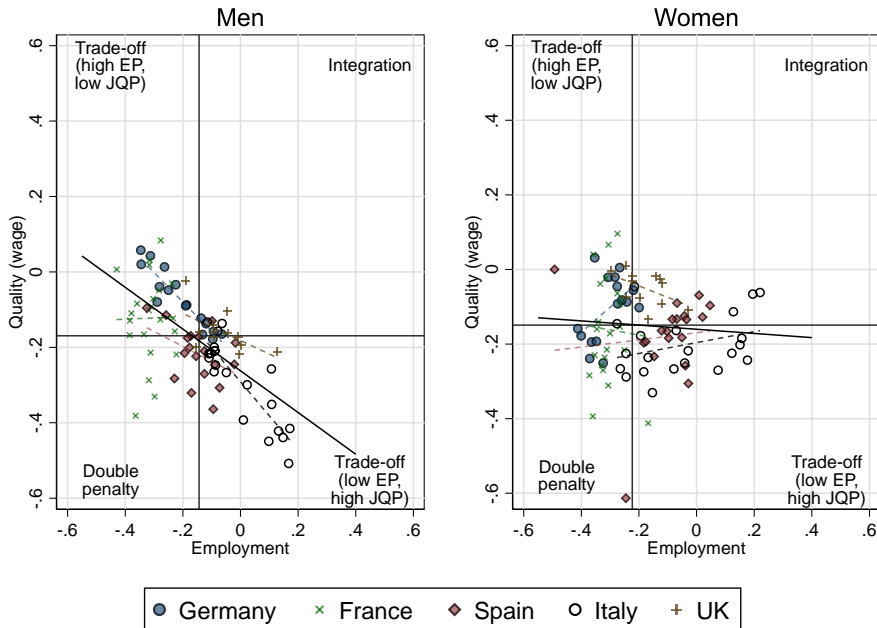
Notes: p. p. = percentage points; wrt = with regard to.  
Source: Own elaboration on EU-LFS data (2009–2016).

Among women, we see patterns of immigrant penalisation less in line with the general trade-off between employment and job quality that characterises male immigrants' inclusion in the European labour markets. In fact, in many countries and regions low and high penalties both in terms of employment and wage are found (e.g., Western France, Eastern Germany, Northern Italy, etc.). This may be due to the mechanisms described in the introduction. For instance, although in Northern Italian regions immigrant women are more penalised in terms of employment than in Southern regions, also because of higher labour market participation among native women compared to their Southern counterparts, this does not imply higher chances of having a wage above the median as most of them work in low-paid occupations such as housekeeping and eldercare.

This emerges clearly in Figure 3, which plots ethnic penalties on employment and wage by gender and region in order to highlight the trade-off characterising the integration of recent immigrants in the European labour markets (see Panichella 2018a). To make the results more readable, we plotted the regions of only five European countries: Germany, France, Spain, Italy, and the United Kingdom. These countries are representative of the different models of inclusion, and their regional variability (i.e., number of regions) is enough to study patterns of ethnic penalties both between and within countries. The trade-off characterising the European model is visible in the top-left and bottom-right quadrants. The former includes those regions that have a higher-than-average ethnic penalty on employment and a lower-than-average ethnic penalty on job quality (Continental model). The latter includes those regions where a lower-than-average ethnic penalty on employment is coupled with a higher-than-average penalty on job quality (Mediterranean model).

Results suggest that among men, the European trade-off is confirmed both between and within each country: At higher employment penalties correspond lower wage penalties, and vice versa. Although few regions are included in the 'double-penalty' quadrant (i.e., relatively stronger penalties in both outcomes), a large number of regions appear in the trade-off quadrants, and the slopes of the interpolation lines are always negative, with the only exception of France. On the contrary, among women, the trade-off between employment and job quality appears less clear since the observations are distributed throughout the quadrants, with more cases residing in both the double-penalty and the integration quadrants compared to men. Overall, there is only a weak negative relationship between employment and wage penalties, but within countries the relationship is null or even positive (in Germany, Italy, and Spain). In other words, when analysing differences within countries, the trade-off model is clearly confirmed only among men, whereas the European model of occupational integration of immigrant women is more mixed. On the one hand, some European regions seem more consistent with a double-penalty model, where strong disadvantages in employment are associated with a high risk of entrapment in lower-paying jobs. On the other hand, in Italy, Spain, and United Kingdom we also found regions in the 'integration' quadrant, characterised by relatively small penalties in both employment and job quality, or even an 'ethnic premium' in employment (e.g., in Italy).

**Figure 3: Ethnic penalty on employment and wage, by gender and region. Probit models with sample selection. Average marginal effects (with regard to natives) on the probability of being a dependent employed and in the top 50% of the wage distribution. Controls: age, year of survey, and education**



Notes: EP = employment penalty; JQP = job quality penalty. Reference lines correspond to the median of the EP ( $x = -0.14$  for men;  $x = -0.22$  for women) and the JQP ( $y = -0.17$  for men;  $y = -0.15$  for women).  
 Source: Own elaboration on EU-LFS data (2009–2016).

## 4. Discussion

The debate on the models of immigrants' labour market incorporation in Europe generally focuses on the national level, identifying two main models of inclusion, which are characterised by a different trade-off between employment and job quality: the Mediterranean and the Continental models. The empirical results presented in this work show that regional differences within countries need to be analysed in detail by future research for at least two reasons.

First, the Mediterranean model is very heterogeneous. Regional differences are particularly visible in Italy: Northern regions can legitimately be included in the Continental model, with (male) migrants experiencing high employment penalties but low wage penalties, and Southern regions in the Mediterranean model, with migrants experiencing low unemployment risks but substantial wage penalties. This regional heterogeneity within the Mediterranean model deserves more empirical insights as it has been done by recent research that implemented multilevel models to study the effects of regional labour market characteristics (see Avola, Piccitto, and Vegetti 2019).

Second, our evidence shows that regional differences are important for studying gender differences in migrants' labour market integration processes. When cross-country differences are analysed, as done by most previous research, the trade-off model is confirmed for both men and women, even if it appears less clear among the latter (Ballarino and Panichella 2018; Guetto 2018). When regional differences within countries are analysed, the trade-off model is confirmed only among men.

Two possible reasons underlie this difference, which deserves a more in-depth analysis. The first is related to the fact that the levels of female labour market participation substantially change for both immigrant and native women across European regions (Elhorst and Zeilstra 2007). This issue, which is not considered by traditional comparative analyses, has a crucial impact on the evaluation of the magnitude of the ethnic penalty among women across European societies. The second reason regards the fact that immigrant women are generally concentrated in specific labour market sectors (e.g., personal care and services), where chances of upward income mobility are low (Ballarino and Panichella 2018). This weakens the trade-off between employment and job quality, and a high penalty on employment less often corresponds to a low penalty on job quality, and vice versa. The regional analysis of the ethnic penalty highlights the process of a cumulative disadvantage that penalises migrant women (see Boyd 1984) in some European areas, where strong employment penalties can also be associated with relevant penalisations on job quality.

In general, these findings question the methodological nationalism affecting most of the current social research on migration (Wimmer and Glick Schiller 2002; King and Skeldon 2010; Panichella 2018b). Indeed, studies that (implicitly or explicitly) define the units of comparison by the boundaries of the nation state without considering the internal heterogeneity within countries could lead to less accurate and more biased results.

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