



Immigrants' Wages and the Contribution of Immigration on the Wage Structure: Spain 1995- 2002

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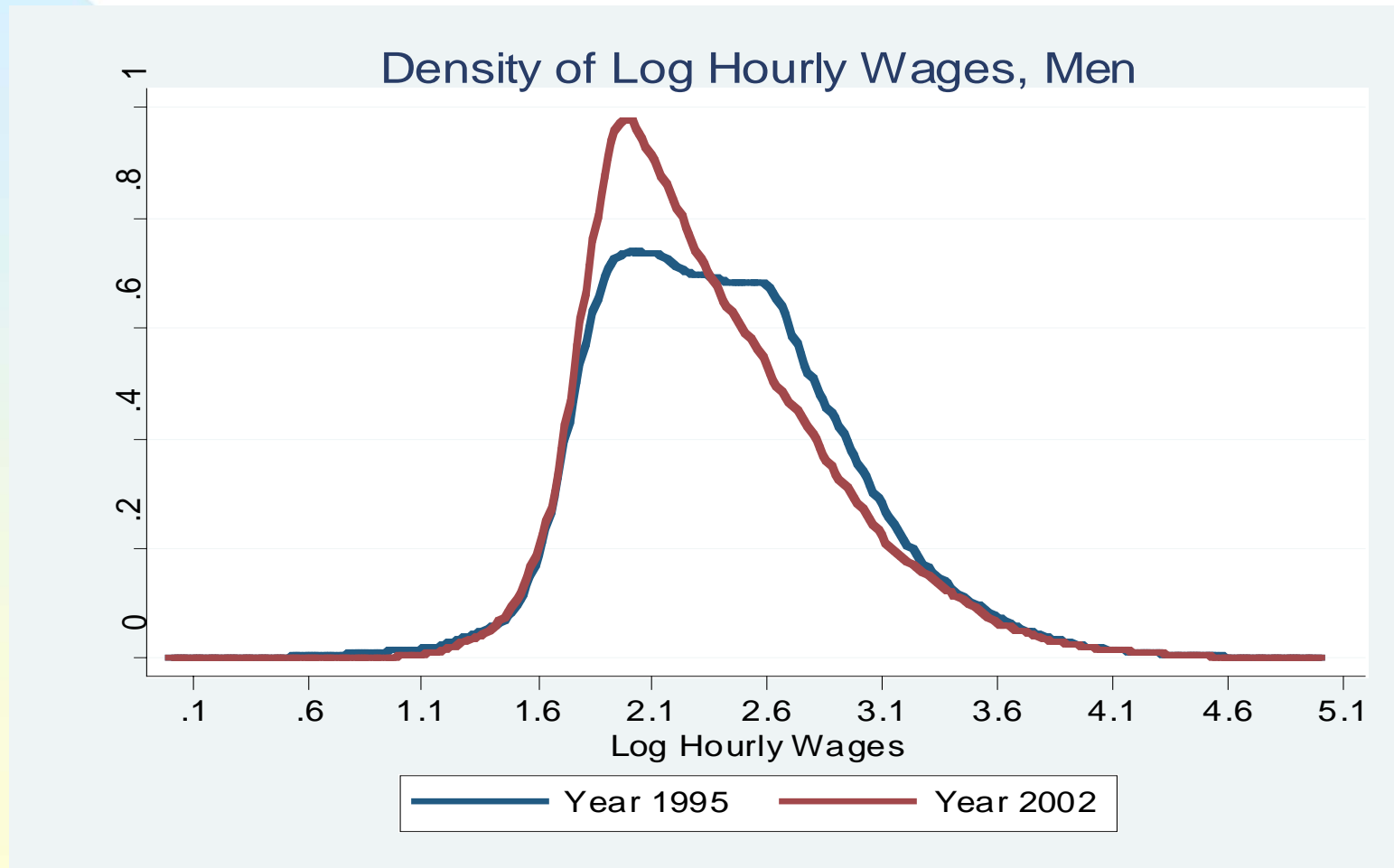
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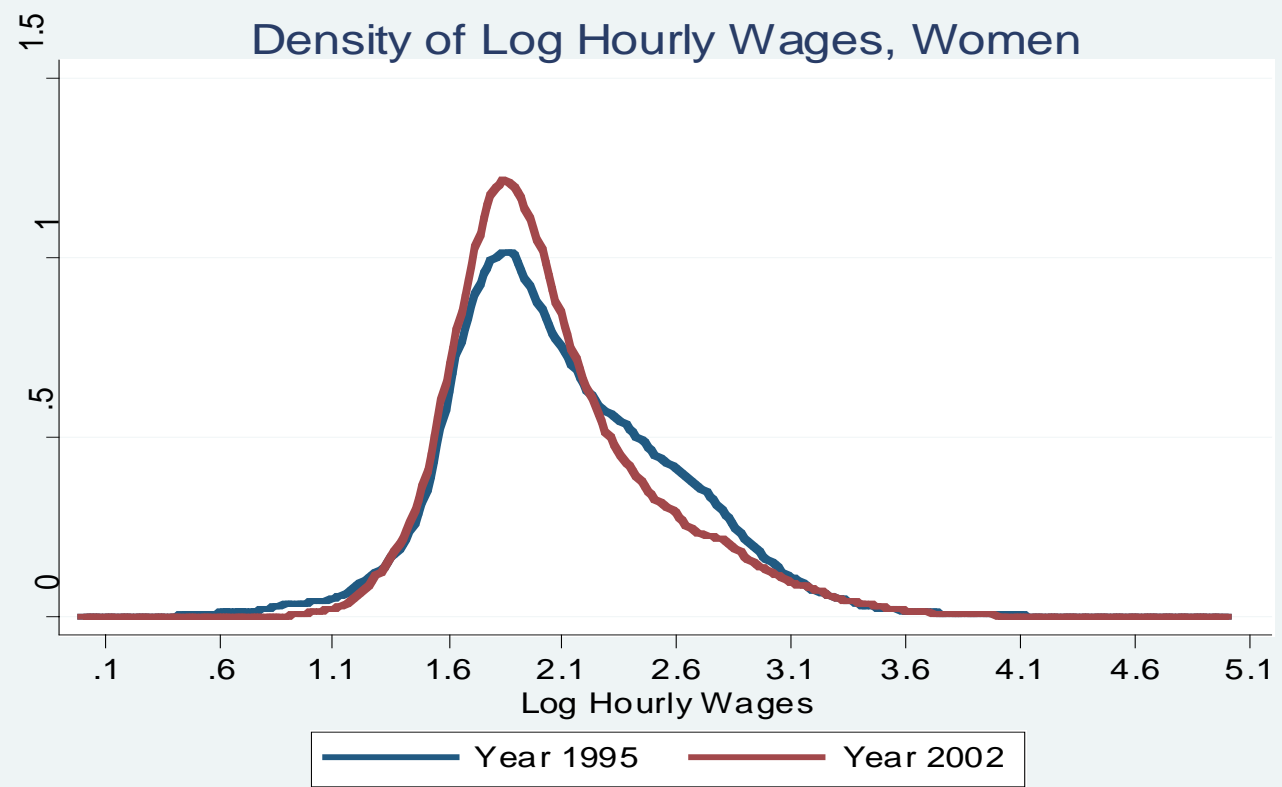
INSIDE Workshop, January 12, 2007


Goal

- To study the contribution of the immigration in Spain to the evolution of the wages between 1995 and 2002.
- To analyze the wage differential between immigrants and natives in Spain, at different points of the wage distribution, after controlling for observable characteristics.

Motivation





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- The two wage distributions are very similar.
 - One of the most important changes the Spanish labor market has experienced is the increase in the immigrant labor force.
 - What is the contribution of the changes in the immigrant working force on changes in wages?
 - Have the immigrants different productive characteristics, or are the returns from these characteristics different?

Proportion of Native employment, Men

	Exp <=10	10<Exp <=25	Exp >25
Primary Educ.			
1995	.9564	.9694	.9983
2002	.8489	.7977	.9884
Secondary Educ.			
1995	.9884	.9820	.9720
2002	.9274	.9360	.9454
University Educ.			
1995	.9876	.9883	.9770
2002	.9523	.9292	.9839

Proportion of Native employment, Women

	Exp <=10	10<Exp <=25	Exp >25
Primary Educ.			
1995	.9906	.9815	.9961
2002	.8121	.8647	.9778
Secondary Educ.			
1995	.9917	.9872	.9897
2002	.9435	.9543	.9691
University Educ.			
1995	.9709	.9769	.9720
2002	.9415	.9135	.9468

Methodology (I)

- We do not have direct information that allows to decompose the differences in wages according to workers' nationality.
- Therefore, We compute the contribution of the immigration to the evolution of wages by using the following expression for the wages in each cell (gender, experience, education):

$$W_{02} = \alpha_{02} W_{02,n} + (1 - \alpha_{02}) W_{02,i}$$

$$W_{95} = \alpha_{95} W_{95,n} + (1 - \alpha_{95}) W_{95,i}$$

$$= \alpha_{95} W_{02,n} + (1 - \alpha_{95}) W_{02,i}$$

$$+ \alpha_{95} (W_{95,n} - W_{02,n}) + (1 - \alpha_{95}) (W_{95,i} - W_{02,i})$$

- Then:

$$W_{02} - W_{95} = (\alpha_{02} - \alpha_{95})(W_{02,n} - W_{02,i}) +$$

$$[(\alpha_{95} W_{02,n} + (1 - \alpha_{95}) W_{02,i}) - (\alpha_{95} W_{95,n} + (1 - \alpha_{95}) W_{95,i})]$$

Methodology (II)

- We estimate wage equations on the conditional mean for natives and immigrants and use the Oaxaca-Blinder method to decompose the wage difference in two parts: one due to different productive characteristics and other due to different returns to these characteristics.
- We perform previous analysis also at other points of the wage distribution, following a Quantile Regression (QR) approach.
 - ◆ We first present quantile measures of the wage gap for 2002.
 - ◆ Then, we use a generalization of the Oaxaca-Blinder decomposition to a QR framework proposed by Machado and Mata (2005) using Monte Carlo methods.

The data

- For the first goal, we use information from the WWS in 1995 and 2002. Since the WWS for 1995 lacks information on the nationality of the worker, we use data from the Labor Force Survey to obtain the employment weights.
- For the second goal, we use data from the 2002 Spanish Wage Structure Survey (WSS).

The data

- The WSS is a random sample of workers from firms of at least 10 employees in the manufacturing, construction and service sectors.
- The survey collects detailed information on workers' wages, as well as on workers' personal (such as gender, nationality only in 2002, age, and educational attainment) and job characteristics (including tenure, sector, occupation, contract and job type, firm size and ownership, and region).

The data

- Wage definition: worker's hourly wage.
 - ◆ We include as wages the gross ordinary salary plus the extraordinary payments.
 - ◆ Working time information from the agreed regular schedule and the hours worked in a no-regular fashion.
- The sample is restricted to men and women between 16 and 64 years old.
 - ◆ Men and women are considered separately.
 - ◆ Immigrants from European Union countries are distinguished from those from non-European Union countries.

Fig. 1: Native and Immigrant Log Hourly Wage Distributions (2002)

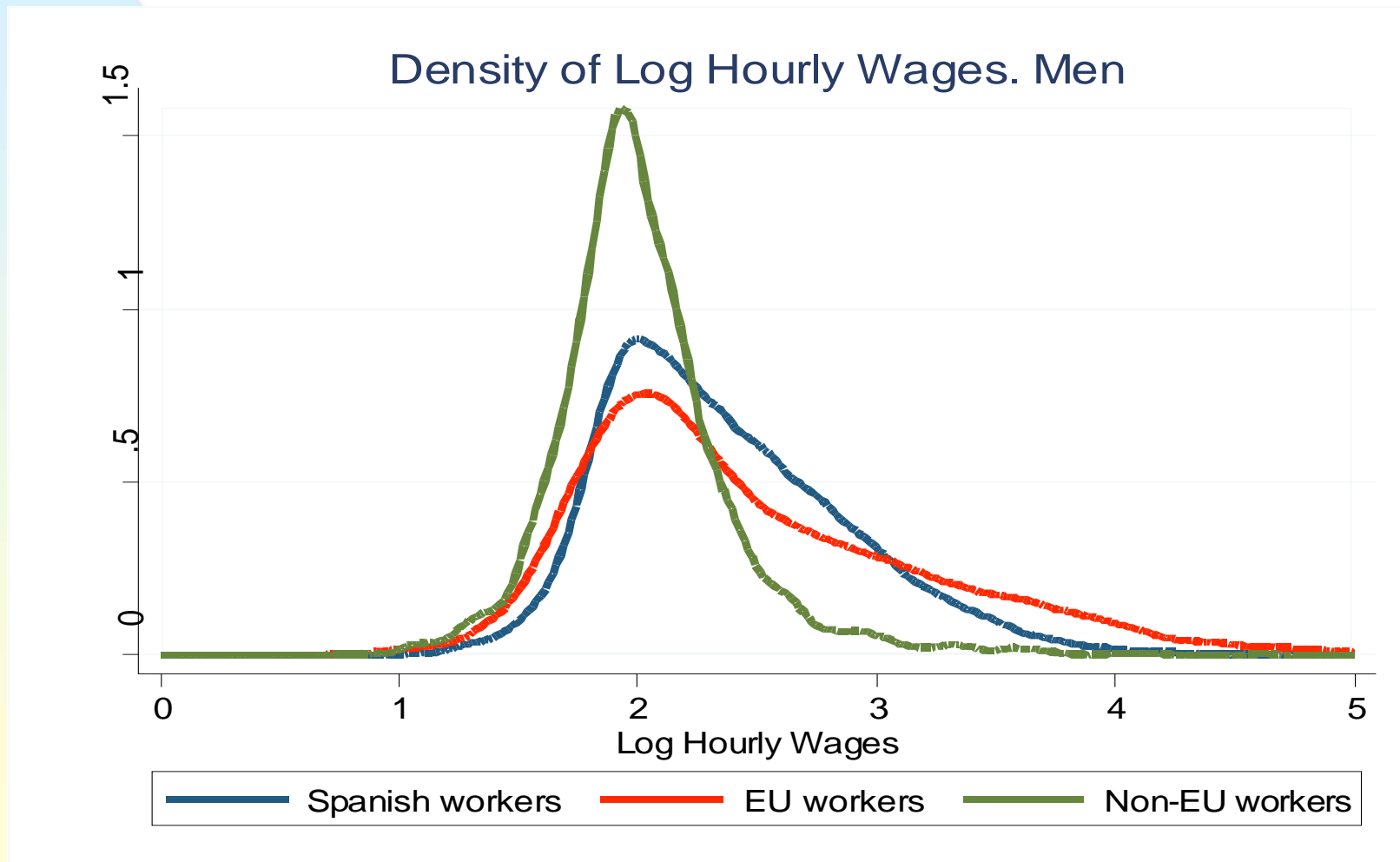


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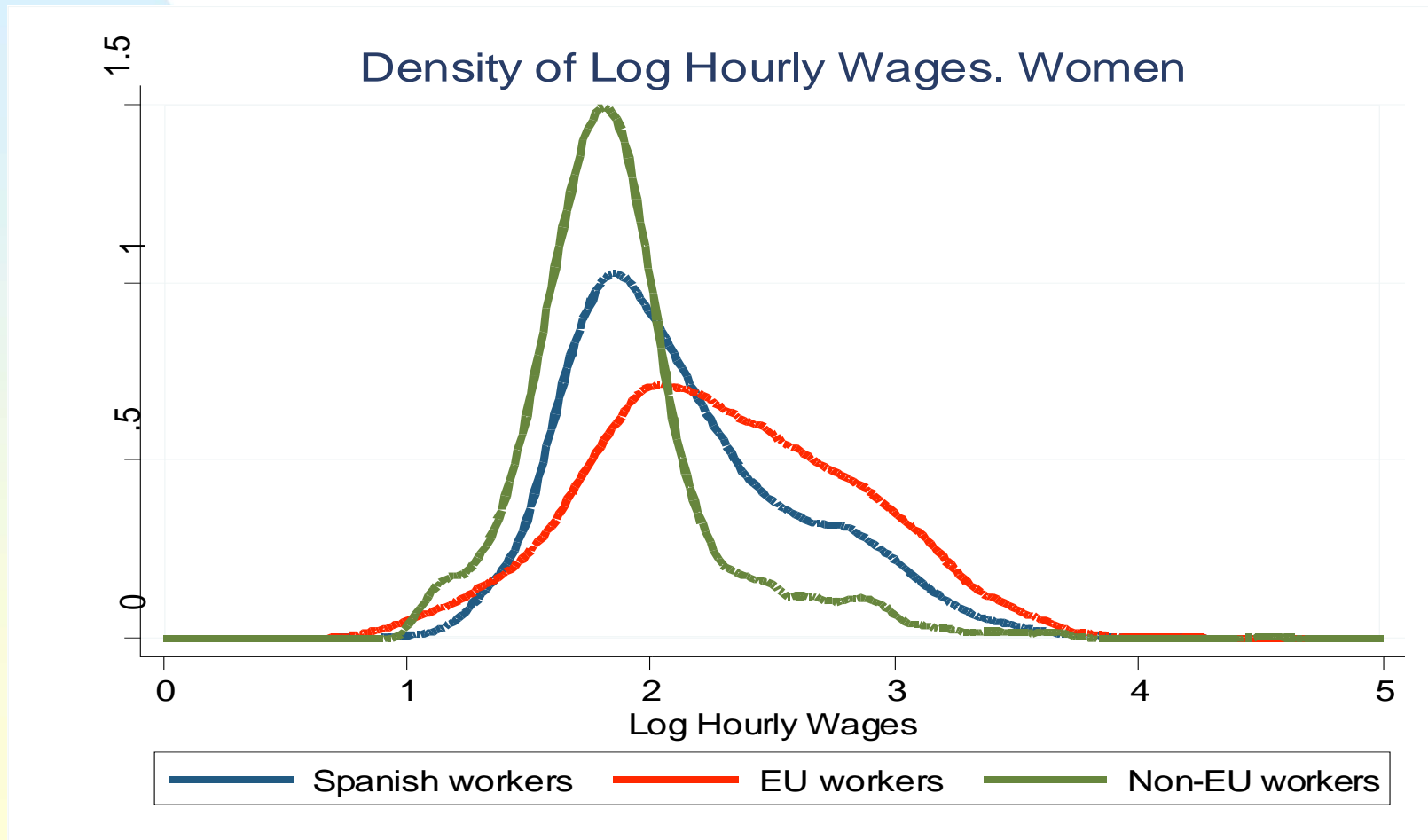


Figure 2. Native-Immigrant Wage Gap

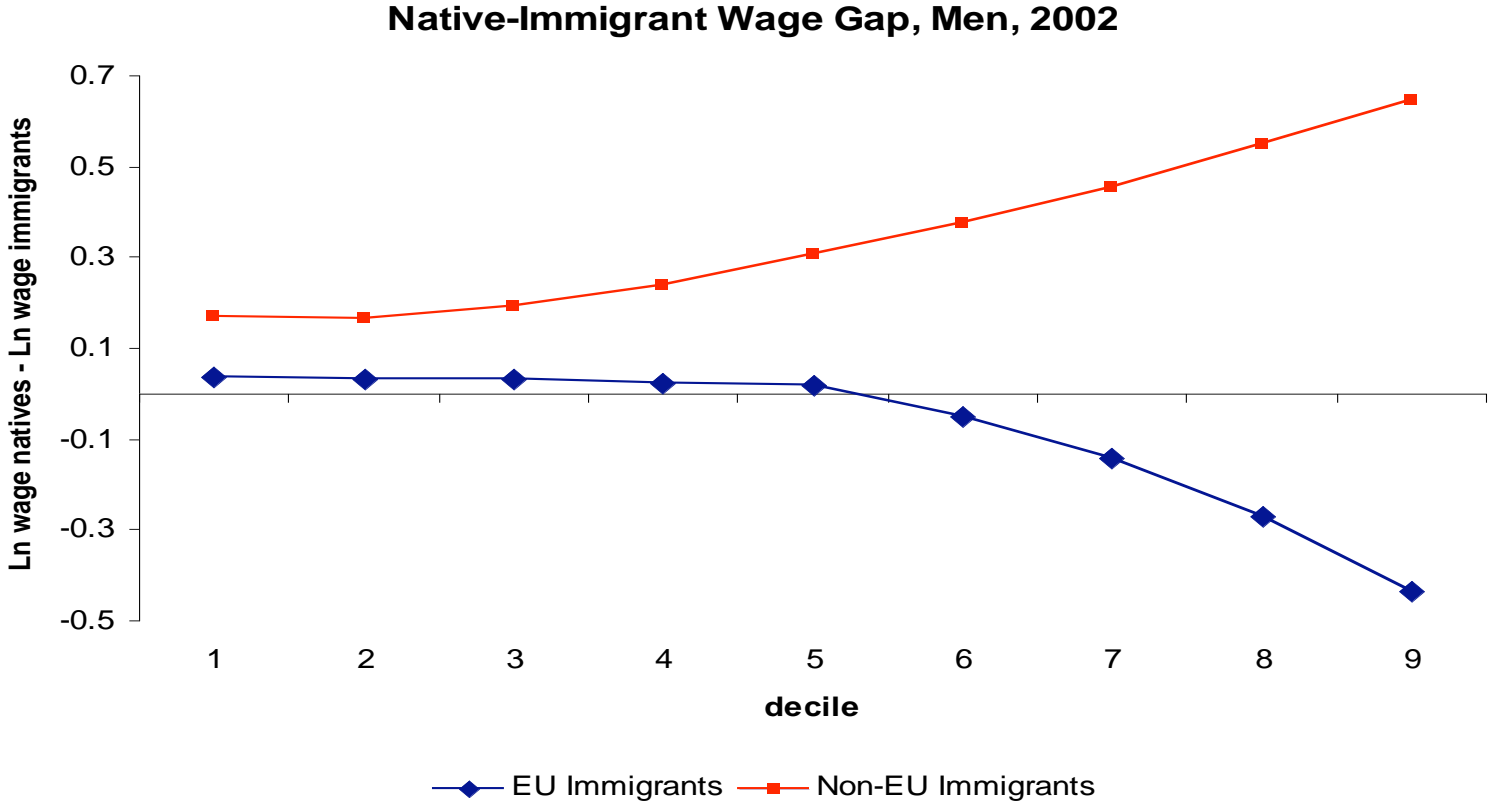


Figure 2. Native-Immigrant Wage Gap

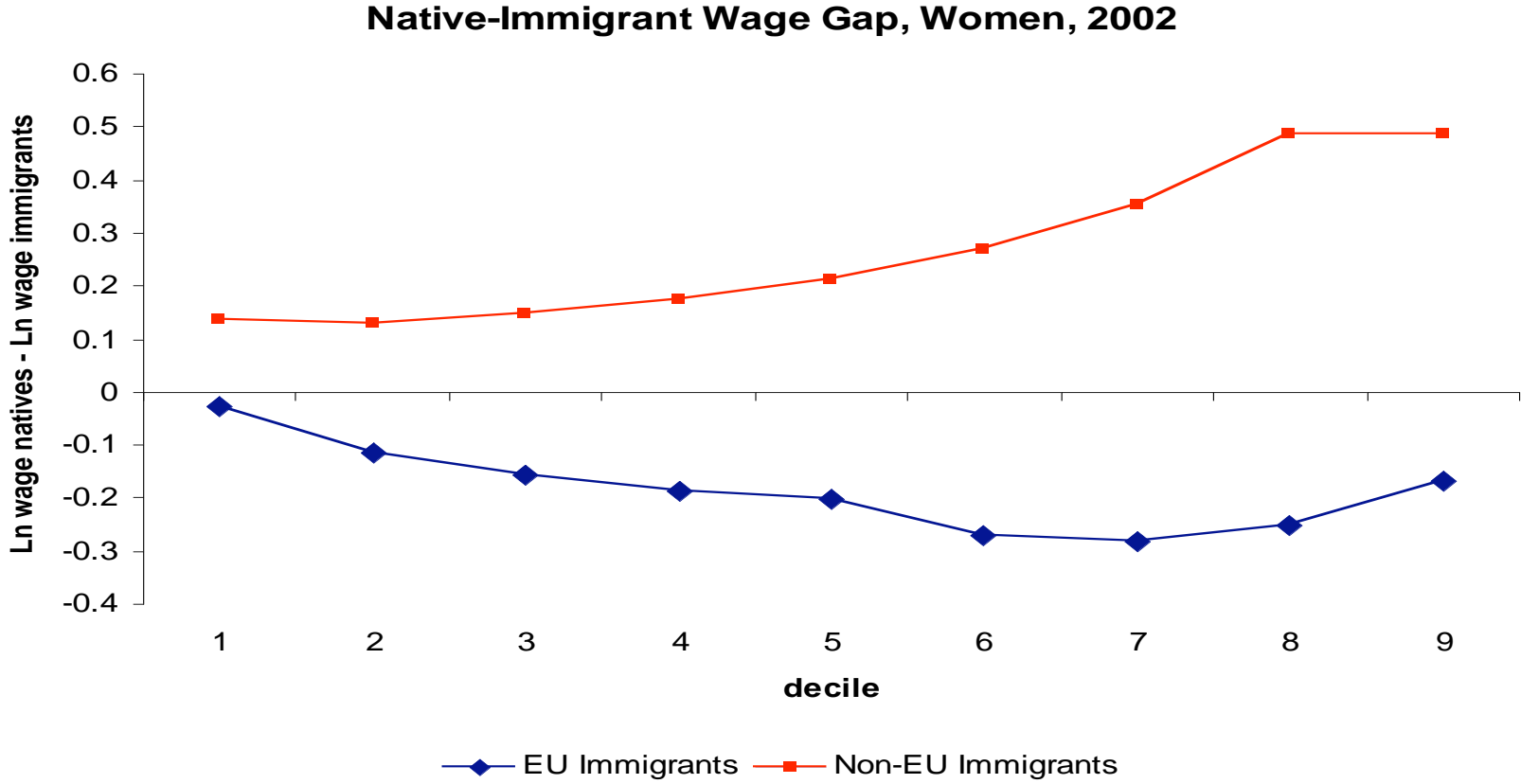


Table A.1. Summary Statistics. Men

	All workers	Natives workers	EU workers	Non-EU workers
Log Hourly Wage	2.3586	2.3675	2.4674	2.0212
	<i>0.5190</i>	<i>0.5177</i>	<i>0.7019</i>	<i>0.3732</i>
Years of schooling	10.7347	10.7903	11.4652	8.6033
	<i>3.3877</i>	<i>3.3703</i>	<i>4.1314</i>	<i>3.0626</i>
Experience	21.2759	21.3590	19.1457	18.9142
	<i>11.7714</i>	<i>11.8458</i>	<i>10.8149</i>	<i>8.6996</i>
Tenure \leq 3 years	0.4477	0.4325	0.7045	0.9142
	<i>0.4973</i>	<i>0.4954</i>	<i>0.4566</i>	<i>0.2801</i>
Part -time	0.0450	0.0444	0.0735	0.0594
	<i>0.2074</i>	<i>0.2060</i>	<i>0.2612</i>	<i>0.2364</i>
Temporary Contract	0.2588	0.2473	0.3636	0.6332
	<i>0.4380</i>	<i>0.4314</i>	<i>0.4814</i>	<i>0.4820</i>
White -collar	0.2511	0.2553	0.4064	0.0635
	<i>0.4336</i>	<i>0.4360</i>	<i>0.4915</i>	<i>0.2439</i>
Public Ownership	0.0499	0.0511	0.0227	0.0144
	<i>0.2177</i>	<i>0.2202</i>	<i>0.1491</i>	<i>0.1192</i>
Industry	0.4720	0.4755	0.3262	0.3868
	<i>0.4992</i>	<i>0.4994</i>	<i>0.4691</i>	<i>0.4871</i>
Construction	0.1221	0.1177	0.1537	0.2711
	<i>0.3275</i>	<i>0.3222</i>	<i>0.3609</i>	<i>0.4446</i>
Services	0.4059	0.4069	0.5201	0.3421
	<i>0.4911</i>	<i>0.4913</i>	<i>0.4999</i>	<i>0.4745</i>
10-50 employees	0.4374	0.4346	0.4693	0.5285
	<i>0.4961</i>	<i>0.4957</i>	<i>0.4994</i>	<i>0.4993</i>
50-200 employees	0.2990	0.2983	0.2914	0.3236
	<i>0.4578</i>	<i>0.4575</i>	<i>0.4547</i>	<i>0.4679</i>
More than 200 employees	0.2636	0.2671	0.2393	0.1479
Number of observations	105,635	101,973	748	2,914

Table A.1. Summary Statistics. Women

	All workers	Natives workers	EU workers	Non-EU workers
Log Hourly Wage	2.1251	2.1285	2.2937	1.8687
	<i>0.4909</i>	<i>0.4906</i>	<i>0.5436</i>	<i>0.4011</i>
Years of schooling	11.5927	11.6171	13.3166	9.5254
	<i>3.5180</i>	<i>3.5050</i>	<i>3.6052</i>	<i>3.4182</i>
Experience	18.3185	18.3460	16.2187	17.6620
	<i>11.2756</i>	<i>11.3164</i>	<i>10.5141</i>	<i>8.9869</i>
Tenure ≤ 3 years	0.5178	0.5094	0.6788	0.9181
	<i>0.4997</i>	<i>0.4999</i>	<i>0.4675</i>	<i>0.2744</i>
Part-time	0.2199	0.2183	0.2096	0.3117
	<i>0.4142</i>	<i>0.4131</i>	<i>0.4075</i>	<i>0.4634</i>
Temporary Contract	0.2836	0.2789	0.3326	0.5245
	<i>0.4507</i>	<i>0.4484</i>	<i>0.4717</i>	<i>0.4996</i>
White-collar	0.2983	0.3000	0.5581	0.1008
	<i>0.4575</i>	<i>0.4582</i>	<i>0.4972</i>	<i>0.3011</i>
Public Ownership	0.1028	0.1046	0.0456	0.0264
	<i>0.3037</i>	<i>0.3060</i>	<i>0.2088</i>	<i>0.1603</i>
Industry	0.2648	0.2666	0.2141	0.1836
	<i>0.4412</i>	<i>0.4422</i>	<i>0.4107</i>	<i>0.3874</i>
Construction	0.0147	0.0148	0.0091	0.0122
	<i>0.1203</i>	<i>0.1207</i>	<i>0.0951</i>	<i>0.1100</i>
Services	0.7205	0.7186	0.7768	0.8041
	<i>0.4487</i>	<i>0.4497</i>	<i>0.4169</i>	<i>0.3970</i>
10-50 employees	0.3639	0.3611	0.4055	0.5009
	<i>0.4811</i>	<i>0.4803</i>	<i>0.4915</i>	<i>0.5002</i>
50-200 employees	0.2790	0.2785	0.3645	0.2702
	<i>0.4485</i>	<i>0.4482</i>	<i>0.4818</i>	<i>0.4443</i>
More than 200 employees	0.3572	0.3604	0.2301	0.2288
	<i>0.4792</i>	<i>0.4801</i>	<i>0.4214</i>	<i>0.4203</i>
Number of observations	60,380	58,879	439	1,062