

Immigrants and Entrepreneurship: a Road for Talent or Just the Only Road?

Susana Iranzo

susana.iranzo@urv.cat

Universitat Rovira i Virgili and ECO-SOS

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Outline

- Motivation
- Theoretical Framework
- Data Description
- Empirical Results and Robustness Checks
- Conclusions

Motivation

- Some facts about immigration and entrepreneurship:
 - ▣ In many countries self-employment rates tend to be higher among migrants than among natives -- [Table 1](#)

Table 1: Percentage of workers in self-employment, 2007

Country	Natives	Foreign-born
Australia	16.3	18.8
Austria	9.3	8.4
Belgium	12.1	15.5
Canada	14.5	17.5
Czech Republic	15.3	19.6
Denmark	7.0	9.6
Finland	9.6	14.1
France	8.1	10.8
Germany	10.0	9.5
Greece	26.4	10.6
Hungary	10.8	16.4
Ireland	16.8	9.3
Italy	23.6	17.5
Luxembourg	5.4	6.5
Netherlands	11.0	11.0
Norway	5.8	6.9
Poland	11.2	29.2
Portugal	15.6	12.1
Slovak Republic	12.6	26.4
Spain	16.0	11.7
Sweden	8.5	10.0
Switzerland	12.4	9.1
Turkey	21.5	18.2
United Kingdom	11.9	13.4
United States	9.9	10.2

Source: OECD Migration Outlook 2009, reproduced in OECD (2010), Table 1.

Motivation

- Some facts about immigration and entrepreneurship:
 - ▣ In many countries self-employment rates tend to be higher among migrants than among natives -- [Table 1](#)
 - ▣ Entrepreneurship tends to be more prevalent among high-skilled migrants but in some instances (ex. US) also among low-skilled migrants -- [Table 2](#)

Table 2: U.S. business owners by educational level, 2000

	Immigrant business owners (%)	All business owners (%)
All education levels	100.0	100.0
Less than high school	27.2	11.9
High school graduate	19.9	25.8
Some college	21.6	29.5
College graduate	31.3	32.7

Source: Fairlie (2008), Table 4

Motivation

- Some facts about immigration and entrepreneurship:
 - ▣ In many countries self-employment rates tend to be higher among migrants than among natives -- [Table 1](#)
 - ▣ Entrepreneurship tends to be more prevalent among high-skilled migrants but in some instances (ex. US) also among low-skilled migrants -- [Table 2](#)
- These stylized facts suggest that most skilled/talented migrants become entrepreneurs (**positive sorting**) but entrepreneurship also chosen by less talented migrants who face fewer opportunities in the labor market (**negative sorting**) – **U-shape relationship** between entrepreneurship/self-employment and migrants skills

Motivation

- Important to know whether there is positive or negative sorting of migrants into entrepreneurship for policy reasons:
 - ▣ migratory policy: special Visa programs (or facilitated procedures) for business owners in some countries
 - ▣ if discrimination or prejudice pushes some immigrant groups into self-employment, policies correcting such discrimination would result in a more efficient allocation of workers across occupational choices

Related Literature

- Vast literature on entrepreneurship:
 - Entrepreneurship and its determinants: Lucas (1978), Evans and Jovanovic (1989), Blanchard and Oswald (1998), Lazear (2005), Guiso and Schivardi (2011), Poschke (2013), etc.
 - Entrepreneurship and racial groups: Borjas and Bronars (1989), Fairlie and Meyer (1996), Hout and Rosen (2000).
- Scarce literature on migration and entrepreneurship:
 - Migration and innovation: Hunt (2010), Kerr and Lincoln (2010), and Peri et al (2015).
 - Specifically on migrant self-employment: Borjas (1986), Yuergert (1995), Fairlie and Meyer (1996), Lofstrom (2002), Saxenian et al (2007), Uwaifo and Belton (2012).

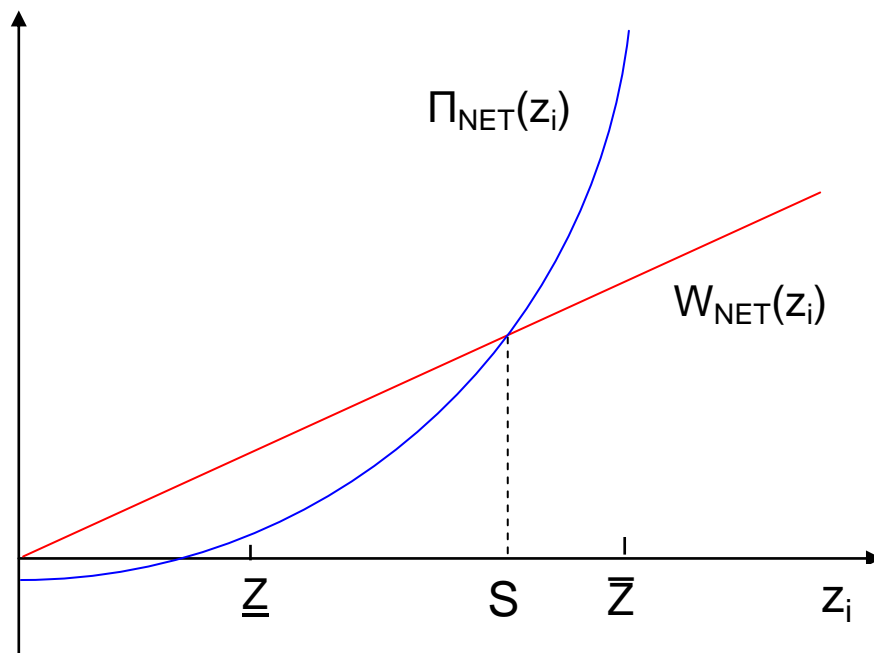
In this paper...

- What this paper does:
 - ▣ develops a theoretical framework to understand the mechanisms through which migrants are drawn into entrepreneurship and
 - ▣ empirically tests the model predictions on survey data of migrants in Spain
- Summary of the findings:
 - ▣ In the case of Spain, no negative sorting into self-employment is observed -- self-employed migrants tend to be more skilled
 - ▣ However, penalties in the labor market (beyond mere losses of human capital) are also consistent with the higher propensity to self-employment and the lower entrepreneurial quality of certain groups of migrants

Theoretical framework

- We build on Lucas (1978) entrepreneurship model.
- Individuals differ in their skill level z_i , with $z_i \in [\underline{z}, \bar{z}]$ and density function $\gamma(z)$
- They choose between becoming an entrepreneur or working as a salaried worker for somebody else based on the net entrepreneurial profits and salary income they can get
 - ▣ If $\Pi(z_i) - C > W(z_i)$ become an entrepreneur, and viceversa.

Theoretical framework



Average entrepreneurial skill: $E(z | z \geq S) = \frac{\int_S^{\bar{z}} z\gamma(z)dz}{1-\Gamma(z)}$

Additional modifications in the case of migrants

- Different groups of migrants might have different entrepreneurship entry costs C_m
- No perfect transferability of skills. A proportion δ_m ($0 \leq \delta_m < 1$) of skills “lost” upon arrival for migrants of origin m
- Migrants of origin m might be subject to additional penalties in the labor market (due to discrimination or others) that reduce their wages below competitive levels –assume a wage cut D_m

Additional modifications in the case of migrants

Skill level of marginal entrepreneur from origin m , S_m , given by

$$\Pi_{NET}(z_i) = W_{NET}(z_i)$$

$$\Pi((1 - \delta_m)z_i) - C_m = w \cdot (1 - \delta_m)z_i - D_m$$

Comparative statics

Perform comparative statics on the skill level of the marginal entrepreneur (S_m) and the average entrepreneurial skill, $E(z|z \geq S_m)$, wrt heterogeneous entry costs (C_m), human capital losses (δ_m) and non-market penalties (D_m) and obtain:

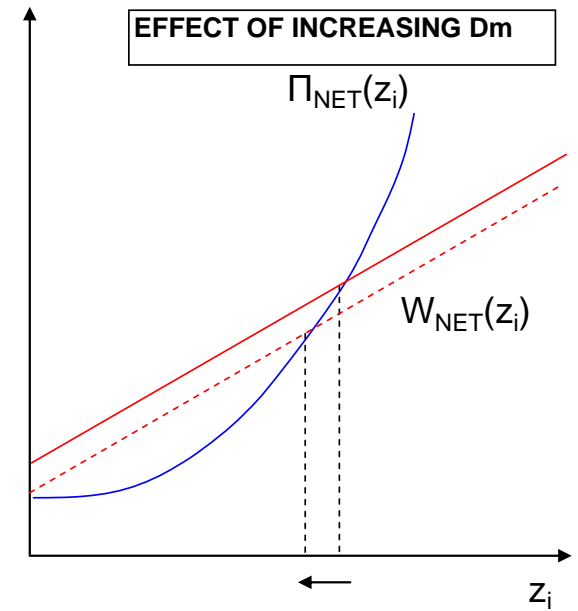
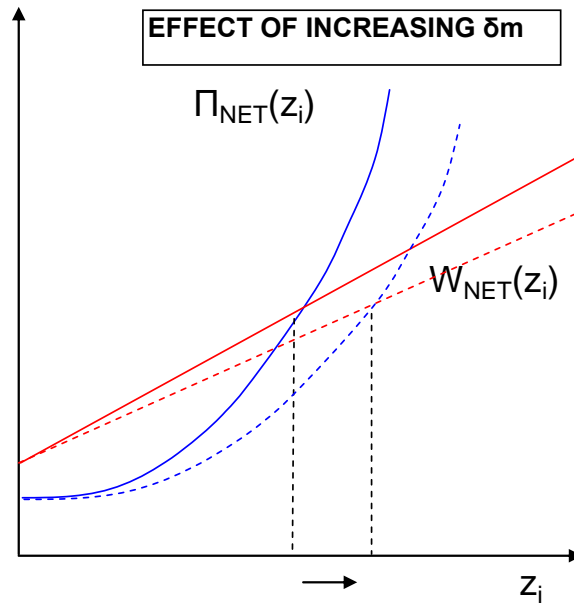
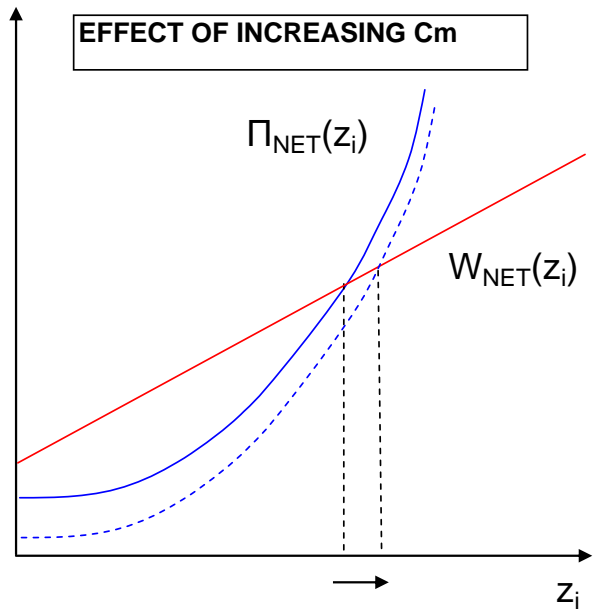
$$1) \frac{dS_m}{dC_m} > 0 \text{ and } \frac{dE(z|z \geq S_m)}{dC_m} > 0$$

$$2) \frac{dS_m}{d\delta_m} > 0 \text{ and } \frac{dE(z|z \geq S_m)}{d\delta_m} \cong 0$$

$$3) \frac{dS_m}{dD_m} < 0 \text{ and } \frac{dE(z|z \geq S_m)}{dD_m} < 0$$



Comparative statics



Model predictions

	Outcome 1: Negative sorting	Outcome 2: Likelihood of entrepreneurship	Outcome 3: Entrepreneurial quality
Higher startup costs ($C_m > C$)	No	Low	High
Human Capital losses ($0 \leq \delta m < 1$)	No	Low	Ambiguous
Discrimination in labor market ($D_m > 0$)	Possible	High	Low

The Data

- *Encuesta Nacional de Inmigrantes 2007*, conducted between November 2006 and February 2007 in Spain.
- Survey containing information on a rich set of variables: education and other individual characteristics, country of origin, year of arrival, earnings, information on current and past employment, including whether salaried worker or self-employed, whether migrant owned business in country of origin, individual assets, etc.
- Out of a little over 15,000 observations, about 7,700 observations after data cleaning.

Migrant characteristics

Educational Level

	All migrants	Self-employed
Total	7,738	1,035
Less than primary education	9.03%	8.70%
Primary education	30.59%	25.89%
Secondary education	38.14%	36.14%
College and some college	22.24%	29.28%

Origin of Migrants

	All migrants (total)	All migrants (% in total)	Self-employed (% in total)
Total	7,738	100	100
EU-15	1,293	16.71	31.69
Eastern Europe	1,488	19.23	10.82
Africa & Asia	1,402	18.12	18.45
Latin American	3,394	43.86	36.23
Others	161	2.08	2.80

Migrant characteristics

Sector of Occupation and Geographical Location

Sector	All migrants (% in total)	Self-employed (% in total)	Spanish Region	All migrants (% in total)	Self-employed (% in total)
Agricult., fishing & mining	6.60	2.80	Andalucía	6.85	8.31
Manufacturing	11.73	6.09	Aragón	4.39	2.80
Construction	19.39	14.70	Asturias	2.30	4.35
Retailing	10.73	18.57	Baleares	7.50	12.27
Hospitality	13.14	12.86	Canarias	4.08	5.51
Transportation & communications	5.26	5.22	Cantabria	2.65	3.09
Real state & renting services	8.65	13.35	Castilla & León	4.03	3.86
Household services	10.70	11.90	Castilla la Mancha	4.38	1.93
Other social & personal services	10.79	13.54	Cataluña	13.13	12.37
Others	3.01	0.97	C. Valenciana	8.39	11.50
			Extremadura	1.85	1.26
			Galicia	2.64	3.96
			Madrid	13.50	10.63
			Murcia	8.18	5.02
			Navarra	7.90	4.83
			País Vasco	3.59	5.02
			Rioja	3.94	2.32
			Ceuta & Melilla	0.70	0.97

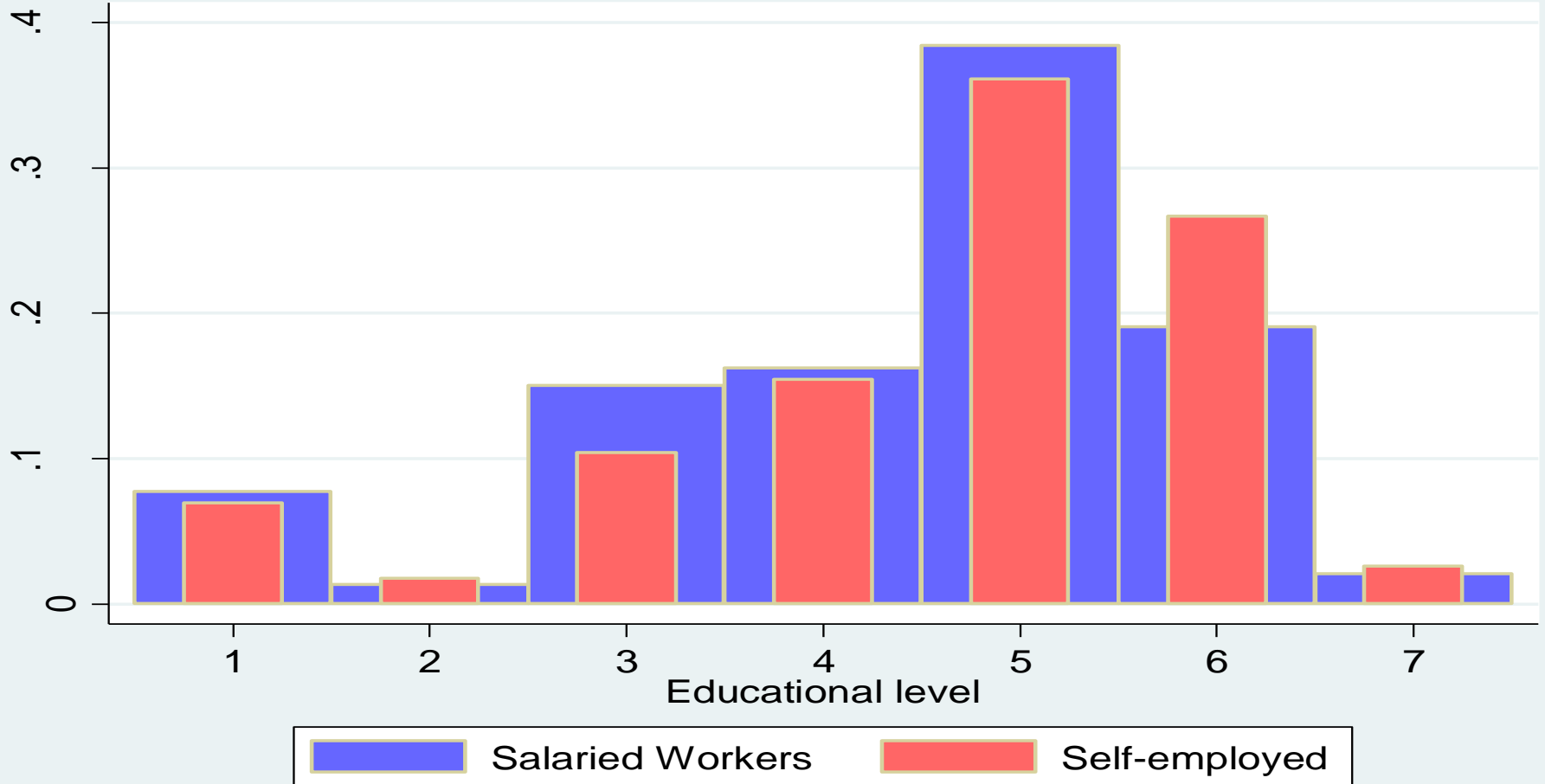
Empirical Results – Outcome 1: Positive/negative sorting of migrants into self-employment

- Skill distributions of self-employed migrants skewed to the right and, except for the educational distribution for EU-15, the Smirnov-Kolmogorov test of equality of distributions rejected at <10% significance levels.
 - ▣ [Schooling distributions](#)
 - ▣ [Effective experience distributions](#)

- Probit regressions fail to show a U-shape relationship between skills and self-employment –only exception for schooling in CO for EU-15.
 - ▣ [Table 10](#)

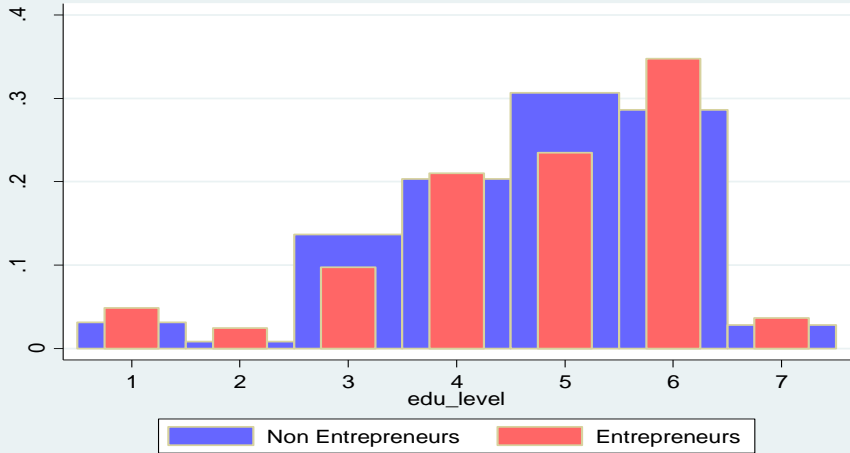
Outcome 1: Positive/negative sorting of migrants into self-employment

Educational Distribution --All Migrants

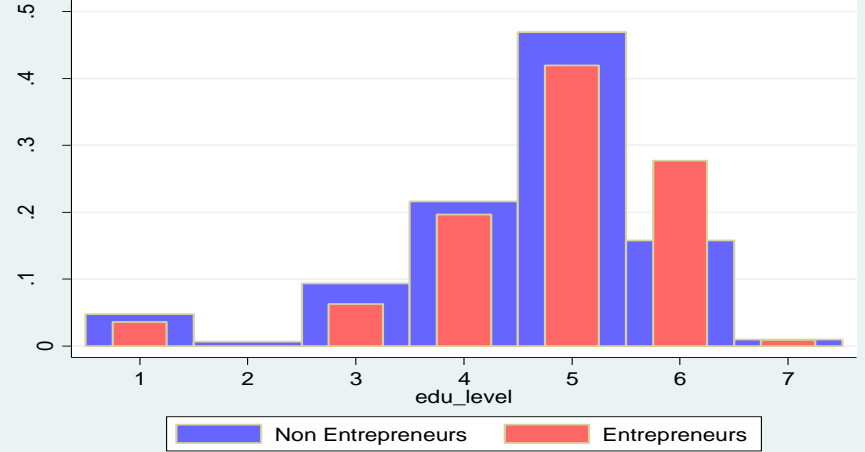


Outcome 1: Positive/negative sorting of migrants into self-employment

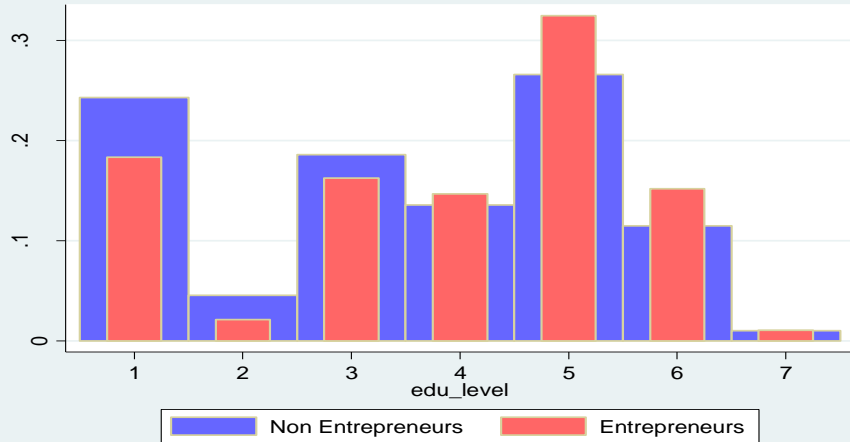
Educational Distribution --EU-15



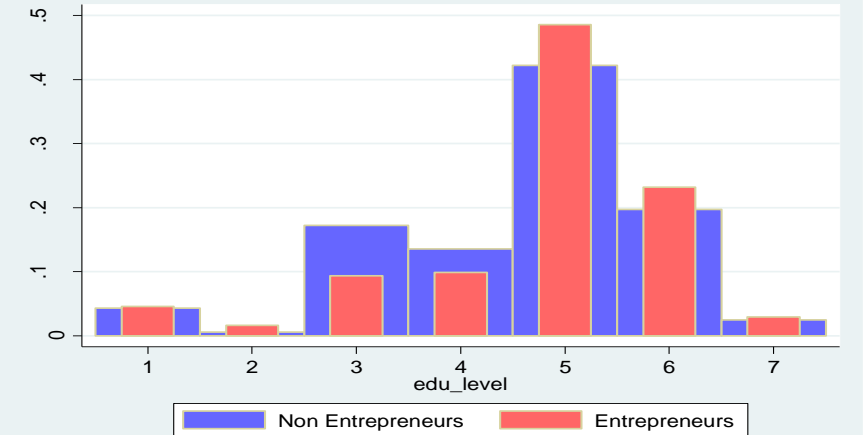
Educational Distribution --Eastern Europe



Educational Distribution --Africa and Asia

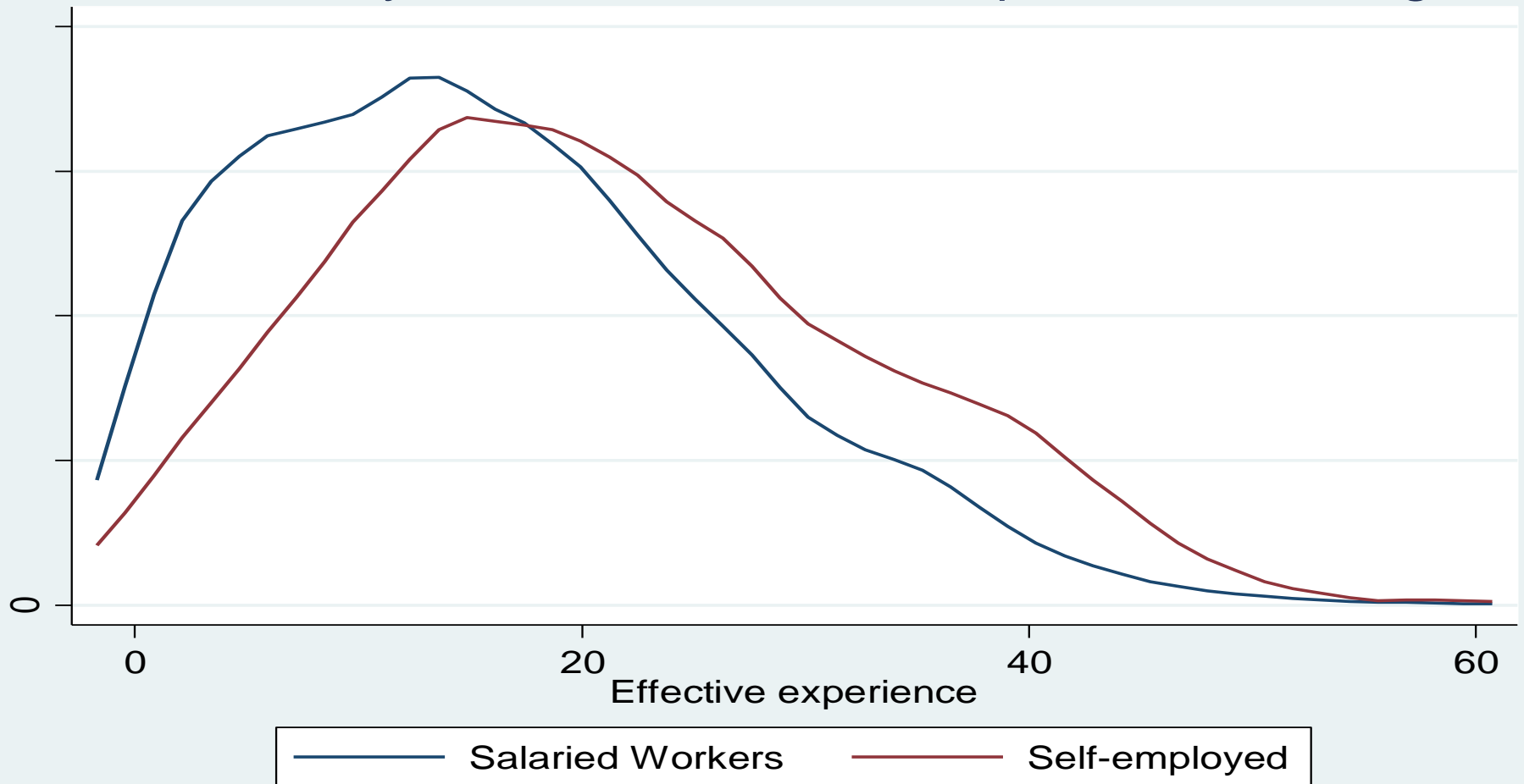


Educational Distribution --Latin America

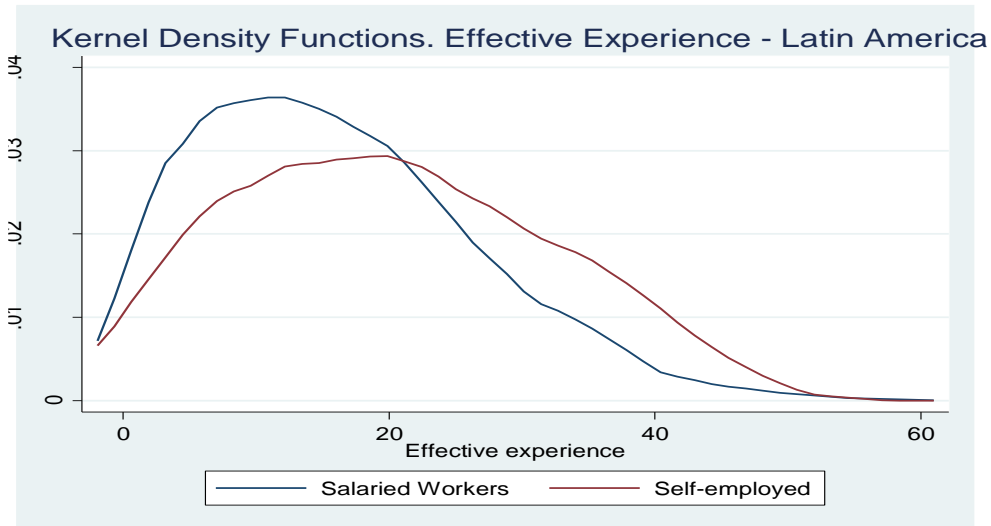
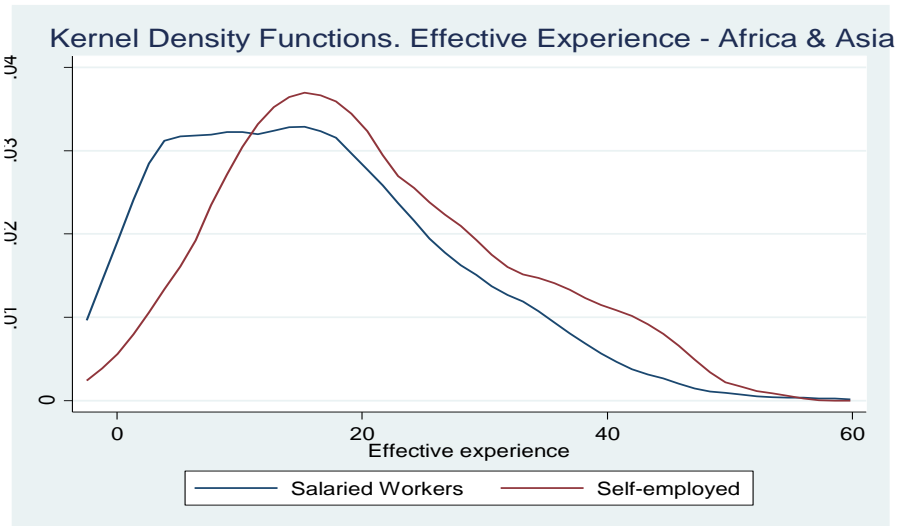
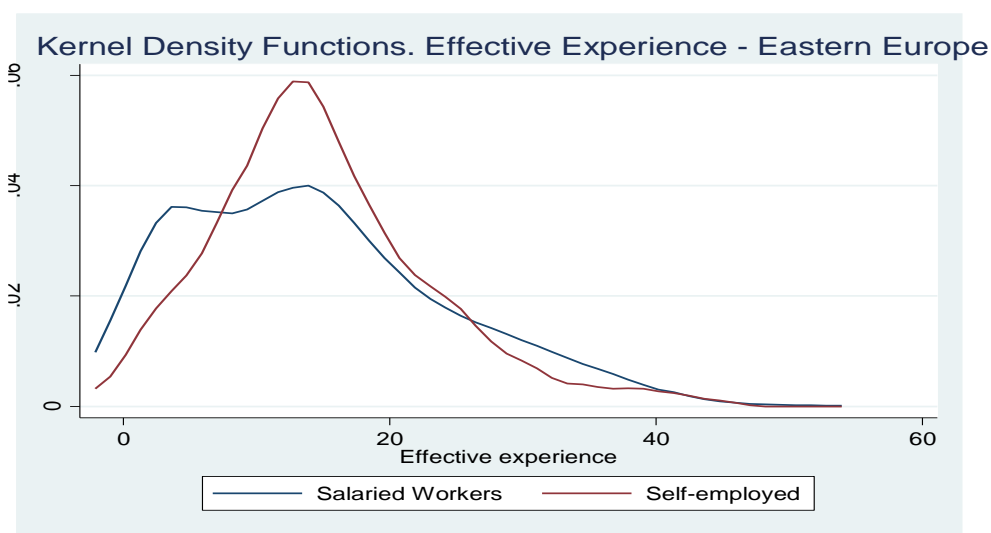
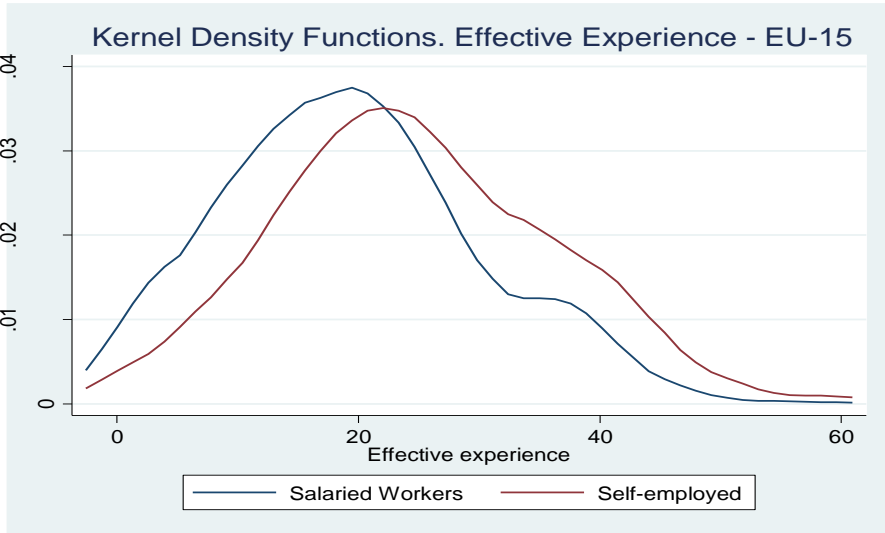


Outcome 1: Positive/negative sorting of migrants into self-employment

Kernel Density Functions: Effective Experience - All Migrants



Outcome 1: Positive/negative sorting of migrants into self-employment



Outcome 1: Positive/negative sorting of migrants into self-employment

Table 10: U-shape relationship between schooling & experience and self-employment? Probit regressions -- Marginal effects

	All Migrants (1)	EU-15 (2)	Eastern Europe (3)	Africa and Asia (4)	Latin America (5)
Schooling in CO	-0.039* (0.023)	-0.107* (0.063)	-0.015 (0.097)	-0.030 (0.037)	-0.031 (0.046)
(Schooling in CO) ²	0.004*** (0.001)	0.008** (0.003)	0.003 (0.005)	0.004 (0.003)	0.004* (0.002)
Schooling in Spain	0.025 (0.033)	-0.045 (0.039)	-0.071 (0.113)	0.113 (0.076)	0.041 (0.079)
(Schooling in Spain) ²	-0.000 (0.002)	0.003 (0.002)	0.009 (0.007)	-0.009 (0.006)	-0.002 (0.005)
Effective experience in Spain	0.098*** (0.012)	0.117*** (0.032)	0.011 (0.053)	0.108*** (0.029)	0.070*** (0.012)
(Effective experience in Spain) ²	-0.001*** (0.000)	-0.002* (0.001)	0.007* (0.004)	-0.001 (0.001)	-0.000 (0.001)
Effective experience in CO	-0.005 (0.006)	0.019 (0.014)	0.034 (0.021)	-0.021* (0.012)	-0.014 (0.009)
(Effective experience in CO) ²	0.000* (0.000)	-0.000 (0.000)	-0.002*** (0.001)	0.001** (0.000)	0.000* (0.000)
Pseudo R ²	0.144	0.195	0.245	0.277	0.132
Observations	5,961	822	1,181	936	2,873

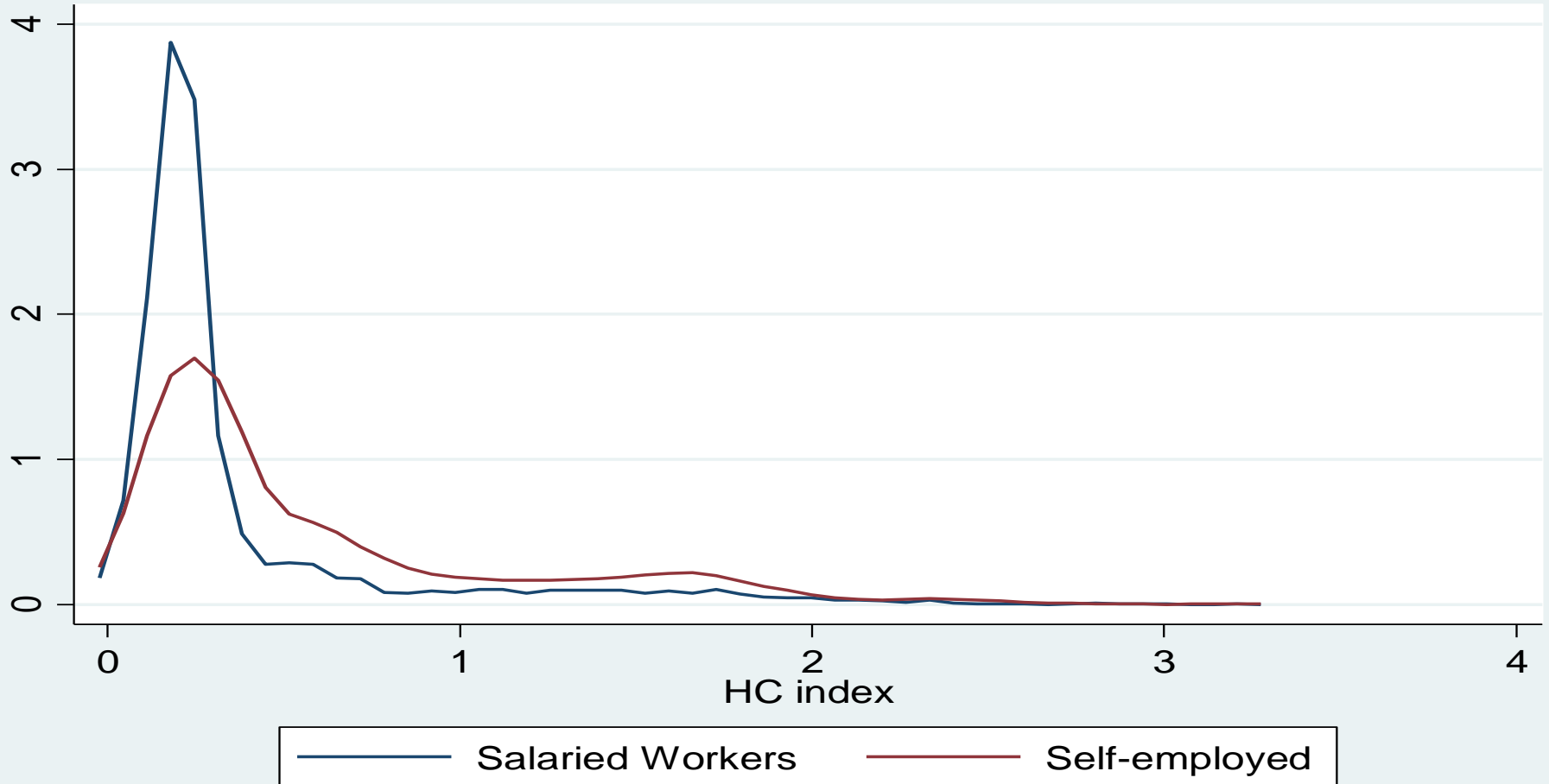
Notes: Robust standard errors in parentheses clustered at the country of origin level. *** p<0.01, ** p<0.05, * p<0.1
All regressions include dummy variables for Spanish fluency, whether owned business in CO, gender, marital status, whether has children, enclave variables as well as sector, Spanish region and arrival cohort fixed effects.

Outcome 1: Positive/negative sorting of migrants into self-employment

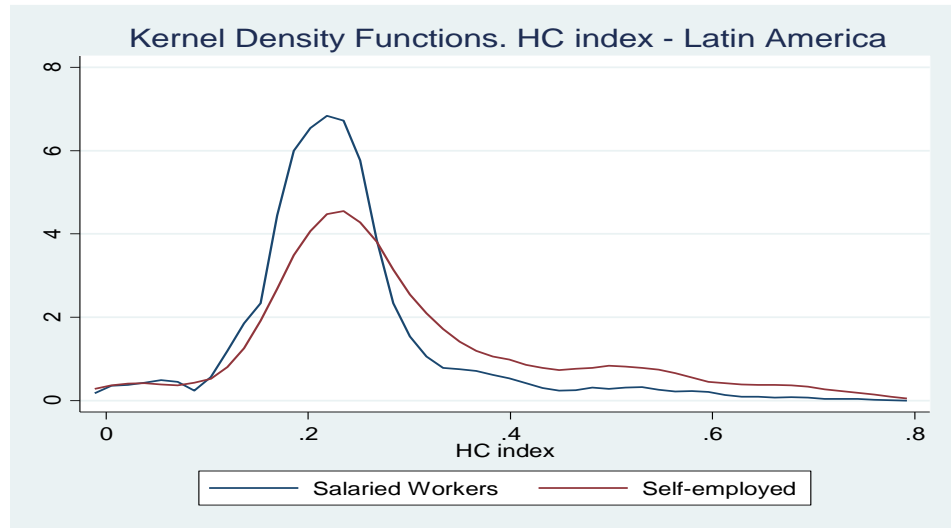
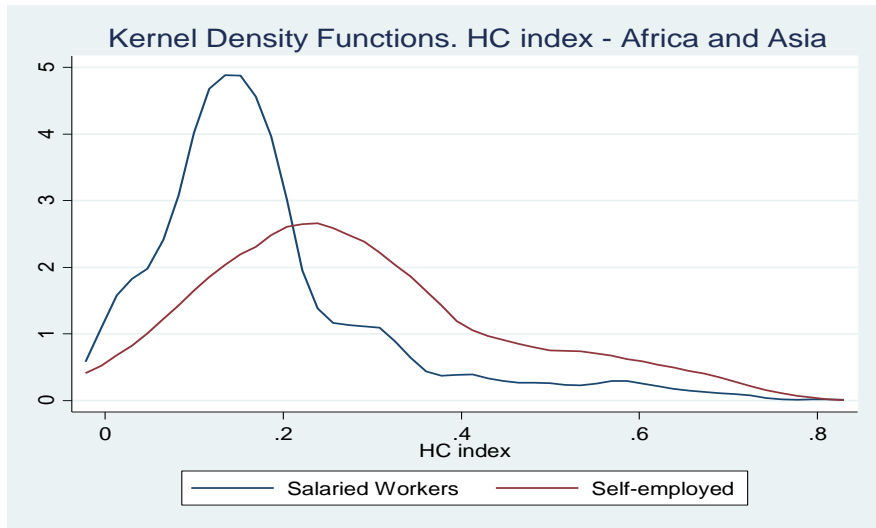
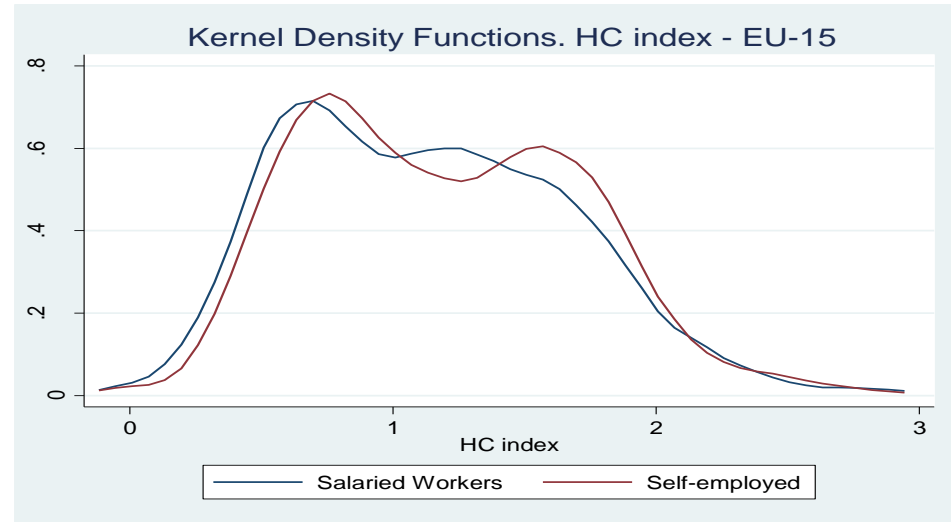
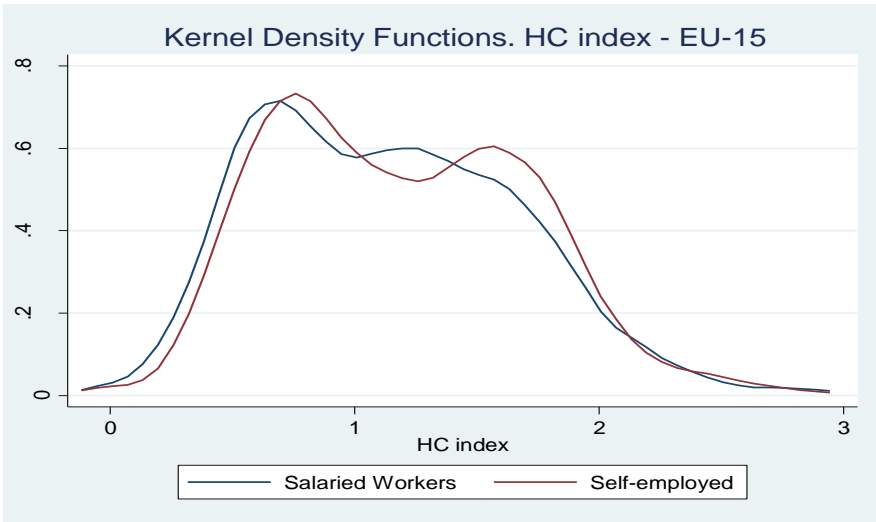
- Problem of comparability of skills across regions/ countries of origin
- Need a "common metric" to express human capital of migrants – use the value placed by the Spanish labour market to schooling and experience from country/region of origin
 - ▣ See results of [Mincerian log wage regressions](#)
- Construct human capital (HC) indices based on those returns.
 - ▣ Distributions of HC indices of self-employed different from that of salaried workers and skewed to the right – [HC distributions](#)
 - ▣ Probit regressions using this index show no U-shape relationship between HC and self-employment – [Table 11](#)

Outcome 1: Positive/negative sorting of migrants into self-employment

Kernel Density Functions. HC index - All Migrants



Outcome 1: Positive/negative sorting of migrants into self-employment



Outcome 2: Probability of self-employment

Table 12: Explaining the different propensities of self-employment across migrant groups. Probit regressions --Marginal effects

	Baseline Model	Model 2	Model 3	Model 4
Schooling	0.005*** (0.002)	0.005*** (0.002)		
Effective experience in Spai	0.010*** (0.001)	0.010*** (0.001)		
Effective experience in CO	0.000 (0.001)	0.001 (0.001)		
Dummy- Eastern Europe (geo2)	-0.089*** (0.020)	-0.082*** (0.018)	0.022 (0.023)	0.012 (0.024)
Dummy- Africa & Asia (geo3)	-0.061*** (0.024)	-0.055** (0.023)	0.072** (0.035)	0.064* (0.035)
Dummy- Latin America (geo4)	-0.083*** (0.020)	-0.079*** (0.019)	0.030 (0.028)	0.028 (0.029)
Dummy- Other countries (geo5)	-0.039 (0.047)	-0.041 (0.047)	-0.031 (0.027)	-0.032 (0.028)
Owens house in Spain		0.018 (0.011)	0.019* (0.011)	0.020* (0.011)
Owens house in CO		-0.007 (0.008)	-0.004 (0.008)	-0.004 (0.009)
Owens land in CO		-0.025** (0.012)	-0.024** (0.012)	-0.022* (0.013)
HC index			0.235*** (0.063)	0.233*** (0.063)
Illegal status				0.021 (0.017)
Hypothesis testing:	geo2=geo3=geo4=geo5 geo2=geo3=geo4=geo5 geo3?geo2, geo4, geo5 geo3?geo2, geo4, geo5			
Pseudo R ²	0.148	0.150	0.142	0.145
Observations	5,961	5,961	5,961	5,624

Notes: Robust standard errors in parentheses clustered at the country of origin level. *** p<0.01, ** p<0.05, * p<0.1

Outcome 3: Entrepreneurial quality

Table 13: Probability of belonging to the bottom and the top of the self-employed earnings distribution. Probit regressions -- Marginal effects

	Earnings <25% (1)	Earnings <10% (2)	Earnings >75% (3)	Earnings >90% (4)
Dummy- Eastern Europe (geo2)	0.107** (0.051)	0.027 (0.040)	-0.090 (0.056)	-0.075 (0.048)
Dummy- Africa & Asia (geo3)	0.216*** (0.032)	0.097*** (0.033)	-0.210*** (0.036)	-0.132*** (0.038)
Dummy- Latin America (geo4)	0.088** (0.039)	0.005 (0.020)	-0.029 (0.038)	0.048 (0.045)
Dummy- Other countries (geo5)	0.147*** (0.054)	0.019 (0.030)	-0.059 (0.057)	0.014 (0.068)
Pseudo R ²	0.202	0.169	0.089	0.115
Observations	862	844	742	691
Test hypothesis (p-value):				
geo3= geo2	0.021	0.098	0.036	0.115
geo3= geo4	0.000	0.003	0.000	0.000
geo3= geo5	0.202	0.043	0.010	0.016

Notes: Robust standard errors in parentheses clustered at the country of origin level.

*** p<0.01, ** p<0.05, * p<0.1

All regressions include individual characteristics, sector, Spanish region and arrival cohort fixed effects

Robustness checks

- Analysis for the 3 most important migrant sending countries:

- ▣ Romania (Eastern Europe)
- ▣ Morocco (Africa)
- ▣ Equator (Latin America)

and some European Union countries to be used as reference group

- For each country, distributions of schooling, experience and human capital indices of self-employed skewed to the right wrt those of salaried workers – Observe positive sorting into self-employment.
- Estimate probit models on the probability of becoming self-employed and on the probability of self-employed earnings to be at the top and bottom of earnings distribution.



Analysis for the main individual sending countries

Table 14: Explaining the different propensities to self-employment

	Baseline Model	Model 2	Model 3	Model 4
Schooling	0.003 (0.002)	0.003 (0.002)		
Effective experience in Spain	0.008*** (0.002)	0.008*** (0.002)		
Effective experience in CO	0.000 (0.001)	0.000 (0.001)		
Dummy- Romania (geo2)	-0.118*** (0.027)	-0.114*** (0.024)	-0.017 (0.016)	-0.021 (0.017)
Dummy- Morocco (geo3)	-0.090*** (0.019)	-0.085*** (0.017)	0.064** (0.029)	0.062** (0.029)
Dummy- Equator (geo4)	-0.142*** (0.027)	-0.138*** (0.024)	-0.003 (0.022)	-0.007 (0.022)
Owens house in Spain		0.017 (0.017)	0.018 (0.016)	0.019 (0.016)
Owens house in CO		0.004 (0.014)	0.008 (0.014)	0.005 (0.014)
Owens land in CO		-0.023 (0.015)	-0.022 (0.015)	-0.020 (0.015)
HC index			0.171*** (0.036)	0.169*** (0.035)
Illegal status				0.011 (0.018)
Hypothesis testing:	geo3?geo2, geo3?geo4, geo4?geo2	geo3?geo2, geo3?geo4, geo4?geo2	geo3?geo2, geo4, geo2=geo4	geo3?geo2, geo4, geo2=geo4
Pseudo R ²	0.212	0.214	0.206	0.207
Observations	2,705	2,705	2,705	2,680

Notes: Robust standard errors in parentheses clustered at the country of origin level. *** p<0.01, ** p<0.05, * p<0.1
All regressions include individual characteristics, sector, Spanish region and arrival cohort fixed effects.

Analysis for the main individual sending countries

Table 15: Probability of belonging to the bottom and the top of the self-employed earnings distribution

	Earnings <25%	Earnings <10%	Earnings >75%	Earnings >90%
	(1)	(2)	(3)	(4)
Dummy- Romania (geo2)	0.051*** (0.016)	-0.043 (0.033)	-0.012 (0.056)	0.018 (0.064)
Dummy- Morocco (geo3)	0.129*** (0.027)	0.025 (0.055)	-0.223*** (0.027)	-0.146*** (0.040)
Dummy- Equator (geo4)	0.059 (0.043)	-0.115*** (0.043)	-0.158*** (0.052)	-0.153*** (0.057)
Pseudo R ²	0.255	0.197	0.089	0.191
Observations	356	281	296	264
Test hypothesis (p-value):				
geo3= geo2	0.047	0.065	0.000	0.000
geo3= geo4	0.023	0.000	0.190	0.862

Notes: Robust standard errors in parentheses clustered at the country of origin level.

*** p<0.01, ** p<0.05, * p<0.1

All regressions include individual characteristics, sector, Spanish region and arrival cohort fixed effects.

Conclusions

- Data for Spanish immigrants is consistent with a model of positive sorting into self-employment -- Distribution of skills of self-employed migrants skewed to the right, and statistically different from that of salaried workers.
- With respect to the EU-15 reference group, HC losses, and to less extent higher entry costs, seem responsible for the lower propensities to self-employment of all other migrant groups.
- However, penalties in the labor market beyond the mere human capital losses than migrants experience upon arrival, are also consistent with the relatively higher probability of self-employment and the lower entrepreneurial quality of the Africa&Asia group (in particular, Moroccans).

Thanks for your
attention



Table 1: Percentage of workers in self-employment, 2007

Country	Natives	Foreign-born
Australia	16.3	18.8
Austria	9.3	8.4
Belgium	12.1	15.5
Canada	14.5	17.5
Czech Republic	15.3	19.6
Denmark	7.0	9.6
Finland	9.6	14.1
France	8.1	10.8
Germany	10.0	9.5
Greece	26.4	10.6
Hungary	10.8	16.4
Ireland	16.8	9.3
Italy	23.6	17.5
Luxembourg	5.4	6.5
Netherlands	11.0	11.0
Norway	5.8	6.9
Poland	11.2	29.2
Portugal	15.6	12.1
Slovak Republic	12.6	26.4
Spain	16.0	11.7
Sweden	8.5	10.0
Switzerland	12.4	9.1
Turkey	21.5	18.2
United Kingdom	11.9	13.4
United States	9.9	10.2

Source: OECD Migration Outlook 2009, reproduced in OECD (2010), Table 1.

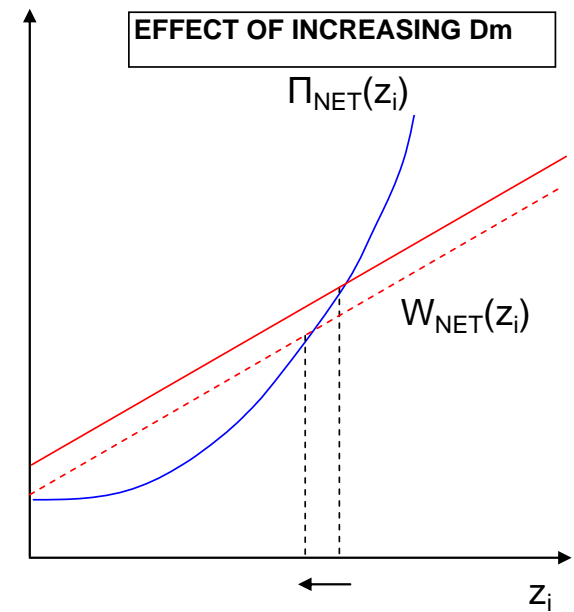
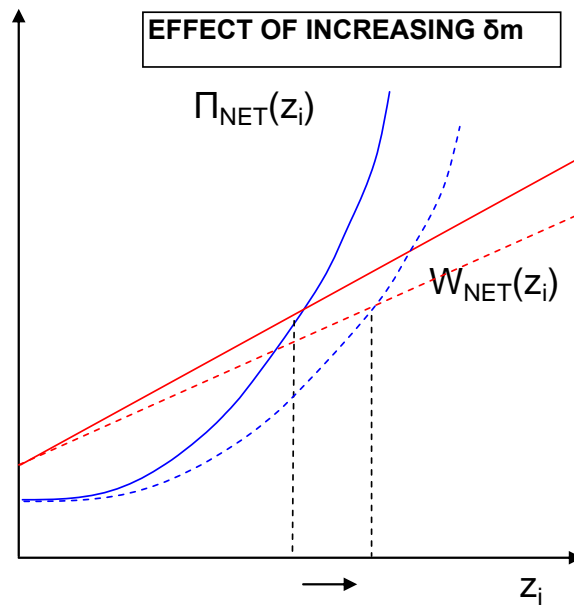
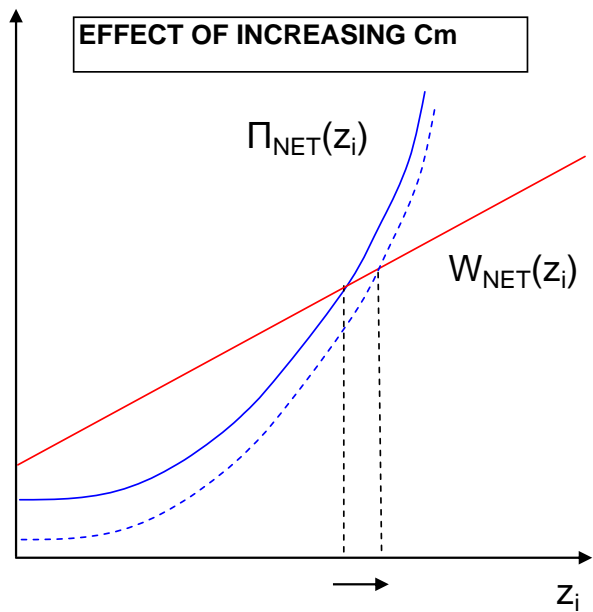


Table 2: U.S. business owners by educational level, 2000

	Immigrant business owners (%)	All business owners (%)
All education levels	100.0	100.0
Less than high school	27.2	11.9
High school graduate	19.9	25.8
Some college	21.6	29.5
College graduate	31.3	32.7

Source: Fairlie (2008), Table 4

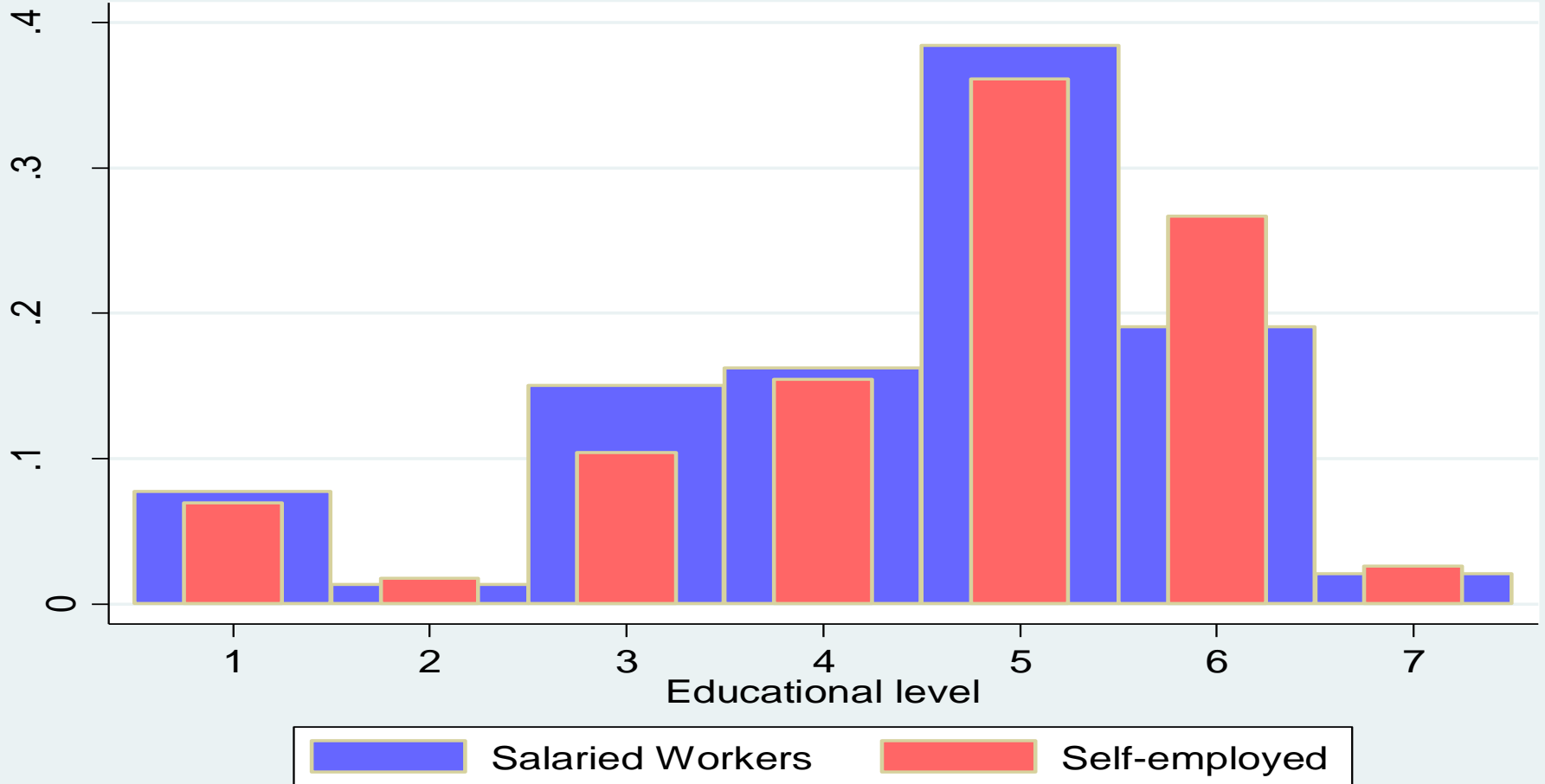
Comparative statics



Outcome 1: Positive/negative sorting of migrants into self-employment



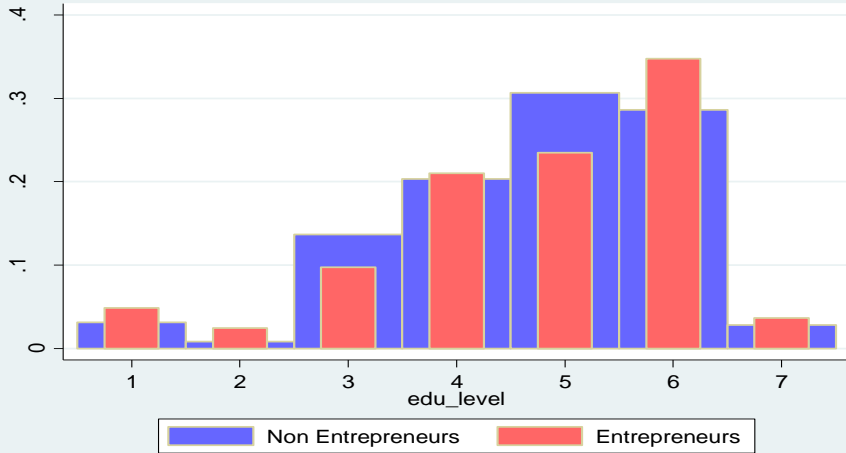
Educational Distribution --All Migrants



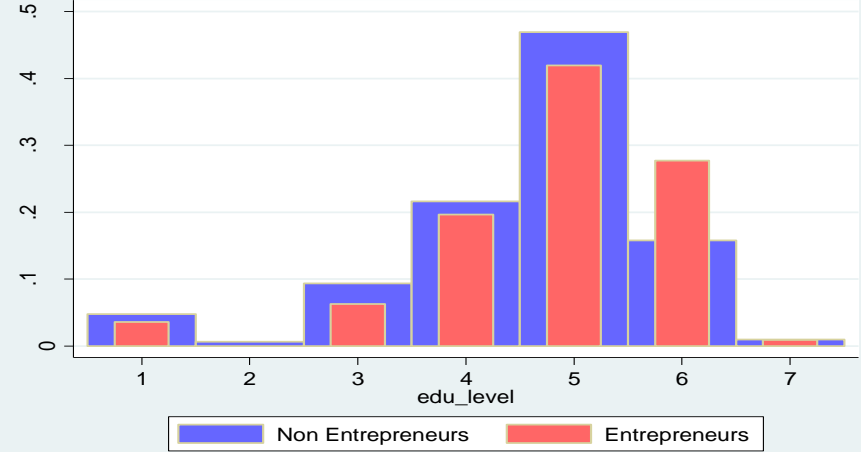
Outcome 1: Positive/negative sorting of migrants into self-employment



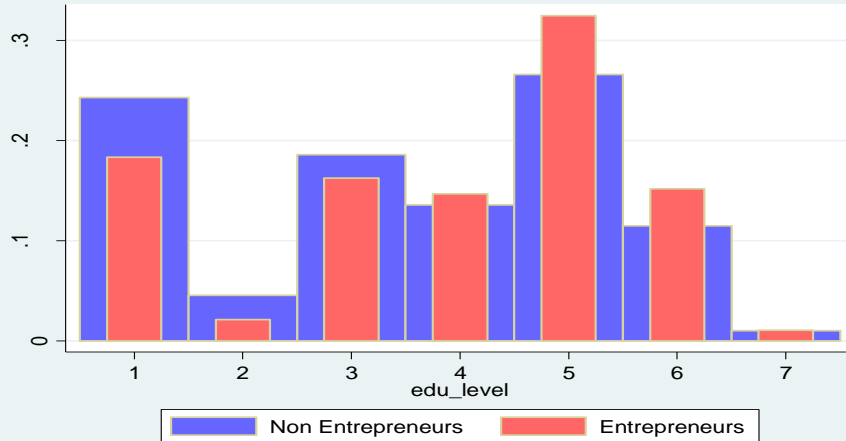
Educational Distribution --EU-15



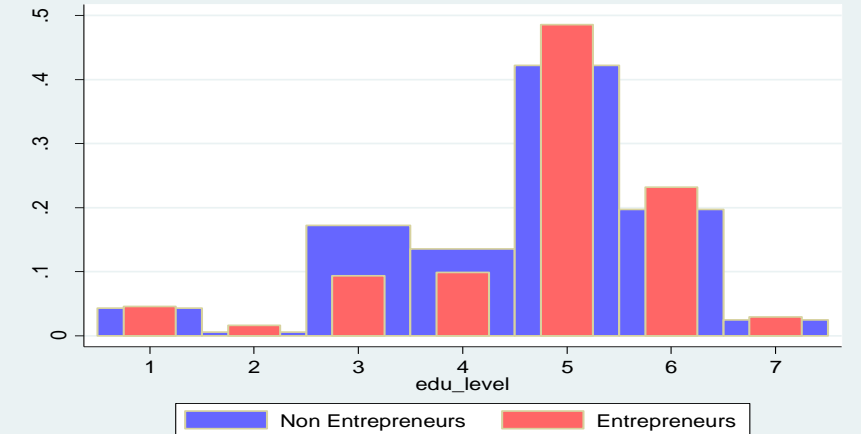
Educational Distribution --Eastern Europe



Educational Distribution --Africa and Asia



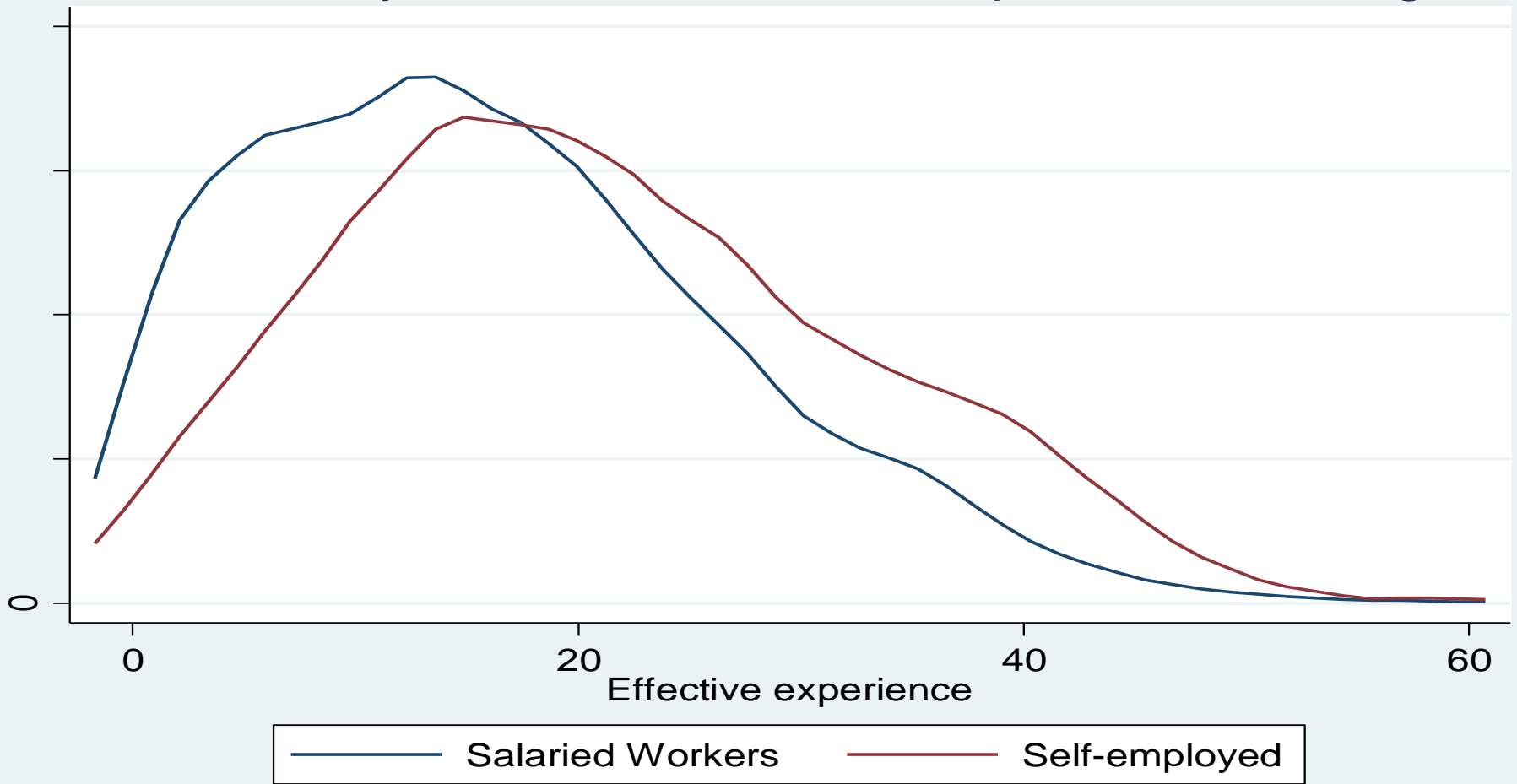
Educational Distribution --Latin America



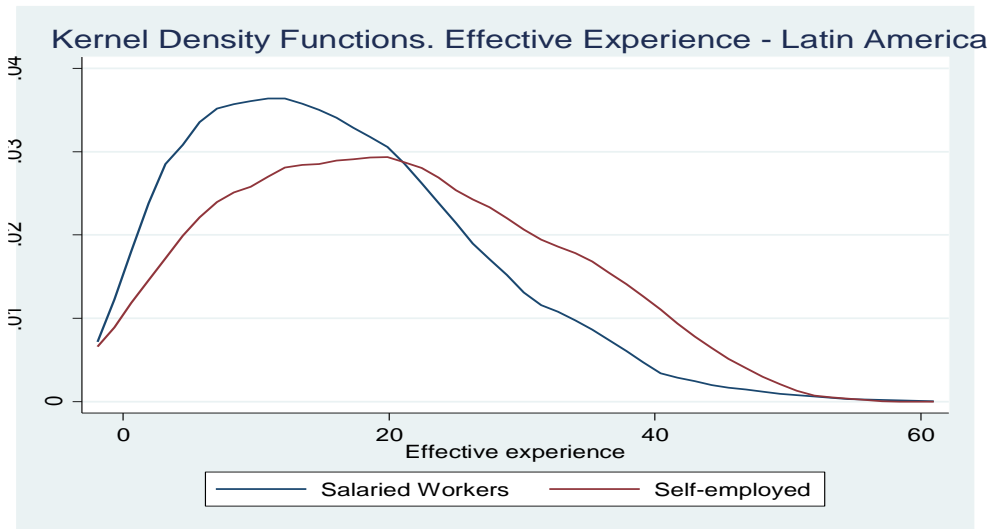
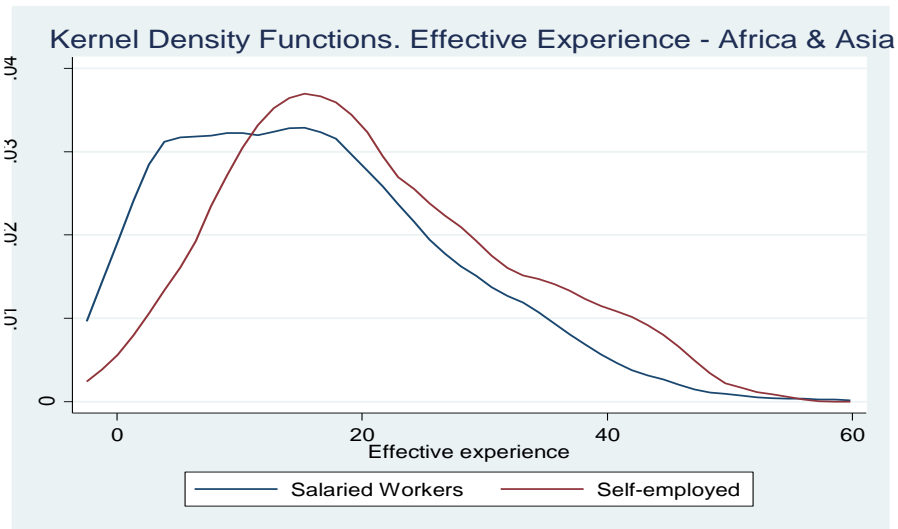
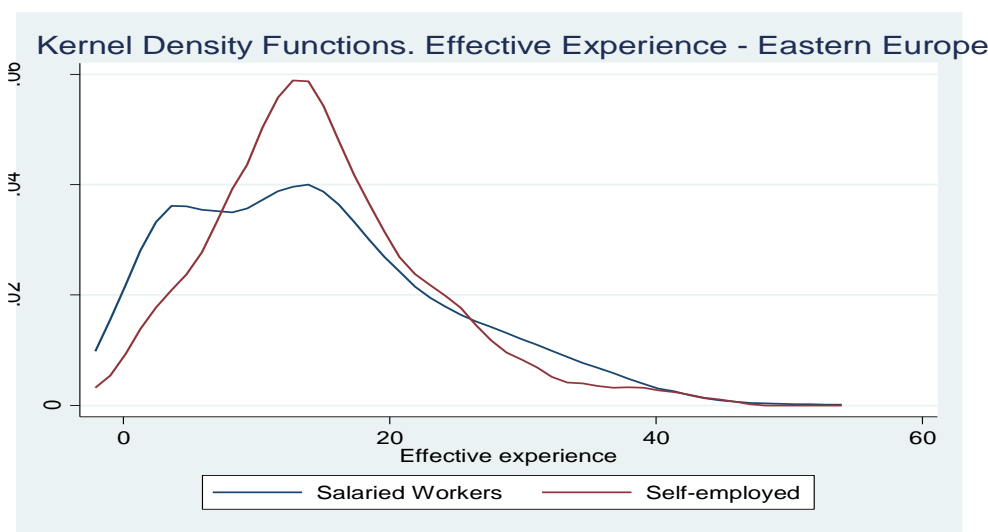
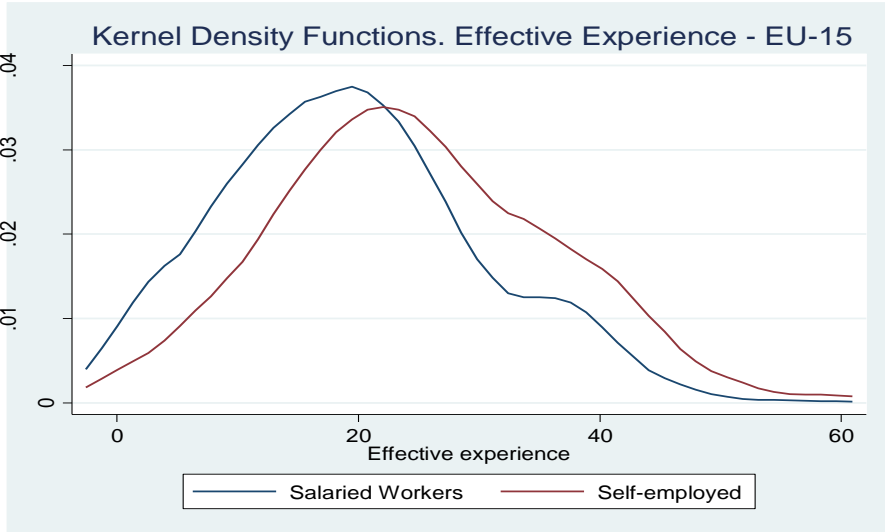
Outcome 1: Positive/negative sorting of migrants into self-employment



Kernel Density Functions: Effective Experience - All Migrants



Outcome 1: Positive/negative sorting of migrants into self-employment



Outcome 1: Positive/negative sorting of migrants into self-employment



Table 10: U-shape relationship between schooling & experience and self-employment? Probit regressions -- Marginal effects

	All Migrants (1)	EU-15 (2)	Eastern Europe (3)	Africa and Asia (4)	Latin America (5)
Schooling in CO	-0.039* (0.023)	-0.107* (0.063)	-0.015 (0.097)	-0.030 (0.037)	-0.031 (0.046)
(Schooling in CO) ²	0.004*** (0.001)	0.008** (0.003)	0.003 (0.005)	0.004 (0.003)	0.004* (0.002)
Schooling in Spain	0.025 (0.033)	-0.045 (0.039)	-0.071 (0.113)	0.113 (0.076)	0.041 (0.079)
(Schooling in Spain) ²	-0.000 (0.002)	0.003 (0.002)	0.009 (0.007)	-0.009 (0.006)	-0.002 (0.005)
Effective experience in Spain	0.098*** (0.012)	0.117*** (0.032)	0.011 (0.053)	0.108*** (0.029)	0.070*** (0.012)
(Effective experience in Spain) ²	-0.001*** (0.000)	-0.002* (0.001)	0.007* (0.004)	-0.001 (0.001)	-0.000 (0.001)
Effective experience in CO	-0.005 (0.006)	0.019 (0.014)	0.034 (0.021)	-0.021* (0.012)	-0.014 (0.009)
(Effective experience in CO) ²	0.000* (0.000)	-0.000 (0.000)	-0.002*** (0.001)	0.001** (0.000)	0.000* (0.000)
Pseudo R ²	0.144	0.195	0.245	0.277	0.132
Observations	5,961	822	1,181	936	2,873

Notes: Robust standard errors in parentheses clustered at the country of origin level. *** p<0.01, ** p<0.05, * p<0.1
All regressions include dummy variables for Spanish fluency, whether owned business in CO, gender, marital status, whether has children, enclave variables as well as sector, Spanish region and arrival cohort fixed effects.

Common metric to measure migrants skills



Returns to schooling and experience -- Mincerian wage regressions

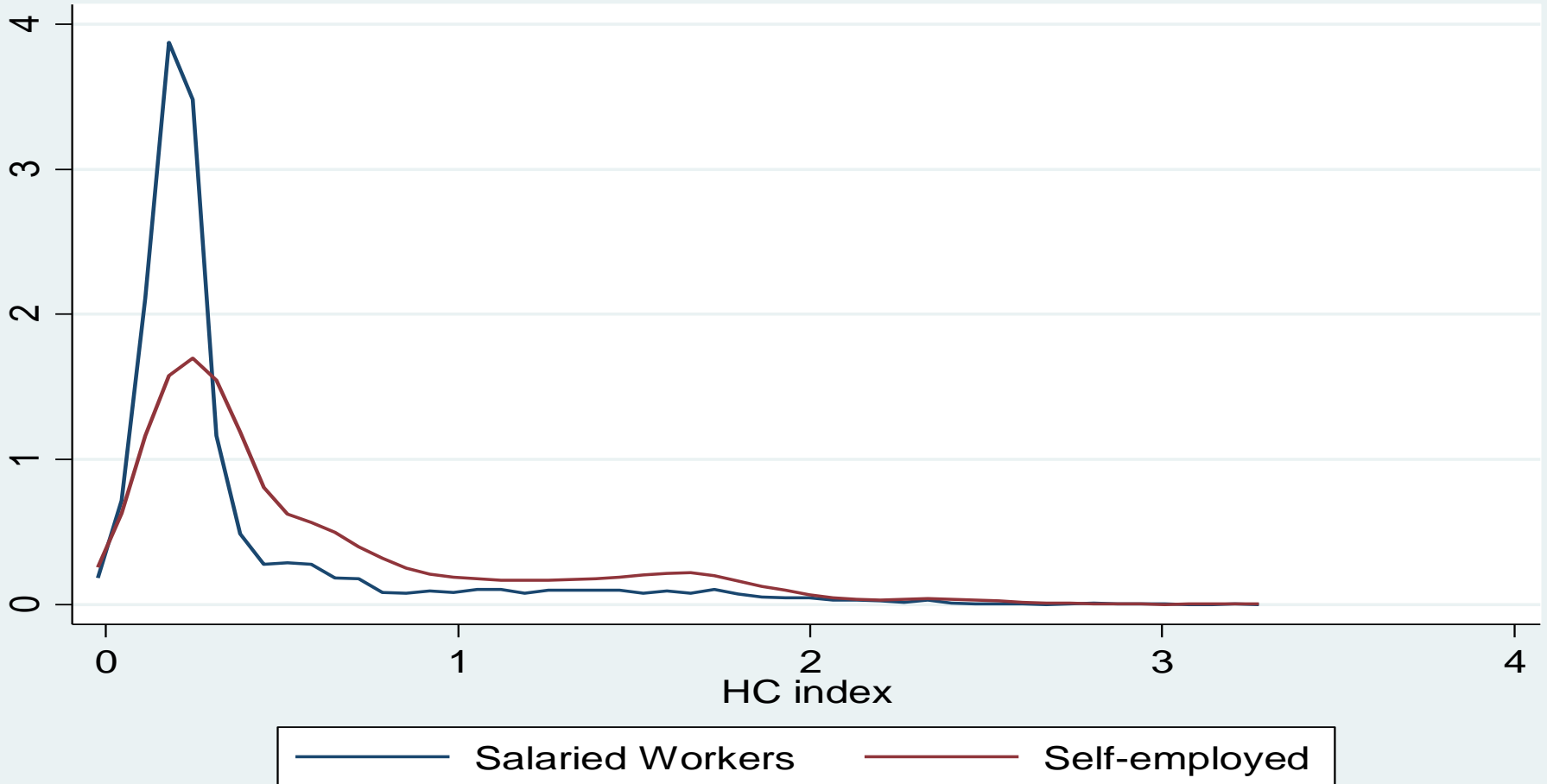
	EU-15 (1)	Eastern Europe (2)	Africa and Asia (3)	Latin America (4)	Other countries (5)
Schooling in CO	0.039** (0.016)	0.008*** (0.002)	0.009*** (0.003)	0.015*** (0.005)	0.070 (0.049)
Schooling in Spain	0.050*** (0.007)	0.010* (0.005)	0.013 (0.009)	0.020*** (0.005)	0.088** (0.032)
Effective Experience in CO	0.005 (0.004)	0.004 (0.002)	0.003 (0.005)	0.002 (0.002)	-0.011 (0.038)
(Effective Experience in CO) ²	0.000 (0.000)	-0.000* (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.001 (0.001)
Effective Experience in Spain	0.049*** (0.010)	0.036*** (0.010)	0.013** (0.006)	0.012** (0.006)	0.056 (0.060)
(Effective Experience in Spain) ²	-0.001** (0.000)	-0.002 (0.001)	-0.000 (0.000)	-0.000 (0.000)	-0.001 (0.002)
R-squared	0.389	0.593	0.250	0.497	0.846
Observations	593	1,009	797	2,335	57

Notes: Robust standard errors in parentheses clustered at the country of origin level. *** p<0.01, ** p<0.05, * p<0.1
 Dependent variable: Log wages of salaried workers. All regressions include: dummies for female, married, legal status, whether the person speaks Spanish, hours worked and sector, Spanish region and arrival cohort fixed effects.

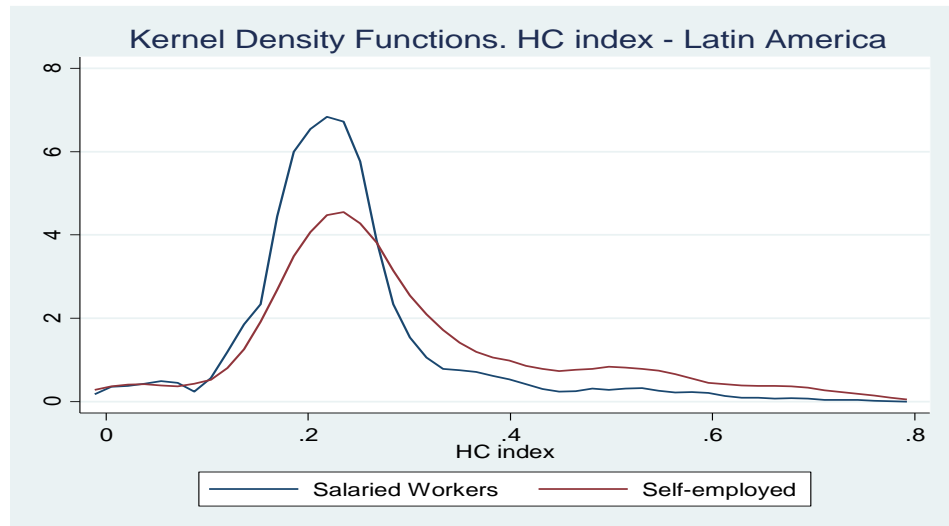
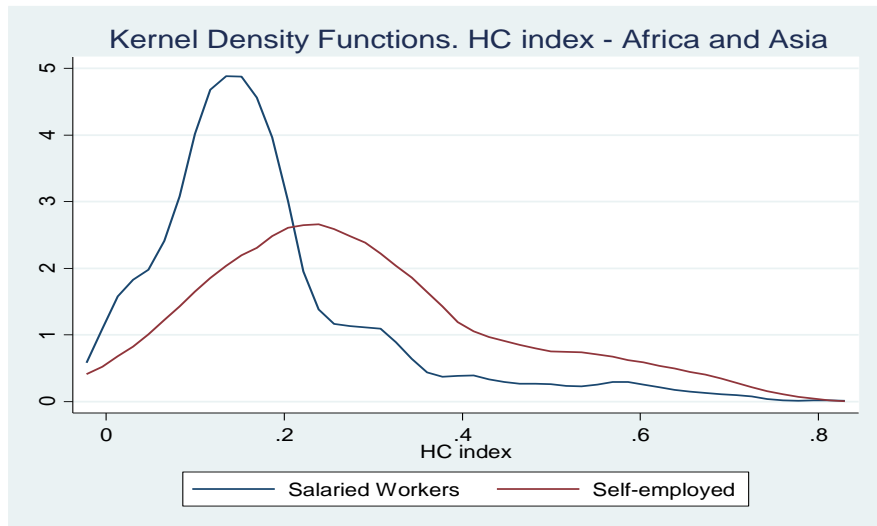
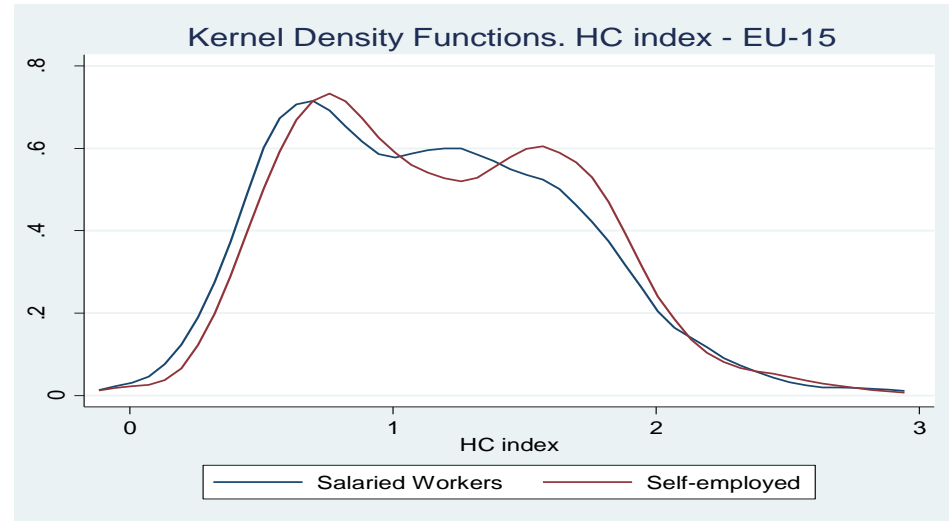
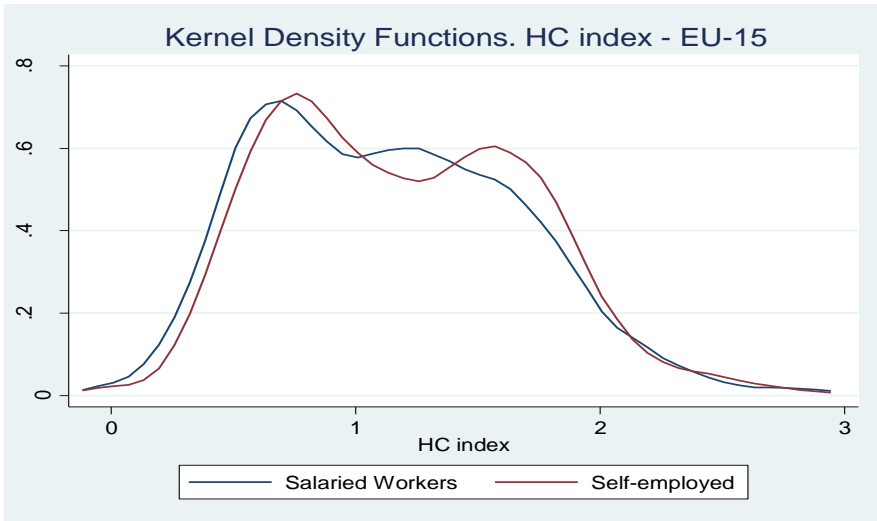
Outcome 1: Positive/negative sorting of migrants into self-employment



Kernel Density Functions. HC index - All Migrants



Outcome 1: Positive/negative sorting of migrants into self-employment



Outcome 1: Positive/negative sorting of migrants into self-employment



Table 11: U-shape relationship between Human Capital index and self-employment? Probit regressions -- Marginal effects

	All Migrants (1)	EU-15 (2)	Eastern Europe (3)	Africa and Asia (4)	Latin America (5)
HC index	1.557*** (0.307)	1.578* (0.894)	-0.369 (1.945)	3.452 (2.496)	1.327 (2.005)
(HC index) ²	-0.590*** (0.140)	-0.249 (0.343)	5.641** (2.841)	-0.419 (4.092)	2.220 (2.792)
Pseudo R ²	0.137	0.174	0.219	0.263	0.124
Observations	5,961	822	1,181	936	2,873

Notes: Robust standard errors in parentheses clustered at the country of origin level. *** p<0.01, ** p<0.05, * p<0.1
All regressions include dummy variables for Spanish fluency, whether owned business in CO, gender, marital status, whether has children, enclave variables as well as sector, Spanish region and arrival cohort fixed effects.

Analysis for the main individual sending countries



Table 14: Explaining the different propensities to self-employment

	Baseline Model	Model 2	Model 3	Model 4
Schooling	0.003 (0.002)	0.003 (0.002)		
Effective experience in Spain	0.008*** (0.002)	0.008*** (0.002)		
Effective experience in CO	0.000 (0.001)	0.000 (0.001)		
Dummy- Romania (geo2)	-0.118*** (0.027)	-0.114*** (0.024)	-0.017 (0.016)	-0.021 (0.017)
Dummy- Morocco (geo3)	-0.090*** (0.019)	-0.085*** (0.017)	0.064** (0.029)	0.062** (0.029)
Dummy- Equator (geo4)	-0.142*** (0.027)	-0.138*** (0.024)	-0.003 (0.022)	-0.007 (0.022)
Owens house in Spain		0.017 (0.017)	0.018 (0.016)	0.019 (0.016)
Owens house in CO		0.004 (0.014)	0.008 (0.014)	0.005 (0.014)
Owens land in CO		-0.023 (0.015)	-0.022 (0.015)	-0.020 (0.015)
HC index			0.171*** (0.036)	0.169*** (0.035)
Illegal status				0.011 (0.018)
Hypothesis testing:	geo3?geo2, geo3?geo4, geo4?geo2	geo3?geo2, geo3?geo4, geo4?geo2	geo3?geo2, geo4, geo2=geo4	geo3?geo2, geo4, geo2=geo4
Pseudo R ²	0.212	0.214	0.206	0.207
Observations	2,705	2,705	2,705	2,680

Notes: Robust standard errors in parentheses clustered at the country of origin level. *** p<0.01, ** p<0.05, * p<0.1
All regressions include individual characteristics, sector, Spanish region and arrival cohort fixed effects.

Analysis for the main individual sending countries



Table 15: Probability of belonging to the bottom and the top of the self-employed earnings distribution

	Earnings <25%	Earnings <10%	Earnings >75%	Earnings >90%
	(1)	(2)	(3)	(4)
Dummy- Romania (geo2)	0.051*** (0.016)	-0.043 (0.033)	-0.012 (0.056)	0.018 (0.064)
Dummy- Morocco (geo3)	0.129*** (0.027)	0.025 (0.055)	-0.223*** (0.027)	-0.146*** (0.040)
Dummy- Equator (geo4)	0.059 (0.043)	-0.115*** (0.043)	-0.158*** (0.052)	-0.153*** (0.057)
Pseudo R ²	0.255	0.197	0.089	0.191
Observations	356	281	296	264
Test hypothesis (p-value):				
geo3= geo2	0.047	0.065	0.000	0.000
geo3= geo4	0.023	0.000	0.190	0.862

Notes: Robust standard errors in parentheses clustered at the country of origin level.

*** p<0.01, ** p<0.05, * p<0.1

All regressions include individual characteristics, sector, Spanish region and arrival cohort fixed effects.