

## Online Appendix

to

### HOW RELEVANT IS THE ORIGIN OF HUMAN CAPITAL FOR IMMIGRANT WAGES? EVIDENCE FROM SPAIN

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The online appendix presents five tables with additional results to the ones included in the article. Table A1 contains descriptive information about the sample from the Encuesta Nacional de Inmigrantes (ENI) used in the study. Tables A2 and A3 are related to the Heckman two-stage procedure to correct for the potential bias in employment selection when estimating our Mincer equation. Table A2 shows the results obtained after applying the first stage of Heckman's procedure while table A3 provides the results of the second-stage. Tables A4 and A5 are related to the different robustness checks carried out to test the validity of our results. Table A4 shows the results of using schooling levels finished in Spain (instead of years) as an indicator of the differential effect of host and foreign country human capital. Table A5 summarises the results when checking the robustness of our conclusions to alternative definitions of our sample (immigrants with legal status; with only one job; without coming from third countries).

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## APPENDIX

**Table A1. Descriptive statistics**

Descriptive statistics	Full sample	Developed countries	Developing countries			
			Total	Latin America	Eastern Europe	Rest of the world
Hourly wage	1.671 [0.00556]	1.936 [0.0253]	1.651 [0.00556]	1.651 [0.00754]	1.656 [0.0105]	1.643 [0.0125]
Male	0.532 [0.00775]	0.561 [0.0298]	0.53 [0.00803]	0.472 [0.0106]	0.512 [0.0149]	0.813 [0.0171]
Married	0.491 [0.00777]	0.345 [0.0286]	0.502 [0.00804]	0.466 [0.0106]	0.554 [0.0149]	0.543 [0.0219]
Age	33.89 [0.132]	34.65 [0.511]	33.84 [0.136]	34.23 [0.181]	33.65 [0.266]	32.58 [0.307]
Children	0.681 [0.0146]	0.486 [0.0485]	0.695 [0.0152]	0.751 [0.0210]	0.637 [0.0242]	0.584 [0.0451]
Age of arrival to Spain	29.56 [0.130]	30.54 [0.508]	29.49 [0.135]	29.83 [0.180]	29.75 [0.259]	27.45 [0.302]
Years since migration	4.336 [0.0327]	4.119 [0.155]	4.351 [0.0332]	4.397 [0.0435]	3.897 [0.0567]	5.135 [0.0969]
Schooling years	11.09 [0.0494]	12.02 [0.217]	11.02 [0.0505]	11.16 [0.0654]	11.41 [0.0774]	9.565 [0.173]
Schooling years in home country	10.95 [0.0497]	11.82 [0.218]	10.88 [0.0508]	11.01 [0.0659]	11.31 [0.0776]	9.412 [0.174]
Schooling years in Spain	0.139 [0.00961]	0.194 [0.0464]	0.135 [0.00974]	0.153 [0.0137]	0.091 [0.0142]	0.152 [0.0294]
Potential experience	16.81 [0.139]	16.64 [0.563]	16.82 [0.143]	17.07 [0.192]	16.24 [0.269]	17.02 [0.343]
Potential exp. in home country	12.61 [0.136]	12.71 [0.557]	12.6 [0.140]	12.82 [0.188]	12.43 [0.263]	12.03 [0.334]
Potential exp. in Spain	4.197 [0.0330]	3.924 [0.157]	4.216 [0.0335]	4.244 [0.0441]	3.806 [0.0573]	4.983 [0.0966]
Effective experience	3.554 [0.0340]	3.550 [0.153]	3.554 [0.0347]	3.632 [0.0455]	3.202 [0.0602]	3.979 [0.105]
Non-employment years	0.643 [0.0172]	0.375 [0.0504]	0.662 [0.0180]	0.612 [0.0230]	0.605 [0.0293]	1.004 [0.0640]
Legal status	0.87 [0.00522]	0.996 [0.00360]	0.861 [0.00556]	0.888 [0.00668]	0.775 [0.0125]	0.933 [0.0110]
Labor experience in home country	0.861 [0.00537]	0.871 [0.0202]	0.861 [0.00557]	0.884 [0.00680]	0.87 [0.0101]	0.744 [0.0192]

Notes: Values correspond to the variable averages. Standard deviation is shown in brackets.

**Table A1. Descriptive statistics (continuation)**

Descriptive statistics	Full sample	Developed countries	Developing countries			
			Total	Latin America	Eastern Europe	Rest of the world
Having more than one job	0.0625 [0.00376]	0.0647 [0.0148]	0.0624 [0.00389]	0.071 [0.00545]	0.0633 [0.00728]	0.0231 [0.00660]
Developed country	0.0671 [0.00389]	1 [0]	0 [0]	0 [0]	0 [0]	0 [0]
Developing country	0.537 [0.00775]	0 [0]	0.576 [0.00795]	1 [0]	0 [0]	0 [0]
Latin America	0.271 [0.00690]	0 [0]	0.29 [0.00730]	0 [0]	1 [0]	0 [0]
Eastern Europe	0.125 [0.00514]	0 [0]	0.134 [0.00549]	0 [0]	0 [0]	1 [0]
Rest of the world	0.0606 [0.00371]	0.0971 [0.0178]	0.058 [0.00376]	0.0485 [0.00456]	0.0687 [0.00756]	0.0751 [0.0116]
Andalucía	0.0449 [0.00322]	0.018 [0.00799]	0.0468 [0.00340]	0.027 [0.00343]	0.0767 [0.00795]	0.0674 [0.0110]
Aragón	0.0113 [0.00165]	0.018 [0.00799]	0.0109 [0.00167]	0.0135 [0.00245]	0.00892 [0.00281]	0.00385 [0.00272]
Asturias	0.063 [0.00378]	0.108 [0.0186]	0.0598 [0.00381]	0.0728 [0.00551]	0.0348 [0.00548]	0.0578 [0.0103]
Baleares	0.0314 [0.00271]	0.0791 [0.0162]	0.0279 [0.00265]	0.0378 [0.00404]	0.00981 [0.00295]	0.025 [0.00687]
Canarias	0.0258 [0.00246]	0.0108 [0.00621]	0.0269 [0.00260]	0.0337 [0.00383]	0.0241 [0.00458]	0.00385 [0.00272]
Cantabria	0.0374 [0.00295]	0.0252 [0.00941]	0.0383 [0.00309]	0.0274 [0.00346]	0.0624 [0.00723]	0.0328 [0.00782]
Castilla y León	0.0574 [0.00362]	0.00719 [0.00508]	0.0611 [0.00385]	0.0355 [0.00392]	0.129 [0.0100]	0.0231 [0.00660]
Castilla-La Mancha	0.135 [0.00531]	0.173 [0.0227]	0.132 [0.00545]	0.143 [0.00743]	0.0856 [0.00836]	0.185 [0.0171]
Cataluña	0.0867 [0.00437]	0.112 [0.0189]	0.0849 [0.00448]	0.0661 [0.00527]	0.117 [0.00960]	0.0963 [0.0130]
Comunidad Valenciana	0.0203 [0.00219]	0.0288 [0.0100]	0.0197 [0.00223]	0.0189 [0.00289]	0.0205 [0.00424]	0.0212 [0.00633]
Extremadura	0.0171 [0.00202]	0.00719 [0.00508]	0.0179 [0.00213]	0.0252 [0.00332]	0.00624 [0.00235]	0.0116 [0.00470]

Notes: Values correspond to the variable averages. Standard deviation is shown in brackets.

**Table A1. Descriptive statistics (continuation)**

Descriptive statistics	Full sample	Developed countries	Total	Developing countries		
				Latin America	Eastern Europe	Rest of the world
Galicia	0.149 [0.00554]	0.119 [0.0194]	0.152 [0.00577]	0.174 [0.00805]	0.14 [0.0104]	0.079 [0.0119]
Madrid	0.0992 [0.00464]	0.0576 [0.0140]	0.102 [0.00487]	0.108 [0.00659]	0.0633 [0.00728]	0.16 [0.0161]
Murcia	0.0922 [0.00450]	0.0935 [0.0175]	0.0921 [0.00465]	0.107 [0.00654]	0.0696 [0.00760]	0.079 [0.0119]
Navarra	0.0253 [0.00244]	0.0324 [0.0106]	0.0248 [0.00250]	0.0306 [0.00365]	0.0125 [0.00332]	0.027 [0.00712]
País Vasco	0.0415 [0.00310]	0.0144 [0.00716]	0.0435 [0.00328]	0.0301 [0.00362]	0.0705 [0.00765]	0.0424 [0.00885]
Rioja	0.042 [0.00310]	0.014 [0.00716]	0.044 [0.00328]	0.03 [0.00362]	0.071 [0.00765]	0.042 [0.00885]
Number of observations	4,143	278	3,865	2,225	1,121	519

Notes: Values correspond to the variable averages. Standard deviation is shown in brackets.

**Table A2. Probit marginal effects for employment**

	Full sample	Developed countries	Developing countries	Latin America	Eastern Europe	Rest of the world
Years since migration	0.0184*** [0.00264]	0.0335*** [0.00751]	0.0160*** [0.00287]	0.0119*** [0.00373]	0.00615 [0.00607]	0.0366*** [0.00741]
Schooling years	0.00254 [0.00169]	-0.0121** [0.00605]	0.00493*** [0.00177]	0.00123 [0.00243]	0.0101*** [0.00352]	0.00784* [0.00442]
Potential experience	0.0236*** [0.00193]	0.0246*** [0.00658]	0.0179*** [0.00211]	0.0194*** [0.00262]	0.0115*** [0.00404]	0.0260*** [0.00675]
(Potential experience) <sup>2</sup>	-0.000550*** [4.12e-05]	-0.000845*** [0.000132]	-0.000338*** [4.76e-05]	-0.000368*** [5.80e-05]	-0.000227** [9.33e-05]	-0.000452*** [0.000157]
Labor experience in home country	0.116*** [0.0155]	0.162*** [0.0587]	0.111*** [0.0158]	0.107*** [0.0222]	0.0753** [0.0302]	0.137*** [0.0370]
Legal status	0.116*** [0.0164]	0.220 [0.191]	0.114*** [0.0163]	0.0813*** [0.0222]	0.140*** [0.0258]	0.234*** [0.0524]
Male	0.168*** [0.0101]	0.212*** [0.0351]	0.167*** [0.0104]	0.137*** [0.0131]	0.135*** [0.0188]	0.322*** [0.0320]
Married	-0.0500*** [0.0112]	-0.0885** [0.0394]	-0.0330*** [0.0116]	-0.0196 [0.0147]	-0.0116 [0.0214]	-0.116*** [0.0369]
Children	-0.0366*** [0.00576]	-0.0355 [0.0234]	-0.0412*** [0.00584]	-0.0315*** [0.00734]	-0.0520*** [0.0126]	-0.0499*** [0.0157]
Number of observations	8,482	1,022	7,460	4,177	2,062	1,221
Pseudo-R <sup>2</sup>	0.1190	0.2477	0.1089	0.0795	0.0875	0.2265

Notes: All estimates include controls for the region of residence. \*\*\*, \*\* and \* indicate that the estimated coefficient is statistically different from zero at 1%, 5%, and 10% significance levels, respectively.

**Table A3. Detailed results of the estimation in Tables 1 and 2**

Logarithm of hourly wages	Full sample	Developed countries	Developing countries	Latin America	Eastern Europe	Rest of the world
Schooling years in Spain	0.0424*** [0.00850]	0.0400* [0.0237]	0.0402*** [0.00908]	0.0454*** [0.0120]	0.0392* [0.0210]	0.0441** [0.0184]
Schooling years in home country	0.0143*** [0.00184]	0.0564*** [0.00831]	0.0119*** [0.00188]	0.0129*** [0.00261]	0.00893** [0.00422]	0.00560* [0.00328]
Effective experience in Spain	0.0233*** [0.00793]	0.0188 [0.0298]	0.0221*** [0.00826]	0.0266** [0.0113]	0.0189 [0.0174]	0.00155 [0.0180]
(Effective experience in Spain) <sup>2</sup>	-0.000575 [0.000949]	-0.000808 [0.00331]	-0.000872 [0.000978]	-0.00087 [0.00136]	-0.000904 [0.00211]	0.00193 [0.00196]
Unemployment years in Spain	0.000944 [0.00497]	-0.0940*** [0.0252]	-0.00265 [0.00493]	0.0086 [0.00670]	-0.0189 [0.0115]	0.00764 [0.0101]
Potential exp. in home country	0.00644*** [0.00195]	0.0123 [0.0111]	0.00322* [0.00195]	0.00936*** [0.00259]	0.00179 [0.00392]	-0.00268 [0.00560]
(Potential exp. in home country) <sup>2</sup>	-0.000240*** [5.68e-05]	-0.000104 [0.000312]	-0.000156*** [5.62e-05]	-0.000320*** [7.45e-05]	-0.000153 [0.000114]	-1.47E-05 [0.000165]
Labor exp. in home country	0.0399*** [0.0154]	-0.0308 [0.0749]	0.0389** [0.0167]	0.0624*** [0.0232]	0.0123 [0.0329]	0.0389 [0.0298]
Legal status	0.132*** [0.0174]	0.0866 [0.112]	0.110*** [0.0177]	0.145*** [0.0266]	0.126*** [0.0271]	0.134** [0.0529]
Having more than one job	0.0249 [0.0236]	-0.0163 [0.102]	0.0266 [0.0241]	0.0276 [0.0310]	0.0156 [0.0449]	0.0713 [0.0723]
Heckman's lambda	0.0783*** [0.0246]	-0.0739 [0.142]	-0.00328 [0.0347]	0.111*** [0.0312]	-0.0117 [0.102]	0.0202 [0.0423]
Male	0.234*** [0.0120]	0.131* [0.0728]	0.207*** [0.0123]	0.229*** [0.0151]	0.252*** [0.0262]	0.173*** [0.0374]
Married	0.0332*** [0.0107]	0.0384 [0.0549]	0.0405*** [0.0110]	0.0348** [0.0147]	0.0189 [0.0209]	0.0561* [0.0292]
Number of observations	4,143	278	3,865	2,225	1,121	519
Adjusted R <sup>2</sup>	0.218	0.329	0.181	0.183	0.245	0.205

Notes: All estimates include controls for the region of residence. \*\*\*, \*\* and \* indicate that the estimated coefficient is statistically different from zero at 1%, 5%, and 10% significance levels, respectively.

**Table A4. Robustness check to the use of schooling levels instead of schooling years**

Logarithm of hourly wages	Full sample	Developed countries	Developing countries	Latin America	Eastern Europe	Rest of the world
Age	0.0211*** [0.00533]	0.0192 [0.0386]	0.0143*** [0.00473]	0.0193*** [0.00655]	0.0221** [0.00963]	0.0238* [0.0126]
Age squared	-0.000299*** [7.31e-05]	-0.000151 [0.000528]	-0.000213*** [6.40e-05]	-0.000273*** [8.84e-05]	-0.000329** [0.000129]	-0.000379** [0.000177]
Primary studies	-0.0197 [0.0129]	-0.0825 [0.0655]	-0.0260** [0.0131]	-0.00813 [0.0177]	-0.00743 [0.0299]	-0.0211 [0.0262]
Tertiary studies	0.130*** [0.0159]	0.333*** [0.0577]	0.105*** [0.0165]	0.114*** [0.0212]	0.0929*** [0.0319]	0.114** [0.0441]
Primary studies in Spain	0.0126 [0.0708]	-0.106 [0.101]	0.0424 [0.0766]	0.0518 [0.106]	0.375*** [0.109]	0.015 [0.113]
Secondary studies in Spain	0.0105 [0.0262]	-0.0488 [0.103]	0.0173 [0.0269]	-0.0213 [0.0348]	0.057 [0.0469]	0.116 [0.0724]
Tertiary studies in Spain	0.103** [0.0478]	0.024 [0.107]	0.126** [0.0531]	0.139** [0.0592]	0.0394 [0.154]	0.179 [0.142]
Labour exp. in home country	0.0153 [0.0155]	-0.00556 [0.0685]	0.0205 [0.0169]	0.0319 [0.0238]	0.00434 [0.0323]	0.0128 [0.0294]
Heckman's lambda	0.028 [0.0265]	-0.0354 [0.134]	-0.0424 [0.0383]	0.019 [0.0453]	0.0128 [0.101]	0.0101 [0.0372]
Number of observations	4,143	278	3,865	2,225	1,121	519
Adjusted R <sup>2</sup>	0.219	0.330	0.179	0.184	0.240	0.207

Notes: OLS estimates with controls related to gender, civil status, legal status geographical area of birth and the region of residence. \*\*\*, \*\* and \* indicate that the estimated coefficient is statistically different from zero at 1%, 5%, and 10% significance levels, respectively.

**Table A5. Robustness checks to different sample selection**

Logarithm of hourly wages	Legal status	Only one job	Only one job, and without coming from third countries
Schooling years in Spain	0.0411*** [0.00869]	0.0407*** [0.00885]	0.0368*** [0.00905]
Schooling years in home country	0.0155*** [0.00196]	0.0138*** [0.00188]	0.0124*** [0.00193]
Effective experience in Spain	0.0191** [0.00879]	0.0239*** [0.00816]	0.0293*** [0.00836]
(Effective experience in Spain) <sup>2</sup>	-0.000187 [0.00102]	-0.000576 [0.000981]	-0.00114 [0.000989]
Unemployment years in Spain	0.000814 [0.00524]	0.000352 [0.00512]	-0.000108 [0.00527]
Potential exp. in home country	0.00448** [0.00209]	0.00683*** [0.00198]	0.00621*** [0.00203]
(Potential exp. in home country) <sup>2</sup>	-0.000171*** [6.18e-05]	-0.000250*** [5.76e-05]	-0.000244*** [5.94e-05]
Labour exp. in home country	0.0394** [0.0163]	0.0380** [0.0158]	0.0329** [0.0164]
Heckman's lambda	0.0636** [0.0291]	0.0775*** [0.0252]	0.0743*** [0.0260]
Number of observations	3,606	3,884	3,598
Adjusted R <sup>2</sup>	0.194	0.224	0.236

Notes: OLS estimates with controls related to gender, civil status, geographical area of birth and the region of residence. \*\*\*, \*\* and \* indicate that the estimated coefficient is statistically different from zero at 1%, 5%, and 10% significance levels, respectively.