SKILLS OR CULTURE? AN ANALYSIS OF THE DECISION TO WORK BY IMMIGRANT WOMEN IN ITALY

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Abstract

Activity and employment rates for immigrant women in Italy display a great variability across ethnic groups. These differences do not solely depend on the individual characteristics, but they remain significant even after conditioning for skill level or potential experience. The aim of this paper is to assess whether this fact is due to a voluntarily decision (i.e. large reservation wages by the immigrants) or to an involuntarily process (i.e. the labour market evaluation of their skills is low), by estimating the reservation wages for each working and not working individuals in the ISMU dataset. Our results show that there exists a huge heterogeneity in the reservation wages across ethnicities, but the low activity and employment rates for certain national groups do not depend on a voluntarily decision. This result is robust to a number of sample selection and specification tests.

JEL: J22, J61, J15
Keywords: Reservation wages, inter-ethnical differences.

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Contents

1. Introduction[1]

Immigrant labour force gives an essential contribution to the growth and development of most of the European Union countries. Immigrants' economic integration in the host country labour markets actually represents a necessary condition for the achievement of the Lisbon targets of full employment and sustainable growth in the European Employment strategy. However, although labour market integration for immigrant men is well documented, gender differences in the partition of the family burden may often play an important role in the immigrant female labour supply. Indeed, cultural background may actually constitute a crucial variable for the female decision to participate and this may be an explanation for the great variability across ethnicities of activity and employment rates.

The aim of this paper is to assess the impact of cultural background on the women decision to participate to the labour market. In particular, we investigate the existence of significant inter-ethnical differences in the female reservation wage, which represents a crucial variable in describing the individual's evaluation of her time spent at home. We take into account a number of confounding factors like the presence of relatives at the moments of the entry in the host country or the entry mode in Italy.

To do so, we make use of an extremely rich database collected by the non-governmental organization ISMU (Iniziative e Studi sulla Multietnicità – *Initiatives and Studies on Multiethnic Society*) from surveys of immigrants from the least developed, emerging and transition countries residing in the region of Lombardy in the North-West of Italy. The fact that the interviews are collected in the same (relatively small) area of Italy is particularly useful for our analysis. Surveyed women actually face the same labour market conditions; moreover, given Italy's recent tradition in immigration, they are most likely to preserve their ethnical attitudes with respect to the labour market participation.

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International evidence on this topic is quite rich. By estimating the probability to work between natives and immigrants and disaggregating by gender in Germany, Constant et al. (2007) finds that cultural background greatly impacts on the labour market participation. Zaiceva and Zimmermann (2008) find a similar result for the UK by using the British Time Use Survey. Bevelander and Groeneveld (2007) report significant lower labour supply by Caribbean and Mediterranean women with respect to Dutch natives after controlling for individual characteristics. Adsera and Chiswick (2007) account for similar results for 15 European Union countries. In general, female employment rates of all ethnic minorities are much lower than for white natives, especially at the bottom of the husband's income distribution (Dustmann and Fabbri, 2005), a result generally attributed to culture and religion.

By focusing on reservation wages rather than employment opportunities, our results show that culture have a low impact on the decision to work by immigrant women in Lombardy. We show that low activity and employment rates for certain ethnic groups (mainly, Arabs and central Asian) are involuntarily since reservation wages are not significantly larger than those of our reference group (i.e. women coming from the New Member States of the European Union, those who display the larger employment rates).

This result is obtained by estimating on the economic evaluation of the time spent at home rather than on the probability to be employed. We deem this methodology be more correct since it is able to disentangle the effects of labour demand from those of the labour supply. Individual's labour supply depends indeed on three economic factors: the expected wage in the labour market, the probability to be employed and the subjective evaluation of the time spent at home (reservation wage). When we focus just on the probability to be employed, we concentrate on the final outcome of the individual decision, while a more precise assessment of the labour supply effects is obtainable only by estimating the reservation wages for all ethnic groups.

The paper is organized as follows. Paragraph 2 describes the ISMU dataset and some of the descriptive statistics. Paragraph 3 explains the most relevant econometric issues, like the estimation of the reservation wages and the robustness checks. Paragraph 4 shows the results. Paragraph 5 concludes the paper. Appendix 1 shows a simple exercise in which we estimate wage inter-ethnical differentials for working individuals.

2. Data

Since 2001, the ISMU has conducted a yearly survey across immigrants living in Lombardy. The individuals surveyed (slightly more than 8,000 each year) are chosen according to a multi-stage design (see Blangiardo, 1993 and, for a brief description of the dataset Accetturo and Infante, 2008). In this paper, we focus on the first 5 waves collected from 2001 to 2005.

This study concentrates on a sample made by all women in working age (i.e. the 15-64 cohorts) of the dataset, which contains information on socio-economic characteristics for more than 12 thousands individuals. Summary statistics of the main variables are reported in table 1. Average schooling is quite high (10.7 years)[2] and comparable with the figures for the Italian population. More than the 60 per cent of the interviewed women is married; they reside in Italy from a relatively short period of time (6.3 years). ISMU dataset also contains information on the legal status of the immigrant: the 11.7 per cent of the interviewed individuals self-report as irregular on the Italian soil.[3]

Standard figures on working conditions are reported in table 2.[4] Employment rate averages at 60.2 per cent for the entire sample, while activity rate is much larger (71.6 per cent). This figure largely varies across ethnicities: the employment rate of the women coming from the New Member States (NMS) of the European Union is almost twice as the one of the Arabic or Muslim countries. The figure for the Other Asian group (mainly people from central Asia) is even smaller. Activity rates display the same great variability across national groups.

Obviously, it might be the case that heterogeneity across groups depends just on the individual characteristics of the worker. For example, larger employment rates by NMS

[2] As usual in this literature, we assigned zero years of schooling when the individual does not have any formal education, 8 years for a compulsory school leaving certificate, 13 years for high school and 17 for at least a university degree.

[3] Accetturo and Infante (2008) discuss the possible misreporting bias in the irregular status of the immigrants and conclude that some underreporting is actually at work but its size is negligible.

[4] To be clear, we split the working condition for immigrants in three groups. The first is made of inactive population, i.e. those who declared to be either a housewife or a student. The second is made of the self-declaring unemployed. The third is constituted by all employed persons. The "active" group includes the unemployed and employed individuals. The employed group contains, instead, all employed persons.

women might solely depend on the higher schooling levels by this cluster compared, for example, with Arab or Muslim countries women.

To account for this possibility, we present some estimates on the willingness to work by ethnic groups conditional on individual characteristics. By using a probit estimator, we model the probability of being active as a function of the individual characteristics of the worker such as: schooling, potential experience, years since migration, marital status, number of children below and above 18 years old, a full set of dummies for country of origin, religion, province of residence and years.

These estimates (Table 3) actually convey the same information of table 2 (column [1]). The first two columns show the results of the probit estimate and its marginal effects of country of origin dummies (columns [1] and [2] respectively) of a model without religion dummies and years in Italy. Similarly, columns [3] and [4] show the results with the variables years since migration and its squared. Columns [5] and [6] show the results (column [5]: probit estimates; column [6]: marginal effects) by adding also religion dummies. It is apparent that inter-ethnical differentials are still working. Being Arab and Muslim reduces the probability to be active by 31 to 20 per cent compared with NMS immigrants. Other Asians group shows an even larger gap.

These figures seem to suggest that inter-ethnical differences do not solely depend on individual characteristics but they are likely to be influenced by individual incentives for the labour market participation. In the remaining part of the paper, we evaluate whether there exist differences in the reservation wages, i.e. in the individual's evaluation of her time spent at home.

3. Econometric issues

3.1 The estimate of the reservation wage: an econometric approach

Although the reservation wage is a crucial variable in the neoclassical theory of labour supply, there is still an opened discussion on the best modality to estimate it. Many national labour force surveys (e.g. in the US, Netherlands, Germany, UK etc.) usually include self-reported reservation wages, whose reliability, however, is widely debated. As shown by Burdett and Vishwanath (1988) and Hofler and Murphy (1994), self-reported reservation

wages are often biased and they are usually inconsistent with the actual behaviour of a worker.[5] This bias calls for alternative methods, which are more linked to standard search theory and the revealed preferences of a worker in the labour market (see, for a survey, Boheim, 2002). This paper follows the econometric approach proposed by Mohanty (2005).

We assume that a worker would participate to the labour market only if the wage she expects to receive in the labour market exceeds her reservation wage. This implies that there exists a unique relationship between the individual's reservation wage and her hypothetical market wage, and these two factors determine the labour market participation. By following this logic, this model uses a methodology based on standard bivariate decision model of Meng and Schmidt (1985) and Tunali (1986).

An individual *i* of ethnic group *j* is employed only if she decides to participate to the labour market ($Work_{ij}$ =1) and is hired by an employer ($Employed_{ij}$ = 1). According to the standard labour supply theory, her decision to be active depends on the comparison between the expected wage (w^m_{ij}) and her reservation wage (w^r_{ij}). In particular,

$work_{ij}$=1 if $y_{1ij} = w^m_{ij} - w^r_{ij} \geq 0$

$work_{ij}$=0 if $y_{1ij} = w^m_{ij} - w^r_{ij} < 0$.

On the other hand, the employer's decision to hire individual *i* depends on the individual's characteristics and her compatibility with his labour needs. In particular,

$employed_{ij}$=1 if $y_{2ij} \geq 0$

$employed_{ij}$=0 if $y_{2ij} < 0$

where y_{2ij} represents the employer's preferences toward worker *i* of ethnic group *j*.

Reservation wages are computed in three steps.

In the first stage, we calculate the latent variables which determines the participation decision by estimating these two equations:

$$y_{1ij} = x_{1ij} b_1 + e_{1ij} \quad (1)$$

[5] Sestito and Viviano (2004) report a similar result for the Italian Labour Force Survey.

$$y_{2ij} = x_{2ij}\, b_2 + e_{2ij} \qquad (2)$$

by a bivariate probit with partial observability. The choice of the bivariate probit technique is particularly useful for our analysis since it allows us to take into account discouragement effects in the labour market, in which the activity status is often correlated with the hardship a worker faces in finding a job. Operationally, we include in x_{1ij} a set of variables aimed at capturing all the economic and cultural determinants for the labour supply like schooling, potential experience, religion, number of children below and above 18 years old, marital status and a set of time dummies. x_{2ij} includes, instead, all the possible personal characteristics which are likely to influence the employer's willingness to hire individual *i*: school, years spent in Italy so far, dummies for country of origin (a proxy for the compatibility to the Italian labour market), time and spatial dummies.[6]

In the second step of the analysis, we estimate a wage equation for the employed only using a correction for the self-selection bias in the participation to the labour market:

$$\ln w_{ij}^{m} = x_{3ij}\, b_3 + c_{13}\, \lambda_{1ij} + c_{13}\, \lambda_{2ij} + u_{ij} \qquad (3)$$

where $u_{ij} = \varepsilon_{ij} - c_{13}\lambda_{1ij} - c_{23}\lambda_{2ij}$, $\lambda_{1ij} = \dfrac{\phi\left(x_{1ij}b_1\right)\Phi\left(\dfrac{x_{2ij}b_2 - \rho x_{1ij}b_1}{\sqrt{1-\rho^2}}\right)}{F\left(x_{1ij}b_1, x_{2ij}b_2, \rho\right)}$ and $\lambda_{2ij} = \dfrac{\phi\left(x_{2ij}b_2\right)\Phi\left(\dfrac{x_{1ij}b_1 - \rho x_{2ij}b_2}{\sqrt{1-\rho^2}}\right)}{F\left(x_{1ij}b_1, x_{2ij}b_2, \rho\right)}$. ϕ and Φ represent, respectively, the density and the cumulative function of a standard normal distribution, while ρ (rho) is the correlation of the error terms in the bivariate probit. x_{3ij} includes a number of characteristics which are likely to influence the labour market performance of each individual: schooling, potential experience, years since migration, working conditions dummies (part-time, tenured etc.), country, spatial and years dummies.

[6] Spatial dummies include one dummy for each of local labour markets in which Lombardy is partitioned.

In the third step we compute the reservation wages. In particular, taking anti-logs of the predicted values[7] of eq. (3) (which actually represents the expected market wage conditional on the individual characteristics) and subtracting the predicted values of eq. (1) (which is the latent variable of the first equation of the bivariate probit analysis and it describes the choice variable for the labour market participation) for all the individuals in the sample, we obtain an estimate of the reservation wage.

3.2 Inter-ethnical differences and robustness

After computing the reservation wages, we test whether they systematically differ across nationalities. We calculate the percentage differences between each group and our reference cluster (NMS women) in two specifications. In the first, we use unconditional means (i.e. differences just controlling for years and spatial dummies). In the second, we calculate it conditional on a number of variables which are likely to influence the labour supply: level of schooling, potential experience, marital status and number of children below and above 18 years old. We focus, in particular, on the differences between the NMS group with two nationalities which displayed the lowest activity and employment rates: Arab/Muslim and other Asia. Whenever the reservation wages for those groups are higher, the observed low labour market participation is likely to be voluntary: the value Arab/Muslim and other Asian women attach to their time spent at home is so high that they remain un-attracted by the Lombardy labour market. Conversely, whenever their reservation wage is comparable to that of our reference group, the low participation rate is involuntarily.

We further check the robustness of these estimates by facing a possible bias due to different incentives to work according to the immigrant's modality of entry in the host country and the legal status.

The first check relates to the fact that whenever an immigrant enters a country by using a visa based on kinship her shadow price for the market wage could be higher, since she could rely on the financial support of a blood relative during her search spell. Whenever this entry mode systematically varies across ethnicities, this may impact on the inter-ethnical comparison of reservation wages. We check this issue by restricting the analysis to those

[7] Expected wages are computed also for unemployed and inactive individuals.

women who entered Italy with this kind of visa. This information is available for all years except for 2004: individuals with a visa based on kinship sum up to 2,332.

The second check is based on the analysis of the irregular group only. Undocumented aliens have a number of characteristics which are worth to be exploited in the analysis. First, they have a very weak bargaining power with respect to their employers: due to their illegal status they are not likely to belong to a union and they work off the books. This implies that wage offers for them are usually quite low (see Accetturo and Infante, 2008, on the topic) and therefore they may be quite close to the reservation wages. Second, illegal aliens are likely to accept low wage offers: their incentives to work are particularly strong since their possibility to be regularized by one of the recurrent amnesties are strictly linked to the evidence of their working condition on the Italian soil. This implies that, conditional on the reservation wage hypothesis, they are more likely to accept the jobs they are offered. Third, irregular immigrants usually are on the Italian soil by fewer years compared to the regulars: they are most likely to preserve their ethnical attitudes with respect to the labour market participation. In the ISMU dataset, irregular women are surveyed each year and they sum up to 1,363 individuals.

4. Results

4.1 Baseline sample

The first part of this section is devoted to the results of the baseline sample. This group is constituted by all the regular women in working age interviewed in the waves 2001-2005.

Table 4 shows the results of both the biprobit estimates (columns [1] and [2]) and the wage equation (column [3]). As expected, schooling positively affects the probability to be active and to be employed in the labour market. Moreover, potential experience increases the probability to offer work in the labour market and the years spent in Italy increases the likelihood to be employed, since the knowledge of local labour market mechanisms is likely to increase with the years since migration. Religion dummies have all the expected sign, while the number of children below (above) 18 years old reasonably rise (decrease) with the probability to be active. Correlation among error terms (rho) is quite high. In the second step, we estimate a classical wage equation for all working individuals and we take into account

the possible selection bias by plugging the computed λ_1 and λ_2 into the equation. Results are displayed in column [3]. All variables have the expected sign and they are significant. The positive and highly significant coefficients of λ_1 and λ_2 implies that a selection is at work in the model.

Panel (a) of table 5 shows the activity and employment rates across ethnicities for the regular group only: reported figures are quite similar to those in Table 2 since the regular aliens constitute almost the 90 per cent of the ISMU sample. Inter-ethnical differences are still large and the share of active and working population is quite low for the Arabs and Other Asia group. By calculating reservation wages according to the methodology explained in section 3.1, we are able to assess their differences across nationalities. The results of the percentage differences between each ethnic group and our reference group (NMS aliens) are displayed in Panel (b). Column [1] shows the unconditional difference (see section 3.2) , column [2] adds controls for a number of variables which are likely to influence the reservation wage (conditional mean, see section 3.2). Results are quite interesting and they show that even after conditioning on individual characteristics, reservation wages display a large variability across nationalities. An F-test testing the hypothesis that all area dummies are equal to zero is rejected in both specifications, although its magnitude shows a clear drop after conditioning for individual characteristics. Quite interestingly, reservation wages for the Arabic and Muslim and the Other Asia groups are significantly lower than those for the NMS, although the activity rates for the formers are extremely low. This implies that the not-working condition is clearly involuntary since it does not depend on the female evaluation of their time spent at home.

4.2 Differentiated effects across educational levels

We further split the reservation wages across four classes of education (no education, primary, secondary and tertiary schooling) and we calculate the conditional means as shown in column [2] of table 5. Results in table 6 are quite interesting: differences in the reservation wages concentrate in the intermediate and high levels of education. The F-test is, indeed, significant for the primary, secondary and tertiary schooling, while country coefficients do not significantly vary for those without formal education.

Even sample splits across schooling confirm the idea that low activity rates for certain groups may actually be involuntarily, since reservation wages for the Arab and Muslim and Other Asia groups is never higher than the estimate for the NMS in a statistically significant way, except for the primary school for the Arabs, which is significant at 10 per cent.

4.3 Robustness

So far we have obtained two clear results. First, subjective evaluation of the time spent at home greatly varies across nationalities; second, the low employment/activity rates registered for certain groups does not depend on a voluntarily decision since reservation wages for ethnicities with a low labour supply is actually lower than the one of our reference group.

As explained in the previous section, a possible explanation for this phenomenon may be linked to the modality of entry in the host country or to the legal status. To investigate this issue, we perform two robustness checks by restricting the analysis to (i) the women who benefited from a visa based on kinship and (ii) undocumented immigrants.

Results for the first check are shown in table 7. Panel (a) report the shares of active and working population among those who received a visa based on kinship: activity and employment rates are even smaller than before, but inter-ethnical differences seem to be still at work. Panel (b) reports the percentage differences in the reservation wages between each group and the NMS cluster. Once again, the F-test is still significant while reservation wages for immigrants from Arab or Muslim countries or from Other Asia is not significantly larger than the one for the NMS group.

A similar result is displayed in table 8 for the irregular aliens. Panel (a) reports activity and employment rates for the undocumented foreigners and it shows that incentives to work are particularly strong for the irregulars. Activity rate averages around the 90 per cent, while the employment rate is much smaller (64 per cent). Still inter-ethnical differences are at place, especially in the employment rates, while the share of active women coming from an Arab or Muslim country is 8 percentage points lower than the figure for the NMS group. Panel (b) reports the estimates for the reservation wages: once again, ethnic groups displaying a low activity rate do not report larger values than the one estimated for the NMS

women. Moreover, the F-test shows a strong significance thus confirming the existence of strong differences in the time spent at home by immigrant women in Italy.

5. Concluding remarks

Activity and employment rates for immigrant women in Italy display a great variability across ethnic groups. These differences do not solely depend on the individual characteristics, but they remain significant even after conditioning for skill level or potential experience. The aim of this paper is to assess whether this fact is due to a voluntarily decision (i.e. large reservation wages) or to an involuntarily process (i.e. immigrants' reservation wage is not particularly large, but the labour market evaluation of their skills is low), by estimating the reservation wages for each working and not working individuals in the ISMU dataset.

Our results are quite clear: there exists a certain heterogeneity in the reservation wages across ethnicities, but the low activity and employment rates for certain national groups do not depend on a voluntarily decision. This result is quite robust to a number of sample selection and specification tests. In particular, low participation rates do not depend on the modality of entry in the host country (visa based on kinship) or on the legal status within the host country. The evidence is confirmed by the wage differentials for the working population, which is not larger for the groups with the lowest share of working individuals.

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Table 1

SUMMARY STATISTICS OF THE MAIN VARIABLES

	No. obs.	Sample mean	Std. Dev.
School	12,426	10.732	4.545
Potential Experience	12,426	16.670	9.306
Years in Italy	12,426	5.741	4.640
Net monthly wage	10,468	606.733	1209.093
Children below 18yo	12,426	0.694	0.989
Children above 18yo	12,426	0.527	1.560
Married	12,426	0.569	0.495
Kinship visa	9,987	0.274	0.446
Irregular	12,426	0.117	0.322
Muslim	12,426	0.305	0.460
Catholic	12,426	0.378	0.485
Other Christians	12,426	0.182	0.386
Buddhists	12,426	0.032	0.175
Hindu	12,426	0.013	0.114
New Member States	12,426	0.077	0.284
Eastern European Countries	12,426	0.211	0.407
Central or Southern America	12,426	0.194	0.396
Arab or Muslim Countries	12,426	0.183	0.387
Sub-Saharan Africa	12,426	0.156	0.362
East Asia	12,426	0.124	0.330
Other Asia	12,426	0.055	0.229

Table 2

ACTIVITY AND EMPLOYMENT RATES ACROSS ETHNICITIES

	Activity rate	Employment rate
New Member States	84.9	70.9
Eastern European Countries	79.1	66.7
Central or Southern America	85.9	71.9
Arab or Muslim Countries	47.0	38.0
Sub-Saharan Africa	77.0	64.0
East Asia	75.1	68.7
Other Asia	35.6	26.8
Total	**71.6**	**60.2**

Notes. Activity and employment rates computed on self declaring working status. Averages weighted according to the sample design.

Table 3

THE ACTIVITY STATUS: A PROBIT ANALYSIS

	[1]	[2]	[3]	[4]	[5]	[6]
Dependent variable: Activity status		Marginal effects		Marginal effects		Marginal effects
School	0.049***		0.033***		0.028***	
	(0.004)		(0.004)		(0.004)	
Potential experience	0.105***		0.082***		0.080***	
	(0.005)		(0.006)		(0.006)	
(Potential experience)2	-0.184***		-0.158***		-0.156***	
(x100)	(0.012)		(0.013)		(0.013)	
Years in Italy	-		0.131***		0.129***	
			(0.008)		(0.008)	
(Years in Italy)2(x100)	-		-0.380***		-0.374***	
			(0.035)		(0.035)	
Eastern European	-0.120	-0.037	-0.160**	-0.049**	-0.050	-0.015
Countries	(0.073)	(0.023)	(0.073)	(0.023)	(0.075)	(0.023)
Central or Southern	0.024	0.007	-0.068	-0.020	0.005	0.001
America	(0.076)	(0.022)	(0.076)	(0.023)	(0.079)	(0.023)
Arab or Muslim	-0.781***	-0.267***	-0.899***	-0.310***	-0.591***	-0.196***
Countries	(0.072)	(0.026)	(0.072)	(0.027)	(0.081)	(0.029)
Sub-Saharan Africa	-0.156**	-0.049**	-0.293***	-0.094***	-0.155**	-0.048*
	(0.076)	(0.024)	(0.077)	(0.026)	(0.079)	(0.025)
East Asia	-0.315***	-0.102***	-0.460***	-0.153***	-0.299***	-0.095**
	(0.078)	(0.027)	(0.079)	(0.028)	(0.084)	(0.029)
Other Asia	-1.023***	-0.375***	-1.032***	-0.377***	-0.821***	-0.294***
	(0.085)	(0.033)	(0.085)	(0.033)	(0.094)	(0.037)
Married	-1.072***		-1.029***		-1.017***	
	(0.042)		(0.042)		(0.042)	
Children below 18yo	-0.252***		-0.306***		-0.291***	
	(0.017)		(0.018)		(0.018)	
Children above 18yo	0.018		0.022		0.019	
	(0.017)		(0.016)		(0.015)	
Spatial dummies	YES		YES		YES	
Year dummies	YES		YES		YES	
Religion origin dummies	NO		NO		YES	
Intercept	0.122		0.097		-0.036	
	(0.113)		(0.115)		(0.126)	
Pseudo – R2	0.254		0.280		0.287	
No. Obs.	10,384		10,367		10,367	

Table 4

BASELINE SAMPLE

	[1]	[2]	[3]
	Biprobit estimates		Wage equation
	Dependent variable: Active	Dependent variable: Employed	Dependent variable: Net monthly wage
School	0.040***	0.028***	0.018***
	(0.005)	(0.004)	(0.005)
Potential experience	0.038***	-	0.002
	(0.007)		(0.003)
(Potential experience)2 (x100)	-0.061***	-	-0.009
	(0.015)		(0.007)
Years in Italy	-	0.080***	0.052***
		(0.009)	(0.014)
(Years in Italy)2(x100)	-	-0.300***	-0.188***
		(0.046)	(0.055)
Muslim	-0.237***	-	-
	(0.049)		
Other Christians	0.318***	-	-
	(0.046)		
Catholic	0.226***	-	-
	(0.048)		
Buddhists	0.012	-	-
	(0.068)		
Hindu	-0.380**	-	-
	(0.130)		
Married	-0.506***	-	-
	(0.043)		
Children below 18yo	-0.082***	-	-
	(0.017)		
Children above 18yo	0.063**	-	-
	(0.022)		
Spatial dummies	NO	Local labour system	Local labour system
Year dummies	YES	YES	YES
Country of origin dummies	NO	YES	YES
Working conditions dummies	NO	NO	YES
Lambda1	-	-	0.409**
			(0.196)
Lambda2	-	-	0.846**
			(0.297)
Intercept	-0.036	-0.084	6.419***
	(0.095)	(0.109)	(0.253)
Rho	0.916		-
No. Obs.	10,659		6,054

Table 5

INTER-ETHNICAL RESERVATION WAGE DIFFERENTIALS (BASELINE SAMPLE)

(a) Activity and employment rates

	Activity rate	Employment rate
New Member States	83.0	73.8
Eastern European Countries	76.8	65.8
Central or Southern America	84.4	71.9
Arab or Muslim Countries	45.0	38.1
Sub-Saharan Africa	75.3	65.1
East Asia	74.5	68.6
Other Asia	33.3	25.4
Total	**69.1**	**59.7**

(b) Reservation wages

	[1] Unconditional	[2] Conditional
Percentage difference with respect to the New Member States group:		
Eastern European Countries	-0.031***	-0.021**
	(0.011)	(0.010)
Central or Southern America	-0.005	0.005
	(0.011)	(0.011)
Arab or Muslim Countries	-0.051***	-0.009
	(0.011)	(0.011)
Sub-Saharan Africa	-0.054***	-0.026**
	(0.012)	(0.011)
East Asia	-0.016	0.003
	(0.014)	(0.013)
Other Asia	-0.097***	-0.044***
	(0.013)	(0.012)
No. Obs.	10,659	10,659
F-test	20.52***	6.55***
	[0.000]	[0.000]

The left-hand side variable is the log of computed reservation wages. White-robust standard errors are in brackets. Stars show significance levels, *** up to 1 per cent, ** between 1 per cent and 5 per cent, * between 5 per cent and 10 per cent. Unconditional means include time and spatial dummies only. Conditional means include controls for schooling, potential experience, marriage, number of children below and above 18 years old. F-test tests the hypothesis of that area of origin dummies are all equal to zero. Every regression is weighted according to the sample design.

Table 6

INTER-ETHNICAL RESERVATION WAGE DIFFERENTIALS ACROSS EDUCATIONAL LEVELS (BASELINE SAMPLE)

	[1] No formal education	[2] Compulsory school	[3] Secondary education	[4] Tertiary education
Percentage difference with respect to the New Member States group:				
Eastern European Countries	0.014	0.021	-0.038***	-0.023
	(0.050)	(0.026)	(0.013)	(0.019)
Central or Southern America	0.014	0.070***	-0.018	-0.007
	(0.055)	(0.026)	(0.013)	(0.021)
Arab or Muslim Countries	0.031	0.047*	-0.022*	-0.051**
	(0.050)	(0.026)	(0.013)	(0.024)
Sub-Saharan Africa	-0.017	0.040	-0.049***	-0.040
	(0.050)	(0.026)	(0.013)	(0.028)
East Asia	0.011	0.060**	-0.020	0.003
	(0.065)	(0.028)	(0.019)	(0.025)
Other Asia	0.03	0.011	-0.085***	-0.089***
	(0.051)	(0.027)	(0.020)	(0.029)
No. Obs.	987	3,780	4,338	1,554
F-test	0.84	4.66***	4.90***	2.50**
	[0.540]	[0.000]	[0.000]	[0.021]

The left-hand side variable is the log of computed reservation wages. White-robust standard errors are in brackets. Stars show significance levels, *** up to 1 per cent, ** between 1 per cent and 5 per cent, * between 5 per cent and 10 per cent. Conditional means include controls for schooling, potential experience, marriage, number of children below and above 18 years old. F-test tests the hypothesis of that area of origin dummies are all equal to zero. Every regression is weighted according to the sample design.

Table 7

ROBUSTNESS CHECK: KINSHIP VISA

(a) Activity and employment rates

	Activity rate	Employment rate
New Member States	57.1	46.6
Eastern European Countries	52.2	40.0
Central or Southern America	67.7	54.4
Arab or Muslim Countries	25.6	20.5
Sub-Saharan Africa	50.8	44.6
East Asia	49.8	47.1
Other Asia	26.5	14.5
Total	**41.5**	**33.8**

(b) Reservation wages

	[1] Unconditional	[2] Conditional
Percentage difference with respect to the New Member States group:		
Eastern European Countries	-0.119*	-0.114*
	(0.066)	(0.065)
Central or Southern America	-0.014	-0.015
	(0.066)	(0.065)
Arab or Muslim Countries	0.026	0.035
	(0.065)	(0.063)
Sub-Saharan Africa	-0.089	-0.072
	(0.066)	(0.066)
East Asia	0.017	0.028
	(0.067)	(0.065)
Other Asia	-0.088	-0.060
	(0.066)	(0.066)
No. Obs.	2,332	2,332
F-test	18.97***	18.43***
	[0.000]	[0.000]

The left-hand side variable is the log of computed reservation wages. White-robust standard errors are in brackets. Stars show significance levels, *** up to 1 per cent, ** between 1 per cent and 5 per cent, * between 5 per cent and 10 per cent. Unconditional means include time and spatial dummies only. Conditional means include controls for schooling, potential experience, marriage, number of children below and above 18 years old. F-test tests the hypothesis of that area of origin dummies are all equal to zero. Every regression is weighted according to the sample design.

Table 8

ROBUSTNESS CHECK: IRREGULAR ALIENS

(a) Activity and employment rates

	Activity rate	Employment rate
New Member States	91.4	60.8
Eastern European Countries	91.2	71.6
Central or Southern America	94.4	71.6
Arab or Muslim Countries	83.3	36.3
Sub-Saharan Africa	91.6	54.1
East Asia	84.6	69.9
Other Asia	89.2	59.2
Total	**90.9**	**64.0**

(b) Reservation wages

	[1] Unconditional	[2] Conditional
Percentage difference with respect to the New Member States group:		
Eastern European Countries	0.148***	0.147***
	(0.020)	(0.019)
Central or Southern America	0.071***	0.061***
	(0.020)	(0.019)
Arab or Muslim Countries	-0.169***	-0.182***
	(0.028)	(0.027)
Sub-Saharan Africa	-0.056**	-0.082***
	(0.023)	(0.023)
East Asia	0.118***	0.102***
	(0.032)	(0.028)
Other Asia	-0.032	-0.050
	(0.041)	(0.036)
No. Obs.	1,363	1,363
F-test	45.02***	49.88***
	[0.000]	[0.000]

The left-hand side variable is the log of computed reservation wages. White-robust standard errors are in brackets. Stars show significance levels, *** up to 1 per cent, ** between 1 per cent and 5 per cent, * between 5 per cent and 10 per cent. Unconditional means include time and spatial dummies only. Conditional means include controls for schooling, potential experience, marriage, number of children below and above 18 years old. F-test tests the hypothesis of that area of origin dummies are all equal to zero. Every regression is weighted according to the sample design.

Appendix 1. A simple exercise: wage differentials across ethnicities

In this section, we present a simple robustness check in which we estimate inter-ethnical differences in wages for workers only. According to the neoclassical theory, we should expect that if low activity rates by certain groups were due to large reservation wages, working individuals belonging to those ethnicities should receive high wages which compensate the high value of the time spent at home. We check this feature by regressing the log of the net monthly wage on: schooling, potential experience (and its squared), years since migration (and its squared) and marriage, spatial, time and working conditions dummies. Results (displayed in Table A1) show that ethnicities characterized by low activity rates (Arab and Other Asia) do not receive a wage premium on the labour market compared to the NMS cluster; this support our finding that their low share of working individuals is due to a weak labour demand rather than an insufficient supply.

Table A1

WAGE DIFFERENTIALS ACROSS ETHNICITIES

Percentage difference with respect to the New Member States group:	
Eastern European Countries	-0.041**
	(0.021)
Central or Southern America	0.001
	(0.020)
Arab or Muslim Countries	-0.030
	(0.027)
Sub-Saharan Africa	-0.057**
	(0.023)
East Asia	-0.011
	(0.027)
Other Asia	-0.088***
	(0.032)
No. Obs.	6,246
R-squared	0.46

The left-hand side variable is the log of actual wages. White-robust standard errors are in brackets. Stars show significance levels, *** up to 1 per cent, ** between 1 per cent and 5 per cent, * between 5 per cent and 10 per cent. Regression controls for time, spatial (local labour systems) dummies, schooling, potential experience, years since migration, marriage and working conditions The regression is weighted according to the sample design.

Appendix 2. Ethnic groups and countries of origin

New Member States: Bulgaria, Czech Rep., Estonia, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, Hungary, Malta, Cyprus.

Eastern European Countries: Albania, Belarus, Bosnia-Herzegovina, Croatia, Serbia-Montenegro, Macedonia, Moldova, Russia, Turkey, Ukraine.

Central and Southern America: Antigua, Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Rep., Ecuador, El Salvador, Jamaica, Grenada, Guatemala, Guyana, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Santa Lucia, St. Kitts and Nevis, St. Vincent and Grenada, Suriname, Trinidad and Tobago, Uruguay, Venezuela.

Arab and Muslim countries: Algeria, Egypt, Libya, Morocco, Tunisia, Saudi Arabia, UAE, Jordan, Iran, Iraq, Kuwait, Lebanon, Oman, Palestine, Qatar, Syria, Yemen.

Sub-Saharan Africa: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Capo Verde, Central African Rep., Chad, Comores, Congo, Congo (Dem. Rep.), Cote d'Ivoire, Eritrea, Ethiopia, Gabon, Ghana, Djibouti, Guinea, Guinea Bissau, Equatorial Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome e Principe, Seychelles, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

East Asia: Cambodia, China, North Korea, South Korea, Philippines, Laos, Malaysia, Singapore, Sri Lanka, Taiwan, Thailand, East Timor, Vietnam.

Other Asia: Afghanistan, Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei, Georgia, India, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Tajikistan, Turkmenistan, Uzbekistan.