

# Rags to Riches: Does Culture Affect Entrepreneurial Activity?

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## Abstract

Entrepreneurial activity differs substantially across countries. While cultural differences across countries have often been proposed as explanations, measuring a country's cultural characteristics suffers from various problems. This paper offers new evidence on the relative importance of the cultural determinants of economic activity. We test the hypothesis that cultural factors influence entrepreneurial behavior. To achieve this, we look at differences in self-employment rates between immigrant groups within the same market, which allows holding constant the institutional environment. Using U.S. Census data for the year 2000, we find significant differences in the propensity to become self-employed across immigrants from 148 countries. We also find evidence of a positive correlation between self-employment rates of U.S. immigrants and various measures of entrepreneurial activity in their respective countries of origin. These findings suggest that cultural factors matter as determinants of entrepreneurship.

JEL classification: J21, J61, L26

Keywords: entrepreneurship, culture, immigrants

## 1 Introduction

The variation in entrepreneurial activity across countries is substantial. For instance, looking at self-employment rates – as a common proxy for entrepreneurship –, values range from a share of 0.17% in Cambodia to 22% in Italy. According to data collected from the World Bank, entry rates of new businesses vary between more than 19% in New Zealand and a mere 2.4% in Haiti.<sup>1</sup> There

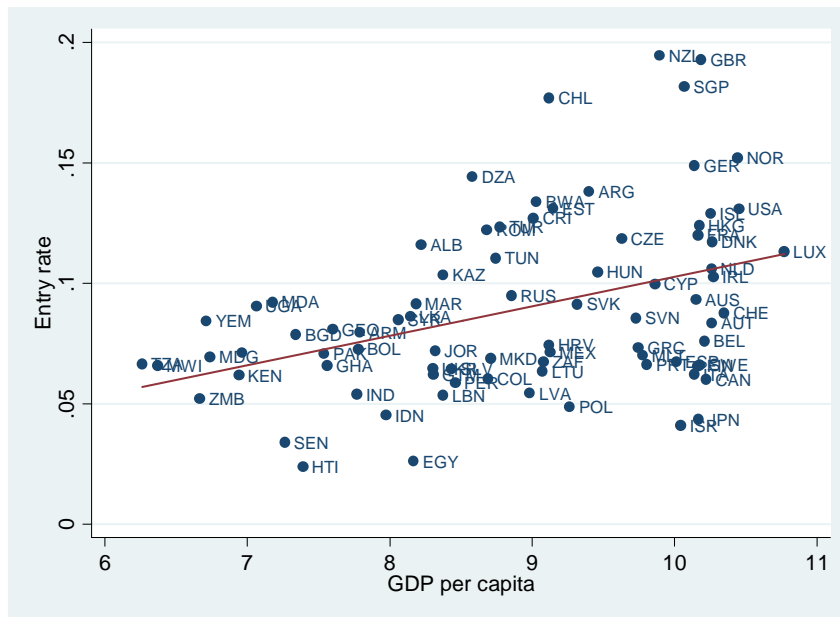
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<sup>1</sup>Sources: International Labour Office database of the ILO Bureau of Statistics and The World Bank Group Entrepreneurship Database.

Figure 1: Entry Rates and GDP per Capita



is also growing evidence that measures of entrepreneurial activity are strongly related to indicators of economic and financial development as well as to the quality of the regulatory environment (see, e.g. Klapper et al. (2007)). Figure (1) demonstrates the strong correlation between entry rates of new firms and income per capita as an encompassing indicator of development.

What determines these large differences? Typically, determinants of entrepreneurship identified in the literature include age, gender, education, and economic endowments. More fundamentally, recent literature has turned towards explaining economic behaviour such as entrepreneurial activity with deeper determinants, including institutions, geography and culture. While geographical and institutional determinants, such as corruption or the protection of property rights can be measured to some degree, culture is much harder to measure, however.

In this paper, we estimate cultural differences in entrepreneurial activity by observing the probability of immigrants from different nations to become self-employed. This approach follows the idea suggested in Hendricks (2002) and measures differences of observed outcomes within the same market, and, hence, allows holding constant a number of alternative explanatory variables such as the institutional environment. More specifically, we investigate if levels of entrepreneurial activity differ across U.S. immigrant groups, and in a second stage, if this difference is related to levels of entrepreneurial activity in the country of origin. We assume that cultural beliefs and attitudes, that is, unobserved

characteristics, are imported in the country of immigration and for this reason show some degree of persistence even if the institutional environment changes.

The paper is organized as follows: Section 2 gives a short overview on the literature related to entrepreneurial culture. Section 3 compares existing arguments that institutions and culture are fundamental determinants of entrepreneurial activity. Section 4 describes the data methods used, followed by a presentation of the empirical results, including robustness checks. The final Section concludes.

## **2 Related Literature**

### **2.1 Determinants of Entrepreneurship**

van Stel et al. (2003) mention three strands of literature that cover the determinants of entrepreneurship. Whereas the first two strands deal with economic development and regime switches, a third strand relates entrepreneurship to conditions such as technology, demography, culture and institutions. Among the many determinants of entrepreneurship, age, gender, education, and institutional factors are most frequently mentioned. Typically, authors find that self-employment is more prevalent among the male population and that entrepreneurs are older (see, e.g., Blanchflower et al. (2001) and Glaeser (2007)). Blanchflower (2000) finds that the least and the best educated are more likely to become entrepreneurs. Other studies analyze the impact of institutional, that is, political, legal and regulatory variables, on entrepreneurship, firm entry and survival. According to Desai et al. (2003), property rights protection and fairness have a positive effect on entry and survival in Europe, particularly in Eastern Europe. More recently, the effect of location and industry characteristics on entrepreneurship was explored in Glaeser (2007), who shows that entrepreneurial activity is correlated with the presence of input suppliers. Wadhwa et al. (2007) find that immigrant entrepreneurs tend to be concentrated in technology clusters.

### **2.2 The Effect of Culture on Economic Outcomes**

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## **3 Culture versus Institutions as Determinants of Entrepreneurship**

A few studies also examine differences in entrepreneurial spirit, especially latent entrepreneurship in different countries (e.g. Grilo and Thurik (2005)). However,

there are several reasons why cultural explanations are much more difficult to unravel from other aspects and from institutions in particular. First, culture is much harder to measure than other “soft” determinants of economic activity, including institutions. Similarly, there are no clear hypotheses that give guidance as to which cultural traits or clusters of cultural traits should matter. Second, attempts to measure culture by resort to survey data suffer from severe cognitive biases (“Halo effects”). Third, culture often shows a remarkable degree of persistence, but eventually is not immutable over time. Therefore, using historical events as instruments (as has been done extensively for institutional explanations) may not be suitable to elucidate culture as a causal determinant of economic outcomes, since cultural change is potentially endogenous. Finally, institutions and culture are two closely related dimensions which may jointly generate an equilibrium set of beliefs, as shown by Greif (1989, 1992).

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## 4 Data and Empirical Strategy

Attempts to disentangle the contribution of entrepreneurial culture on economic outcomes from alternative explanations therefore suffer mainly from the problem of measuring countries’ cultural attributes. In this paper, we explore a different source of variation. We estimate cultural differences in entrepreneurial activity by observing the inclination of immigrants from different nations to become self-employed. This approach follows the idea suggested in Hendricks (2002) and measures differences of observed outcomes within the same market, and, hence, allows holding constant a number of competing explanatory variables such as the institutional environment. Hendricks (2002) analyzes income differences of U.S. immigrants in order to obtain an estimate of human capital endowments, and Carroll et al. (1994) as well as Carroll et al. (1999) study cultural differences in savings patterns using immigrant data for Canada and the U.S.

The market we look at in this paper is the United States. Our main variable of interest is a binary variable that counts whether an individual is self-employed or not. Although this measure of entrepreneurial activity has some limitations (e.g., it does not capture the size of the firm, the year the business was started, etc), it may reasonably proxy the propensity to become an entrepreneur and is a very simple measure which is commonly used in the literature (e.g. Blanchflower 2000; Glaeser (2007)).

We use a 5% sample of the Integrated Public Use Microdata Series (iPUMS) of the Minnesota Population Center covering the year 2000 (Ruggles et al. (2008))<sup>2</sup>. This dataset has a number of advantages. First, it covers a large number of immigrants which is particularly important as the number of self-employed workers

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<sup>2</sup>The same dataset is used by Michelacci and Silva (2007) to analyze how local entrepreneurship contributes to business creation. Hendricks (2002) uses 1990 U.S. Census data to identify the sources of cross-country income differences.

with respect to the overall population is very small. Having only a few confirming observations is a common problem in binary data regressions and possibly results in severe biases. The total number of immigrants in the sample which for technical reasons is restricted to include 100'000 randomly selected US-Citizens, is 1.2 million, covering more than 98 thousand foreign-born self-employed individuals. Second, the dataset covers a wide range of demographic, social, and economic variables which have been found to explain the probability of being self-employed. This allows us to control for any systematic bias resulting from differences in educational background across immigrant groups or due to immigrant-self selection. In addition, we can distinguish between incorporated and unincorporated self-employment.<sup>3</sup> Furthermore, we follow the literature and omit all individuals younger than 20 and older than 69 years. In the regressions using individual country information, we also exclude countries with less than 50 reported individuals being self-employed since self-employment rates calculated from few observations are unreliable. Other variables mentioned in literature that may determine individual probability of becoming self-employed, such as inheritance, access to funding etc., are not available in the iPUMS dataset and are thus not accounted for. In the restricted sample, the share of self-employed individuals among non-native Americans ranges from 16% for South-Korean immigrants to 2% for immigrants from Cape Verde.

In a first stage, we estimate a logit function, regressing self-employment on the control variables mentioned above and include a dummy variable equal to one for each of the countries of origin. A common assertion states that immigrants arrive with a set of cultural values and behaviors different from those in the destination country. This is reflected in the possibility of a non-zero value of the country dummies in this stage. Over time, those transplanted behaviors fade, and institutional factors and cultural norms in the country of immigration become more important. We thus also examine the evolution of entrepreneurial activity of immigrants over time using interaction terms for each country dummy with the duration of residence in the US. We finally also repeat these regressions with continental dummies instead of country dummies.

To anticipate the findings from the first stage, we find a substantial and statistically significant amount of variation across countries. Since the institutional environment is the same for all immigrant groups, and we are able to control for demographic and educational background, we interpret these results as evidence for cultural explanations of entrepreneurial activity. As a natural next step, we ask whether aggregate differences across immigrants are systematically related to levels of entrepreneurial activity in the country of origin. Such an approach has been used in Guiso et al. (2006) who analyze how trust of immigrants in

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<sup>3</sup>The demographic variables include age, gender, education, marital status and number of children in the household. In addition we obtained the U.S. state of residence, country of origin, duration of stay in the US in years, proficiency in English, income and industry of employment from the same source. The total sample size is about 14 million of which 820 thousand are self-employed. The overall share of self-employment in the sample is thus around 6%.

the US relates to trust in the corresponding country of origin. However, in the context of this paper, the probability of self-employment may be strongly biased by the demographic and employment characteristics of individuals, since immigrants from different countries often cluster in certain professions. For this end, we use the estimated coefficients from the logit regression described above rather than the raw self-employment ratios across countries of origin in order to explain differences of entrepreneurial activity across countries in the second stage.

As proxies for entrepreneurial activity in different countries, we calculate self-employment ratios using data from the International Labor Organization and the rate of formation of new businesses using a dataset from the World Bank. We also expand our empirical model to account for income differences across countries. Income levels capture many omitted factors – such as infrastructure – that are related to enabling entrepreneurial activity and therefore to the ease with which people may become self-employed. On the other hand, income levels may determine emigration flows. For instance, countries often favor immigration from more advanced countries. Or low income may be a severe obstacle for emigration as people lack sufficient amounts of money to pay for travel expenses. Finally, we also include six common institutional measures in our regression to separate cultural from institutional determinants of entrepreneurship.

## 5 Empirical Results

### 5.1 Differences in Self-Employment Across Immigrant Groups

Table 1 presents odds ratios of logit estimates with self-employment of immigrants to the US and US-citizens as the dependent variable. All regressions include age, gender, education, marital status, the number of children, proficiency in English, and industry of employment as control variables. The latter are of particular importance, as self-employment is systematically higher in some professions than others. We constructed these variables by aggregating dummy variables for those professions that yielded the largest fraction of self-employed persons. In particular, our dummy variables indicate whether a person works in one of the following branches: agriculture, building and construction, retail, services, transport and medical. Finally, we also included a dummy variable for household work.

In Column (1) of Table 1 we include a dummy variable which takes a value of 1 if the individual is an immigrant in the U.S. and 0 otherwise. The results indicate that the immigrants' overall probability of being self-employed is not significantly different from the probability of US-citizens, conditional on all the control variables mentioned above. In Column (2) we add an interaction term of the immigrant dummy with the years that have passed since immigration. The intuition for using an interaction term is that immigrants are assumed to arrive

with a set of cultural values and behaviors that are different from US-citizens. Over time, immigrants assimilate their behavior, and factors that determine self-employment of all inhabitants in the US equally become more important. In addition, immigrants possess less knowledge and often less money which may lower their immediate probability to become self-employed. The individual coefficient on immigrants now presents the effects of immigrants' probability of being self-employed immediately after arrival. The regression results in Column (2) that allow for assimilation effects clearly show that the immediate probability is significantly lower compared with an average US-citizen. Yet, this effect fades over time. This is depicted in Figure 2 which indicates that after approximately 15 to 20 years the probability of immigrants' being self-employed has converged to those of US-citizens (indicated by the solid line) and is slightly higher afterwards. This effect can also be seen in Column (3) where we only consider immigrants that have been less than ten years in the US.

Table 1: Probability of Being Self-Employed by Region of Origin, Logit Regressions

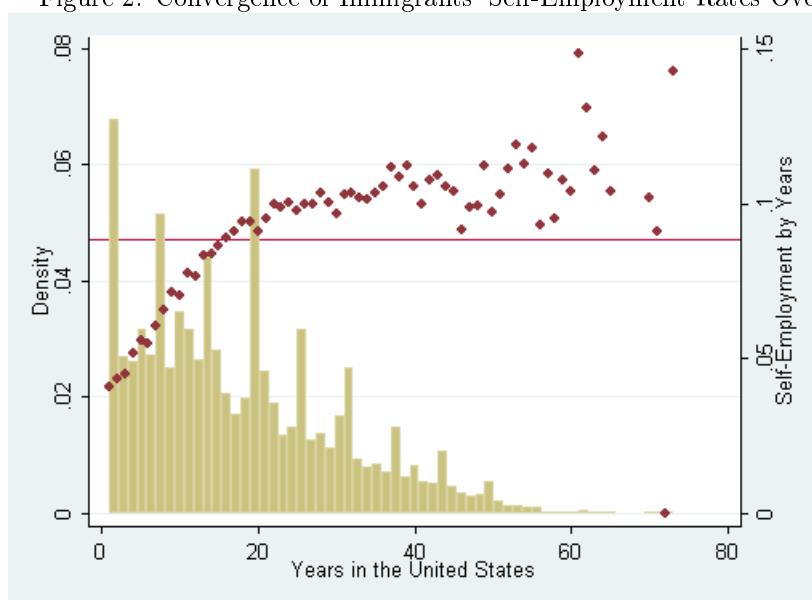
	(1)	(2)	(3)	(4)	(5)	(6)
			Immigrants less than 10 years in US			Interaction with ln (Years US)
Immigrant	0.983 (0.014)	0.793*** (0.013)	0.772*** (0.007)			
Immigrant x Years US		1.008*** (0.000)				
Middle East & North Africa				1.604*** (0.035)	1.051 (0.037)	0.581*** (0.038)
Sub-Saharan Africa				0.796*** (0.025)	0.509*** (0.025)	0.320*** (0.029)
Western Europe				1.193*** (0.019)	1.160*** (0.030)	1.069* (0.043)
Eastern Europe & Central Asia				0.982 (0.020)	0.697*** (0.019)	0.430*** (0.019)
Latin America & The Caribbean				0.699*** (0.011)	0.596*** (0.011)	0.535*** (0.013)
North America				1.302*** (0.029)	1.240*** (0.048)	1.037 (0.065)
South Asia				1.009 (0.022)	0.527*** (0.018)	0.251*** (0.015)
East Asia & Pacific				1.011 (0.017)	0.696*** (0.015)	0.409*** (0.015)
Oceania				0.954 (0.040)	0.861* (0.066)	0.789* (0.098)
Middle East & North Africa x Years US					1.020*** (0.001)	1.428*** (0.031)
Sub-Saharan Africa x Years US					1.028*** (0.003)	1.439*** (0.049)
Western Europe x Years US					1.001 (0.001)	1.032*** (0.012)
Eastern Europe & Central Asia x Years US					1.017*** (0.001)	1.368*** (0.021)
Latin America & The Caribbean x Years US					1.005*** (0.001)	1.075*** (0.007)
North America x Years US					1.002 (0.001)	1.080*** (0.021)
South Asia x Years US					1.039*** (0.002)	1.712*** (0.037)
East Asia & Pacific x Years US					1.017*** (0.001)	1.369*** (0.015)
Oceania x Years US					1.003 (0.003)	1.061 (0.045)
Pseudo R-squared	0.154	0.154	0.155	0.159	0.161	0.162
Number of Observations	1'318'204	1'318'204	1'318'204	1'318'204	1'318'204	1'318'204

Notes: All regressions above are logit regressions for the year 2000 calculated with robust standard errors. The dependent variables is a dummy for being self-employed. The estimations included the following variables not shown in the Table above: age, age squared, gender, number of children, dummies for marital status, education, proficiency in english and industry of employment. \*\*\* significant on the 1%-level, \*\* significant on the 5%-level, \* significant on the 10%-level.

In the remaining columns of Table 1 we include variables indicating the region of the immigrants' countries of origin. In Column (4), where we do not account for assimilation effects, but include only immigrants up to ten years within immigration, two points stand out. First, the differences in the odds ratios are much larger than for the overall immigration effect shown in Columns (1) and

(3). Second, the probability for immigrants from Western Europe, Canada, and Middle East and North Africa is significantly above average while immigrants from Latin America and Sub-Saharan Africa have a significantly lower probability of being self-employed. Finally in Columns (5) and (6) we account for region-specific effects of the speed of assimilation. Column (6) uses the log of years of residency in the US. Again, the effects are much more pronounced with the immediate effects being lower, in general. Together with the interaction terms, the regression results indicate that the differences across regions are larger if we account for differences in the speed of convergence.

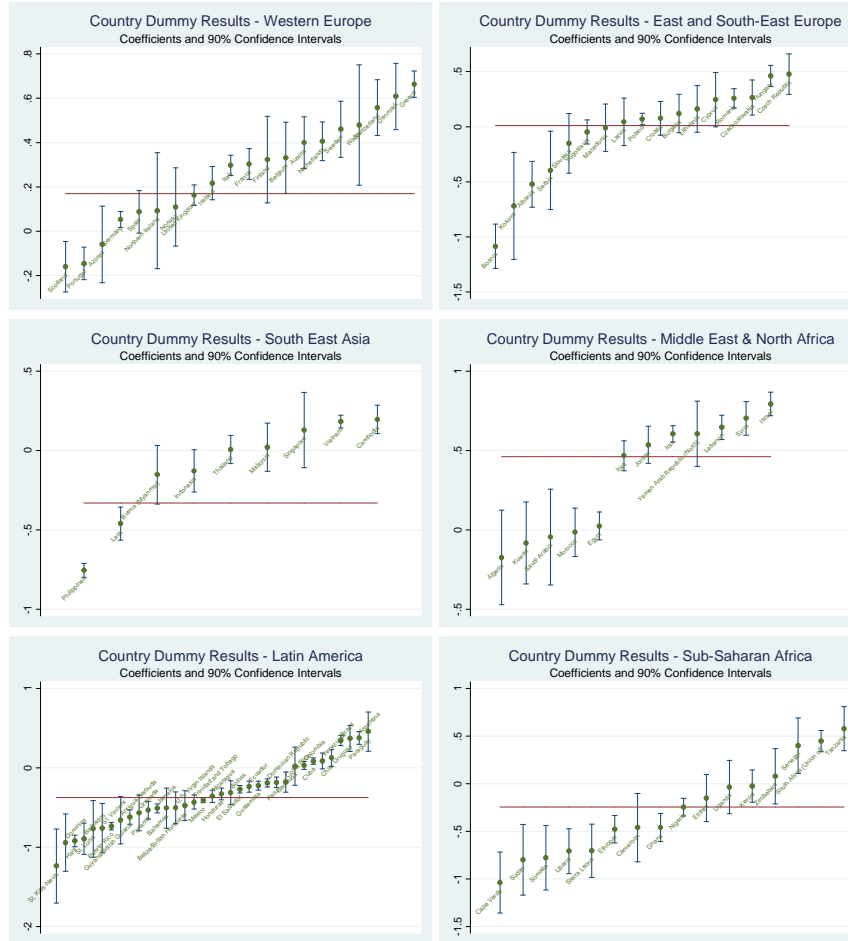
Figure 2: Convergence of Immigrants' Self-Employment Rates Over Time



Next, we delve beyond differences in regional aggregates and include dummy variables for each country of origin. Figure 3 shows estimated coefficients and confidence intervals of the dummy variables for each of the major region.<sup>4</sup> In addition, the solid lines indicate each of the estimated regional coefficients. Figure 3 shows that there is a substantial amount of variation within each region. This variation explains the relatively low coefficients found for regional aggregates. However, looking beyond the regional aggregates, the ranking within each of the regions gives a more consistent picture. For instance, in Latin America, almost all of the Caribbean countries can be found below the regional average. In the Appendix we show the corresponding regressions that include all of the country dummies, as well as the interaction terms jointly, analogous to the regressions shown in Table 1.

<sup>4</sup>The easier to interpret odds ratios are simply the exponential of the coefficients.

Figure 3: Estimated Differences in Self-Employment Rates Across Countries of Origin



Again, the regressions that include dummy variables for each country of origin indicate significant differences in the probability of being self-employed between countries as well as from US-citizens. Using interaction terms for each country dummy with the duration of residence in the US, we also find strong convergence effects of immigrants towards the average self-employment ratio of US-citizens.

In all regressions presented in this section, we have controlled for a wide variety of demographic, educational, and professional variables. More importantly, since we focus on immigrants, all individual in the sample face the same institutional environment and labour market. The approach used in this paper thus offers an intuitive empirical strategy to avoid measurement problems to separate cultural from institutional explanations. In the following section, we ask

whether the estimated aggregate differences across immigrants from different countries are systematically related to levels of entrepreneurial activity found in the country of origin.

## 5.2 Cross-Country Differences: Income, Culture, and Institutions

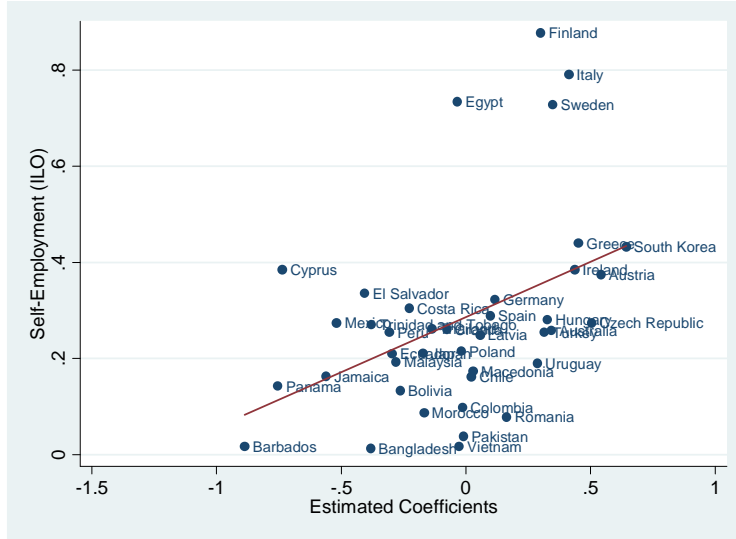
Table 2 shows regression results using self-employment rates across countries as the dependent variable. The source of our dataset is the LABORSTA database from the International Labour Organization. From this database, we calculate the share of employers in the total population.<sup>5</sup>

Column (1) of Table 2 presents results from a regression that adds only the estimated coefficient for each country from the logit regression in Column (3) as shown in the table in the Appendix. The estimated coefficients are thus from a regression that includes only countries with at least 50 self-employed immigrants and excludes immigrants that have stayed for more than 15 years in the US. We use the estimated coefficients from the logit regression rather than the raw self-employment ratios across countries of origin since this allows to filter out the demographic influences as argued above. The results shown in Column (1) indicate a strong and significant relationship between immigrants' self-employment rates and the proposed proxy of entrepreneurial activity in their country of origin. Figure 4 illustrates this relationship nicely.

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<sup>5</sup>The ILO defines an employer according to the International Classification of Status in Employment 1993 (ICSE-93) as "a person who operates his or her own economic enterprise, or engages independently in a profession or trade, and hires one or more employees."

Figure 4: Self-Employment Rates Across Countries versus Estimated Self-Employment Rates from US-immigrants



To the degree that the estimated coefficients are able to capture cultural traits of entrepreneurial attitudes, this regression result suggests that cultural aspects show some degree of persistence when people emigrate. In Column (2) of Table 2 we expand out empirical model to first account for income differences across countries. Income levels capture many omitted factors – such as infrastructure – that are related to enabling entrepreneurial activity and therefore to the ease with which people may become self-employed. On the other hand, income levels may determine emigration flows. For instance, countries often favor immigration from more advanced countries. Or, low income may be a severe obstacle for emigration as people lack sufficient amounts of money to pay for travel expenses. Therefore, not accounting for different income levels across countries may result in a serious selection bias. Yet, while the coefficient is reduced, the influence of the estimated cultural component of the probability of being self-employed remains robust to the inclusion of income per capita in the regression.

Table 2: Self-Employment Shares Across Countries, OLS regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Estimated Probability (coefficients)	0.230*** (3.240)	0.144** (2.185)	0.186*** (2.758)	0.183*** (2.726)	0.161** (2.244)	0.168** (2.405)	0.145* (1.869)	0.149* (2.010)
GDP per Capita (log)		0.115*** (2.943)						
Voice & Accountability			0.0844* (1.890)					
Political Stability & Absence of Violence				0.0818** (2.298)				
Government Effectiveness					0.0870** (2.138)			
Regulatory Quality						0.108** (2.074)		
Rule of Law							0.0869** (2.209)	
Control of Corruption								0.0826** (2.164)
	0.287*** (9.464)	-0.761** (-2.163)	0.244*** (6.658)	0.263*** (9.275)	0.238*** (6.998)	0.222*** (5.462)	0.248*** (8.434)	0.251*** (8.646)
Observations	40	40	40	40	40	40	40	40
R-squared	0.18	0.34	0.29	0.27	0.30	0.30	0.29	0.31

Notes: All regressions above are OLS regressions for the year 2000 calculated with robust standard errors. The dependent variables is the share of employers according to ICSE-93 GROUP 2 of total population according to ILO (Source: LABORSTA). \*\*\* significant on the 1%-level, \*\* significant on the 5%-level, \* significant on the 10%-level.

Finally, we include six common institutional measures in our regression to separate cultural from institutional factors from Kaufmann et al. (2002) in order to explain self-employment ratios. These relate to: (i) voice and accountability, (ii) political stability, (iii) government effectiveness, (iv) regulatory quality, (v) rule of law, and (vi) control of corruption. We exclude income per capita again from these regressions as we find strong collinearity between income and the institutional measures for the sample used. The significance of the estimated probability remains unchanged with the inclusion of income, however. While the coefficients of the probability of being self-employed is less precisely estimated in some cases, we find a significant relationship with the actual self-employment ratios across countries throughout all regressions.

## 6 Conclusions

In this paper, we have analyzed the relative contributions of institutions and culture in determining entrepreneurial activity. While cultural differences across countries have often been proposed as explanations, measuring a country's cultural characteristics suffers from various problems. We offered a new approach to measure cultural influences by looking at differences in self-employment rates between immigrant groups within the same market. Since we were able to control for a wide variety of demographic and economic characteristics, and institutional factors were by definition equal for all immigrants, this method allowed us to examine cultural influences on the probability of being self-employed. Using U.S. Census data for the year 2000, we found significant differences in the propensity to become self-employed across immigrants from 148 countries.

In a second stage, we compared the estimated coefficients to self-employment rates across the countries of origin. We found a surprisingly strong relationship for immigrants' self-employment rates in the US and those found in their respective countries of origin. We interpret this as evidence that culture is – at least partly – an expression of the behavior acquired under by different institutional environments. This behavior becomes part of a cultural habit and may show a remarkable degree of persistence over time. Overall, these results suggest that cultural factors matter as determinants of entrepreneurship.

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# Appendix

Table 3: Probability of Being Self-employed by Country of Origin, Logit Regressions

	(1) Baseline	(2) < 15 yrs in US	(3) selfemp > 50	(4) Country x yrs in US(log) immediate interaction	
American Samoa	0.458*** (0.078)	0.319*** (0.120)		0.195** (0.136)	1.303 (0.286)
Guam	0.613*** (0.061)	0.521*** (0.109)	0.612*** (0.061)	0.421** (0.175)	1.119 (0.148)
Puerto Rico	0.479*** (0.014)	0.543*** (0.026)	0.478*** (0.014)	0.556*** (0.045)	0.935*** (0.024)
U.S. Virgin Isds	0.605*** (0.074)	0.539*** (0.105)	0.605*** (0.074)	0.232*** (0.110)	1.389** (0.218)
Canada	1.317*** (0.029)	1.235*** (0.047)	1.316*** (0.029)	1.046 (0.066)	1.081*** (0.021)
Bermuda	1.021 (0.149)	1.062 (0.321)	1.021 (0.149)	0.947 (0.562)	1.023 (0.185)
Cape Verde	0.354*** (0.069)	0.225*** (0.082)		0.114* (0.132)	1.461 (0.579)
Mexico	0.665*** (0.012)	0.594*** (0.016)	0.664*** (0.012)	0.489*** (0.016)	1.076*** (0.010)
Belize/British Honduras	0.621*** (0.072)	0.423*** (0.094)	0.621*** (0.072)	0.210*** (0.111)	1.453** (0.258)
Costa Rica	0.836** (0.065)	0.795** (0.092)	0.834** (0.065)	0.576*** (0.117)	1.120 (0.081)
El Salvador	0.763*** (0.021)	0.665*** (0.027)	0.761*** (0.021)	0.505*** (0.049)	1.121*** (0.040)
Guatemala	0.799*** (0.028)	0.722*** (0.034)	0.797*** (0.028)	0.644*** (0.067)	1.039 (0.041)
Honduras	0.720*** (0.032)	0.690*** (0.038)	0.718*** (0.032)	0.590*** (0.069)	1.035 (0.049)
Nicaragua	0.699*** (0.033)	0.677*** (0.043)	0.697*** (0.033)	0.571*** (0.113)	1.042 (0.076)
Panama	0.586*** (0.040)	0.469*** (0.065)	0.585*** (0.040)	0.246*** (0.074)	1.314*** (0.124)
Cuba	1.088*** (0.027)	0.889*** (0.040)	1.086*** (0.027)	0.522*** (0.039)	1.257*** (0.029)
Dominican Republic	0.827*** (0.026)	0.840*** (0.037)	0.825*** (0.026)	0.746*** (0.074)	1.001 (0.036)
Haiti	0.398*** (0.018)	0.342*** (0.024)	0.397*** (0.018)	0.232*** (0.043)	1.194*** (0.079)
Jamaica	0.600*** (0.020)	0.571*** (0.029)	0.600*** (0.020)	0.484*** (0.061)	1.083* (0.048)
Antigua-Barbados	0.517*** (0.094)	0.443*** (0.132)		0.626 (0.391)	0.932 (0.202)
Bahamas	0.602*** (0.093)	0.475*** (0.124)		0.320** (0.183)	1.244 (0.244)
Barbados	0.409*** (0.049)	0.412*** (0.087)	0.409*** (0.049)	0.872 (0.441)	0.767 (0.134)
Dominica	0.390*** (0.086)	0.323*** (0.102)		0.104** (0.099)	1.639 (0.565)
Grenada	0.567*** (0.078)	0.607** (0.122)	0.567*** (0.078)	0.978 (0.448)	0.811 (0.140)

	(1) Baseline	(2) < 15 yrs in US	(3) selfemp > 50	(4) Country x yrs in US(log)	
				immediate	interaction
St. Kitts-Nevis	0.290*** (0.082)	0.285*** (0.132)		0.605 (0.550)	0.761 (0.249)
St. Lucia	0.463*** (0.101)	0.498** (0.160)		0.304* (0.218)	1.166 (0.296)
St. Vincent	0.467*** (0.088)	0.455*** (0.131)		0.595 (0.379)	0.913 (0.205)
Trinidad and Tobago	0.650*** (0.035)	0.684*** (0.052)	0.650*** (0.035)	0.882 (0.170)	0.891* (0.062)
Argentina	1.458*** (0.071)	1.345*** (0.109)	1.454*** (0.071)	0.811 (0.120)	1.212*** (0.060)
Bolivia	0.732*** (0.067)	0.767** (0.094)	0.729*** (0.067)	0.652* (0.167)	1.014 (0.097)
Brazil	1.413*** (0.056)	1.446*** (0.068)	1.409*** (0.056)	1.244*** (0.094)	1.015 (0.033)
Chile	1.133* (0.073)	1.020 (0.102)	1.130* (0.073)	0.620** (0.129)	1.221*** (0.089)
Colombia	1.032 (0.032)	0.984 (0.043)	1.029 (0.032)	0.755*** (0.056)	1.094*** (0.029)
Ecuador	0.789*** (0.034)	0.742*** (0.044)	0.787*** (0.034)	0.561*** (0.070)	1.100** (0.050)
Guyana/British Guiana	0.538*** (0.029)	0.476*** (0.039)	0.538*** (0.029)	0.367*** (0.089)	1.154 (0.101)
Paraguay	1.579*** (0.236)	1.503** (0.289)	1.574*** (0.236)	0.833 (0.358)	1.241 (0.192)
Peru	0.833*** (0.034)	0.734*** (0.041)	0.831*** (0.034)	0.434*** (0.056)	1.253*** (0.059)
Uruguay	1.449*** (0.146)	1.329* (0.228)	1.446*** (0.146)	0.737 (0.283)	1.246* (0.163)
Venezuela	1.092 (0.067)	0.969 (0.083)	1.089 (0.067)	0.708** (0.113)	1.163** (0.071)
Denmark	1.837*** (0.167)	1.658*** (0.280)	1.834*** (0.166)	1.322 (0.390)	1.116 (0.105)
Finland	1.382*** (0.164)	1.348 (0.267)	1.379*** (0.163)	0.738 (0.241)	1.236** (0.128)
Norway	1.116 (0.120)	1.016 (0.199)	1.114 (0.120)	0.552* (0.184)	1.260** (0.129)
Sweden	1.585*** (0.122)	1.413*** (0.182)	1.582*** (0.121)	0.876 (0.189)	1.230*** (0.087)
United Kingdom	1.177*** (0.033)	1.285*** (0.064)	1.176*** (0.033)	1.250*** (0.107)	0.982 (0.026)
Scotland	0.853** (0.059)	1.052 (0.142)	0.852** (0.059)	0.975 (0.226)	0.963 (0.069)
Wales	1.615*** (0.267)	1.660* (0.460)		2.382* (1.130)	0.873 (0.142)
Ireland	1.243*** (0.057)	1.545*** (0.103)	1.243*** (0.057)	2.117*** (0.287)	0.832*** (0.038)
Northern Ireland	1.098 (0.174)	1.026 (0.309)		0.477 (0.247)	1.323* (0.208)

	(1) Baseline	(2) < 15 yrs in US	(3) selfemp > 50	(4) Country x yrs in US(log) immediate interaction	
Belgium	1.393*** (0.136)	1.038 (0.209)	1.390*** (0.136)	0.706 (0.224)	1.242** (0.120)
France	1.356*** (0.057)	1.270*** (0.102)	1.353*** (0.057)	0.938 (0.122)	1.121*** (0.045)
Netherlands	1.501*** (0.079)	1.549*** (0.175)	1.498*** (0.079)	1.197 (0.214)	1.074 (0.058)
Switzerland	1.747*** (0.134)	1.586*** (0.210)	1.743*** (0.134)	1.378 (0.293)	1.080 (0.076)
Albania	0.593*** (0.075)	0.541*** (0.078)	0.591*** (0.075)	0.290*** (0.074)	1.416*** (0.165)
Greece	1.941*** (0.070)	1.566*** (0.165)	1.937*** (0.070)	1.347 (0.261)	1.107* (0.064)
Macedonia	0.990 (0.129)	1.027 (0.213)	0.988 (0.129)	0.811 (0.352)	1.049 (0.156)
Italy	1.347*** (0.038)	1.508*** (0.113)	1.344*** (0.037)	1.196 (0.156)	1.030 (0.039)
Portugal	0.865*** (0.039)	0.773*** (0.077)	0.863*** (0.039)	0.624** (0.146)	1.090 (0.080)
Azores	0.943 (0.099)	1.162 (0.365)	0.941 (0.099)	1.156 (0.948)	0.926 (0.229)
Spain	1.092 (0.064)	1.100 (0.121)	1.090 (0.064)	0.827 (0.161)	1.080 (0.068)
Austria	1.491*** (0.106)	1.716*** (0.302)	1.488*** (0.106)	1.868** (0.508)	0.937 (0.074)
Bulgaria	1.128 (0.120)	0.923 (0.123)	1.125 (0.120)	0.480*** (0.119)	1.476*** (0.150)
Czechoslovakia	1.302*** (0.126)	1.014 (0.190)	1.300*** (0.126)	0.719 (0.221)	1.211** (0.117)
Slovakia	0.860 (0.142)	1.034 (0.221)		0.908 (0.388)	0.953 (0.151)
Czech Republic	1.613*** (0.179)	1.652*** (0.246)	1.610*** (0.179)	1.197 (0.304)	1.103 (0.105)
Germany	1.055** (0.023)	1.122** (0.054)	1.054** (0.023)	0.974 (0.076)	1.021 (0.023)
Hungary	1.586*** (0.091)	1.384** (0.175)	1.582*** (0.091)	0.958 (0.226)	1.166** (0.082)
Poland	1.072** (0.034)	0.979 (0.043)	1.069** (0.034)	0.694*** (0.068)	1.151*** (0.040)
Romania	1.293*** (0.069)	1.175** (0.087)	1.289*** (0.069)	0.519*** (0.087)	1.399*** (0.084)
Yugoslavia	0.953 (0.064)	0.865 (0.099)	0.951 (0.063)	0.589** (0.126)	1.165** (0.081)
Croatia	1.079 (0.101)	0.924 (0.172)	1.076 (0.100)	0.580 (0.193)	1.216* (0.127)
Serbia	0.673* (0.145)	0.304*** (0.122)		0.089** (0.088)	2.101** (0.702)
Bosnia	0.337*** (0.041)	0.296*** (0.040)	0.336*** (0.041)	0.154*** (0.035)	1.625*** (0.198)

	(1) Baseline	(2) < 15 yrs in US	(3) selfemp > 50	(4) Country x yrs in US(log)	
				immediate	interaction
Kosovo	0.487** (0.144)	0.425** (0.144)		0.135*** (0.071)	1.886*** (0.403)
Latvia	1.045 (0.136)	1.055 (0.254)	1.042 (0.136)	0.771 (0.330)	1.100 (0.141)
Lithuania	1.176 (0.151)	1.312 (0.249)	1.172 (0.150)	1.522 (0.467)	0.892 (0.094)
Other USSR/Russia	0.951 (0.039)	0.815*** (0.042)	0.948 (0.039)	0.334*** (0.041)	1.559*** (0.079)
Byelorussia	0.712*** (0.088)	0.770** (0.100)	0.710*** (0.087)	0.510** (0.171)	1.129 (0.177)
Moldavia	0.773 (0.125)	0.695* (0.131)		0.279*** (0.126)	1.604** (0.320)
Ukraine	0.853*** (0.040)	0.754*** (0.043)	0.851*** (0.040)	0.337*** (0.042)	1.484*** (0.075)
Armenia	1.334*** (0.104)	1.150 (0.111)	1.330*** (0.103)	0.630 (0.188)	1.322** (0.159)
Azerbaijan	0.566*** (0.122)	0.595** (0.133)		0.449 (0.303)	1.080 (0.366)
Georgia	1.055 (0.213)	0.904 (0.207)		0.584 (0.282)	1.309 (0.307)
Uzbekistan	0.974 (0.143)	0.836 (0.138)	0.971 (0.143)	0.634 (0.322)	1.199 (0.309)
China	1.025 (0.027)	0.858*** (0.032)	1.022 (0.027)	0.351*** (0.026)	1.472*** (0.039)
Hong Kong	1.051 (0.047)	0.928 (0.071)	1.048 (0.047)	0.524*** (0.092)	1.245*** (0.074)
Taiwan	1.463*** (0.049)	1.200*** (0.066)	1.458*** (0.049)	0.530*** (0.070)	1.411*** (0.064)
Japan	1.095*** (0.034)	0.840*** (0.048)	1.092*** (0.034)	0.487*** (0.043)	1.301*** (0.036)
South Korea	2.158*** (0.047)	1.895*** (0.063)	2.151*** (0.047)	0.854*** (0.052)	1.371*** (0.028)
Cambodia	1.216*** (0.066)	0.842 (0.094)	1.213*** (0.066)	0.321*** (0.141)	1.557*** (0.240)
Indonesia	0.879 (0.071)	0.595*** (0.084)	0.877 (0.071)	0.265*** (0.069)	1.516*** (0.130)
Laos	0.631*** (0.040)	0.479*** (0.055)	0.629*** (0.040)	0.188*** (0.084)	1.487** (0.232)
Malaysia	1.021 (0.094)	0.754** (0.100)	1.018 (0.094)	0.264*** (0.105)	1.667*** (0.246)
Philippines	0.470*** (0.012)	0.377*** (0.016)	0.468*** (0.012)	0.168*** (0.017)	1.432*** (0.049)
Singapore	1.138 (0.164)	1.146 (0.217)	1.136 (0.163)	0.599 (0.239)	1.272 (0.190)
Thailand	1.007 (0.055)	0.869 (0.083)	1.004 (0.054)	0.451*** (0.102)	1.299*** (0.100)
Vietnam	1.201*** (0.029)	0.971 (0.036)	1.197*** (0.029)	0.510*** (0.046)	1.336*** (0.043)

	(1) Baseline	(2) < 15 yrs in US	(3) selfemp > 50	(4) Country x yrs in US(log)	
				immediate	interaction
Afghanistan	1.048 (0.095)	0.968 (0.131)	1.046 (0.095)	0.577 (0.255)	1.220 (0.199)
India	1.084*** (0.027)	0.857*** (0.031)	1.081*** (0.027)	0.247*** (0.018)	1.757*** (0.044)
Bangladesh	0.736*** (0.054)	0.681*** (0.061)	0.734*** (0.054)	0.210*** (0.052)	1.674*** (0.166)
Burma (Myanmar)	0.859 (0.096)	0.698** (0.125)	0.856 (0.096)	0.335*** (0.133)	1.402** (0.199)
Pakistan	1.065 (0.044)	0.987 (0.054)	1.063 (0.044)	0.411*** (0.055)	1.438*** (0.074)
Sri Lanka	1.097 (0.124)	0.694** (0.125)	1.094 (0.124)	0.179*** (0.086)	2.025*** (0.353)
Iran	1.830*** (0.057)	1.573*** (0.082)	1.825*** (0.057)	0.712*** (0.091)	1.374*** (0.060)
Nepal	0.663* (0.150)	0.514** (0.150)		0.197*** (0.124)	1.770** (0.469)
Cyprus	1.277 (0.191)	0.478* (0.201)	1.275 (0.191)	0.120*** (0.078)	2.126*** (0.426)
Iraq	1.595*** (0.092)	0.804* (0.094)	1.591*** (0.091)	0.217*** (0.056)	2.039*** (0.178)
Israel	2.211*** (0.100)	2.171*** (0.156)	2.206*** (0.100)	1.351** (0.195)	1.174*** (0.057)
Jordan	1.710*** (0.121)	1.644*** (0.178)	1.706*** (0.121)	1.000 (0.252)	1.191** (0.105)
Kuwait	0.920 (0.144)	0.964 (0.185)		0.465 (0.226)	1.282 (0.247)
Lebanon	1.909*** (0.089)	1.601*** (0.123)	1.904*** (0.089)	0.568*** (0.113)	1.514*** (0.103)
Saudi Arabia	0.955 (0.175)	0.766 (0.194)		0.423* (0.196)	1.374* (0.240)
Syria	2.019*** (0.130)	1.714*** (0.165)	2.014*** (0.129)	0.787 (0.190)	1.396*** (0.121)
Turkey	1.506*** (0.091)	1.366*** (0.124)	1.503*** (0.091)	0.794 (0.141)	1.247*** (0.078)
Yemen Arab Republic (North)	1.832*** (0.229)	1.675*** (0.307)	1.828*** (0.229)	0.677 (0.266)	1.420** (0.198)
Algeria	0.840 (0.152)	0.681 (0.164)		0.223*** (0.106)	1.736*** (0.306)
Egypt	1.025 (0.055)	0.964 (0.079)	1.022 (0.055)	0.478*** (0.083)	1.312*** (0.080)
Morocco	0.985 (0.091)	0.843 (0.112)	0.983 (0.091)	0.479*** (0.121)	1.299*** (0.117)
Sudan	0.449*** (0.101)	0.465*** (0.116)		0.232*** (0.113)	1.344 (0.286)
Ghana	0.631*** (0.057)	0.579*** (0.070)	0.630*** (0.057)	0.419*** (0.112)	1.170 (0.126)

	(1) Baseline	(2) < 15 yrs in US	(3) selfemp > 50	(4) Country x yrs in US(log)	
				immediate	interaction
Liberia	0.492*** (0.070)	0.427*** (0.083)	0.492*** (0.070)	0.103*** (0.063)	1.848*** (0.413)
Nigeria	0.782*** (0.044)	0.699*** (0.057)	0.781*** (0.044)	0.359*** (0.066)	1.355*** (0.095)
Senegal	1.492** (0.264)	1.587** (0.307)		1.863 (0.713)	0.854 (0.152)
Sierra Leone	0.495*** (0.084)	0.494*** (0.110)		0.249** (0.151)	1.304 (0.299)
Ethiopia	0.620*** (0.054)	0.497*** (0.058)	0.619*** (0.054)	0.138*** (0.038)	1.826*** (0.189)
Kenya	0.977 (0.101)	0.679** (0.105)	0.975 (0.101)	0.265*** (0.092)	1.707*** (0.223)
Somalia	0.460*** (0.095)	0.404*** (0.091)		0.266*** (0.113)	1.300 (0.276)
Tanzania	1.784*** (0.251)	1.136 (0.260)	1.779*** (0.250)	0.726 (0.337)	1.403** (0.241)
Uganda	0.966 (0.165)	0.712 (0.181)		0.290** (0.176)	1.580** (0.353)
Zimbabwe	1.081 (0.191)	0.814 (0.206)		0.402** (0.181)	1.485** (0.249)
Eritrea	0.860 (0.130)	0.808 (0.171)	0.859 (0.130)	0.242*** (0.124)	1.617** (0.306)
Cameroon	0.631** (0.138)	0.510** (0.147)		0.275** (0.177)	1.405 (0.369)
South Africa (Union of)	1.566*** (0.106)	1.310*** (0.126)	1.564*** (0.106)	0.634** (0.121)	1.436*** (0.100)
Australia	1.545*** (0.104)	1.409*** (0.144)	1.544*** (0.104)	1.053 (0.182)	1.151** (0.069)
New Zealand	1.675*** (0.172)	1.467** (0.226)	1.674*** (0.172)	0.892 (0.254)	1.270** (0.126)
Fiji	0.695*** (0.090)	0.628*** (0.113)	0.694*** (0.090)	0.541 (0.211)	1.086 (0.167)
Tonga	1.090 (0.142)	1.116 (0.241)	1.088 (0.141)	1.564 (0.841)	0.856 (0.162)
Western Samoa	0.311*** (0.072)	0.429** (0.162)		0.285* (0.209)	1.013 (0.247)
Pseudo R-squared	0.169	0.155	0.169	0.172	
Number of Observations	1318204	716046	1302394	1318204	

Notes: All regressions above are logit regressions for the year 2000 calculated with robust standard errors. The dependent variables is a dummy for being self-employed. The estimations included the following variables not shown in the Table above: Age, Age squared, Gender, Number of children, Dummies for Marital Status, Education, Proficiency in English and Industry. \*\*\* significant on the 1%-level, \*\* significant on the 5%-level, \* significant on the 10%-level. (1) baseline regression (2) < 15 years in the US (3) number of self-employed > 50 (4) interaction with log years in the US