

# Country-Specific Preferences and Employment Rates in Europe \*

Simone Moriconi (IÉSEG School of Management and LEM)  
Giovanni Peri (University of California, Davis).

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## Abstract

European countries exhibit significant differences in employment rates of adult males. Differences in average labor-leisure preferences, determined by cultural values that vary across countries, can be responsible for part of these differences. However, differences in labor market institutions, productivity, and skills of the labor force are also crucial factors and likely correlated with preferences. In this paper we use variation among first- and second-generation European migrants to isolate the effect of culturally determined labor-leisure preferences on individual employment rates. If migrants maintain some of their country of origin labor-leisure preferences as they move to different labor market conditions, we can separate the impact of these culturally determined preferences from the effect of other factors. We find that country-specific labor-leisure preferences explain about 24% of the top-bottom variation in employment rates across European countries.

**Key Words:** Labor-Leisure Preferences, Cultural Transmission, Employment, Europe, Migrants.

**JEL codes:** J22, J61, Z10

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\*Address: Simone Moriconi, Department of Economics and Quantitative Methods, IÉSEG School of Management (LEM-CNRS 9221), 1 parvis de la Défense Socle de la Grande Arche 92044 Paris la Défense - France; s.moriconi@ieseg.fr. Giovanni Peri, Department of Economics, UC Davis, One Shields Avenue, Davis Ca 95616; gperi@ucdavis.edu. This paper benefited of research grants by the Einaudi Institute for Economics and Finance (EIEF) and the French National Research Agency (ANR) for the project MALYNES (no. ANR-18-CE26-0002). We thank colleagues who attended presentations at the Università Cattolica di Milano, JKU Linz, IÉSEG School of Management, Ifo CEMIR seminar in Munich, the XIV "Brucchi Luchino" Workshop in Bergamo, the 2016 Annual Conference of the Royal Economic Society in Brighton, the 2016 SOLE Conference in Seattle, the EIEF lunch seminar, the LAGV Conference in Aix-en-Provence, the 2016 Annual Conference of the Swiss Society of Economics and Statistics, the 28th EALE Conference, the 31st AIEL conference and the 2017 MILLS Workshop on "Culture, Family and Social Values", the 2018 AFSE Conference in Paris, and the 2018 SEHO Conference in Paris for very helpful discussions. The usual disclaimer applies. Work on this paper started when Simone Moriconi visited the Economics Department of the University of California Davis, which is also gratefully acknowledged.

# 1 Introduction

Systematic differences in values and preferences across time and space often result in differences of economic behavior (Fernández [22]).<sup>1</sup> A crucial set of preferences and decisions, affecting the economic welfare of individuals, are related to attitudes towards labor. Previous studies have shown attitudes towards the family and family ties (Fernández *et al.* [20], Algan and Cahuc [7], Alesina and Giuliano [1]) and attitudes towards women and children (Giavazzi *et al.*, [25]) to be important determinants of labor market outcomes for women and young individuals. Those studies emphasize that cultural attitudes are persistent from parents to children and differ across countries of origin. Several studies have used children of immigrants (often in the United States) and linked their employment outcomes to cultural attitudes measured in the country of origin of parents (e.g. Giuliano [28], Fernández [21], Alesina and Giuliano [1]). Those papers have focused heavily on family relationships, the role of women, and cultural attitudes towards women and their labor market participation in order to explain the substantial increase in female labor force participation during the recent decades and its variation across countries.

This paper is closely related to that literature, but asks a more direct question with bearing on the labor supply decisions of all individuals, including prime-age males. In the basic economic theory of labor supply (e.g. Borjas [12], Chapter 2) the decision to work and the amount of labor supplied depends crucially on the relative labor-leisure preferences of an individual. One can think of these preferences as partly idiosyncratic and partly affected by the culture of origin, thus transmitted across generations. In a culture in which work is considered rewarding, fulfilling, and an important component of personal success, the disutility of labor is perceived as low, and people may be willing to work for lower wages and supply more working hours. In a culture in which work is instead considered burdensome, the disutility of work can be high, generating lower labor supply. While there is clearly a culturally-based and persistent component to these preferences, individual-specificity is important and may change over time with the employment experience itself. Even having access to the individual truthful assessment about labor-leisure preferences the endogenous component can be large. When in a successful job, for instance, a person may be more inclined to say that she likes working relative to what she would say if employed in an unpleasant or less successful job. Alternatively, people out of work involuntarily may overemphasize their preference for working, as a way of regretting their current state. This may generate reverse causality clouding identification of the causal impact of a genuine preference parameter on employment.

The goal of this paper is to study whether (and the degree to which) cultural differences in labor-leisure preferences can explain the differences in employment rates of adult males across European countries. We carry out this analysis in three steps. First, we construct a culture-specific component of the labor-leisure preference that is different across countries-of-origin. This is likely to change slowly over time and we consider it as a pre-determined preference parameter. In the main part of this paper, we analyze whether this preference affects working decisions of prime-age males by looking at first and second

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<sup>1</sup>This is a practical definition of culture, which encompasses the broad set of shared knowledge, understanding, and practice. See Fernández [22], [23] for detailed discussions.

generation migrants. When doing this we also address whether selection and sorting of migrants along the cultural dimension may generate a bias in the estimates of country-specific preferences (see Alesina and Giuliano [3] for a discussion of this issue). Second, we separate the effect of this preference from other potentially correlated and transmittable factors, such as skills, language ability and other cultural values and perceptions. Third, we assess how much of the differences in male employment-to-population ratios across European countries can be explained by country-specific labor-leisure preferences.

We use data from five waves of the European Social Survey (ESS), a biannual survey covering individuals in 26 European countries from 2004 to 2012. In spite of the relatively large sample size and rich information relative to individual preferences, cultural traits and ideology contained in this survey, its use among economists has been limited. The survey contains information on the country of birth of the respondent and of his father and mother. We use this information to define *migrants* as individuals that are not resident in the country where their parents were born (i.e. the country of origin), including in this definition those commonly called first- and second-generation migrants.<sup>2</sup> In contrast to "migrants," we call *natives* those individuals who are resident in the country of birth of their parents.

The ESS dataset also includes a series of labor market variables (employment, hours worked, working history), demographic information (education, age, gender, occupation), and several questions revealing preferences, values and beliefs of individuals. The data are representative of the population of each European country and include more than 20,000 respondents in each wave, with a significant number of first- and second-generation migrants. In order to assess the labor-leisure preferences of individuals, we use the following statement included in the 2010 wave of the survey: "*I would enjoy having a paid job even if I did not need the money.*" The individual could strongly agree (score of 5), agree, be neutral, disagree, or strongly disagree (score of 1). As noted above, the current situation of an individual may affect the response to this statement. Hence we isolate a predetermined, country-specific component of the preference as the fixed country-effect in a regression including all the native residents of Europe and controlling for all their observable characteristics.<sup>3</sup> We then associate this country-specific effect with the country of birth of the father of each individual. We focus our analysis on individuals who live in a country different from their parents' birthplace. That is, we focus on first- and second-generation emigrants. After controlling for individual characteristics, observable characteristics of parents, bilateral (destination-by-origin) migration stocks, and other characteristics of the country-of-residence and ancestry, the coefficient on parents' country-specific preferences can be considered as the effect of culturally-determined labor-leisure preference on labor supply. This is because the idiosyncratic individual preferences, which can be correlated with individual characteristics and with the choice of migration, do not affect the construction of the country-specific cultural preferences for labor.

Our estimates find a statistically and economically significant coefficient of country-specific labor-leisure preferences on employment rates and hours worked. We focus on

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<sup>2</sup>A first-generation migrant is a migrant born in the country of origin, while a second-generation migrant is a migrant born in the country of residence from parents born in the country of origin.

<sup>3</sup>In robustness checks we also include emigrants in calculating this fixed effect for origin countries. The results are very similar.

working-age males to avoid any transitional and family-related impact on employment. For this group we observe a difference of as much as 11 percentage points in employment-population ratios across European countries (Sweden – in the top 10% – has a ratio of 0.94, while in Lithuania – in the bottom 10% – the ratio is about 0.83). Using the estimated effects of country-specific labor-leisure preferences, we can explain about 24 percent of the 90-10 percentile difference. While our estimates can still contain some bias due to measurement error, selection of migrants and correlation with unobserved country characteristics, we provide an extensive series of checks confirming the order of magnitude of the estimated coefficient and suggesting that those biases are not large. In existing studies, the emphasis in explaining differences in cross-European employment rates has been on labor market institutions (unemployment insurance, labor taxation, unionization) and hysteresis after shocks (see Bassanini and Duval [11] and Arpaia and Mourre [10]). The central contribution of our paper is to provide evidence that culture-specific labor-leisure preferences are significantly different across European countries and may explain about one quarter of the top-bottom differences in their employment rates.

The rest of the paper is organized as follows. Section 2 frames this paper within the existing literature. Section 3 provides a simple theoretical framework to interpret the empirical findings. Section 5 presents the empirical specifications and discusses issues of identification and interpretation of the coefficients. Section 4 presents data and summary statistics, Section 6 shows the main results and Section 7 discusses some robustness checks and extensions. Section 8 discusses the results obtained in this paper with respect to the role of redistribution. Section 9 concludes.

## 2 Literature Review

This paper contributes to two lines of research. One, originating with the seminal study of Prescott [41], analyzes the possible determinants of differences in hours worked (and employment rates) across developed countries, contrasting the USA and Continental Europe and comparing potential explanations based on different preferences and different tax rates. The other line of research, beginning with Fernández *et al.* [20], and Algan and Cahuc [7] has analyzed, instead, the role of family attitudes on labor supply of households. This literature has maintained a specific focus on women, youth and old individuals' labor supply. The first line of research can be cast in a very simple question: how much of the cross-country differences in employment and hours worked is due to distortions such as taxes, regulations and rigidities that affect the marginal pay rate, and how much is due to different preferences that affect the marginal rate of substitution between labor and leisure? The second line of research, instead, focuses on cultural values and attitudes towards family, gender and children that differ across countries and change slowly, and which may play an important role in labor supply decisions of families and in the allocation of time between men and women. Our paper combines the very simple question of the first group of papers with the focus on cross-country differences, cultural determination, and transmission of preferences emphasized in the second.

Prescott [41] argued that lower labor supply in Europe could be fully explained by higher marginal tax rates, leaving no roles for difference in preferences and attitudes

that affect the evaluation of labor and leisure. Such an explanation, however, requires values for the wage elasticity of labor supply much larger than those estimated in most micro-studies. Alesina, Glaeser and Sacerdote [6] emphasize the crucial role of unions and mandated holidays as coordination devices that allow for longer periods of coordinated leisure in European Countries, leading to a reduction of total hours of work. They also dismissed an explanation of differences based purely on country-specific “preferences,” as the US-Europe gap was not always present but opened during the 1980s, a period of important policy changes. More recently, however, several authors have pointed at country-specific preferences for leisure as an important factor in explaining employment (or unemployment) differences across European countries. Eugster *et al.*, [33] is a paper closely related to ours. In this paper, the authors use unemployment register data from Switzerland to analyze the impact of culture on the unemployment spells’ duration of Swiss prime-age males. The authors distinguish between a “Latin-speaking” cultural group (i.e. French, Italian, Romansh) and a “German-speaking” cultural group, each associated with different cultural attitudes determining levels of job search effort—the first being more pro-leisure, and the second being more pro-work. The authors exploit variation in unemployment at the so called “Röstigraben” (i.e. the border between language-cultural regions which does not correspond to a political border or a labor market border). On the two sides of the “Röstigraben” we observe differences in culture but the same labor market and political institutions. The authors estimate a significant causal impact of cultural differences on differences in unemployment spells. The paper exploits, as an original source of identification, the discontinuity at the border.

Our analysis differs from the contribution by Eugster *et al.* [33] in several respects. First, they identify a cultural determinant of individual job search effort, whereas we investigate the cultural determinants of labor supply and employment outcomes.<sup>4</sup> Second, their analysis is limited to the Swiss case, and to only two cultures. Instead of a spatial discontinuity, we feature an “epidemiological approach” to study the transmission of culture to the second generation of migrants, and separate cultural from other effects. The standard version of the epidemiological approach retrieves culture from natives and relates it to preferences, economic behaviors of emigrants (typically second generation) in their destination (see e.g. Giuliano [28], Fernández [21] and Fernández and Fogli [24]).<sup>5</sup> Additionally, we directly measure labor-leisure preferences using survey questions while Eugster *et al.* [33] consider a residual effect, after accounting for potentially confounding factors, as culturally determined. Hence, ours is a different and complementary method to the one used by Eugster *et al.* [33]. Moreover, our approach prompts the inclusion of all countries in the analysis, allowing each of them to differ in their cultural valuation of

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<sup>4</sup>Labor supply decisions and job search effort may differ substantially in the presence of institutional arrangements (e.g. generous unemployment insurance. See Lichter [35]) acting as a disincentive to job search for the unemployed.

<sup>5</sup>Starting from pioneering contributions by Carroll *et al.* [15], and Antecol [9], using immigrants to study the importance of culture on economic behavior has become standard in the analysis of culture. Amongst others, Giuliano [28], Fernández [21] and Fernández and Fogli [24] apply it to analyze the effect of culture on living arrangements, female work participation and fertility decisions, respectively. This approach has been used also to analyze the effect of culture on policy preferences (Luttmer and Singhal [37], and Algan and Cahuc [8]) and attitudes towards labor regulation (Alesina *et al.* [4]). See Alesina and Giuliano [3] for a review.

labor and leisure. Thus we expand the focus relative to Eugster *et al.* [33], trying to use our estimates to explain broad employment differences in Europe.

In the literature on cultural attitudes and labor market outcomes, Fernández *et al.* [20] were the first to investigate the effect of preference formation within the family on women’s work outcomes. Algan and Cahuc [7] analyze the role of family ties and family preferences as an explanation for the heterogeneity between employment rates of females, youth and elderly across developed economies. The authors indicate that people in different countries have very different attitudes with respect to females and young/old individuals, and this correlates with the employment rates of those groups over the period even after controlling for country-specific characteristics and time dummies.<sup>6</sup> More recently, Alesina and Giuliano [1] have studied the impact of family ties on work decisions using individual responses from the World Value Survey (WVS) on the role of the family and the attitude that children are expected to have towards their parents. Their results suggest strong family ties are associated with higher home production, larger families, and lower labor force participation of women and young people. In this strand of the literature, the paper more closely related to ours is Giavazzi *et al.* [25]. They also use data from WVS to analyze whether attitudes towards gender, youth and leisure are significant determinants of the employment rates of women and youth. They proxy labor-leisure preferences by the “value/importance attached to holidays”, as a job attribute. They find that fewer hours of work are supplied in countries where holidays are considered a valuable job characteristic.

Our paper is innovative with respect to Giavazzi *et al.* [25] in several respects. First, we infer preferences for working from a question on valuing a job even without pay. While our measure is not immune to criticisms, it has the advantage of prompting a direct individual evaluation of work, rather than an indirect one derived from the importance attached to paid vacations. In fact, generous vacation policies may be an indicator of employer’s fairness and attention to workers’ needs, and the employee’s evaluation may reflect that. The question collected by the European Social Survey (ESS) is not available in the WVS.

Second, Giavazzi *et al.* [25] emphasize the fact that even country-specific cultural attitudes change over time and use a panel of countries and migrants to the US in order to identify this country-specific, yet changing, component of attitudes. The authors apply a variation of the epidemiological approach that “extracts” culture from US immigrants and correlates it to the economic behavior of natives in their country of origin. It is widely acknowledged that application of the epidemiological approach avoids reverse causality going from economic outcomes to preferences but introduces concerns of selection of migrants and sorting in the destination (see e.g. Fernández [21] for a discussion). Selection and sorting concerns are stronger in Giavazzi *et al.* [25], as the cultural variable is retrieved from migrants to the US, i.e. a strongly selected group of (usually) high skilled people from their country of origin (e.g. Grogger and Hanson, [29]). This may reduce the correlation with (and increase the measurement error of) the attitudes of stay-

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<sup>6</sup>Algan and Cahuc [7] predict culture as the coefficients of the country fixed effects in individual level regressions, after controlling for an extensive set of individual characteristics. These predicted coefficients are then regressed on local employment rates, after controlling for the traditional set of labor market institutions.

ers in the country of origin.<sup>7</sup> Instead of retrieving cultural preferences from the selected group of migrants to the US, we apply the standard epidemiological approach, and obtain country-specific preferences from native people resident of a country. We then include these origin-specific preferences as determinants of employment outcomes for first and second generation migrants in their country of destination. We show that selection and sorting do not make preferences of emigrants very different from those of non migrants. It appears that emigrants are a selected group of people with slightly higher preferences for work compared to non-migrants. Thus, the origin-based coefficients may slightly underestimate the intensity of preferences of the migrants group as it is usually the case in studies that apply the epidemiological approach (see e.g. Fernández [21], Fernández and Fogli [24]. See Alesina and Giuliano [3] for a review).

Third, Giavazzi *et al.*, [25] estimate the aggregate impact of cultural preferences on total number of hours worked in the country. They analyze an aggregate mechanism consistent with the social multiplier effects a la Alesina *et al.*, [6]. Conversely, we analyze the quantitative importance of cultural preferences on individual work supply and on hours worked, and compare their role to that of skills, institutions and labor demand.

### 3 Theoretical Framework

In this section we present a framework, rooted in the simplest textbook model of labor demand and supply, that allows us to give a foundation to our empirical analysis. It also helps provide an interpretation for the estimated coefficients and a framework for discussion of identification and possible biases. Our simple, representative agent model produces an equilibrium prediction about the labor supply (interpreted as fraction of total time worked, or as the probability of working) of an individual from culture of origin  $o$  residing in country  $r$ .

#### 3.1 Labor Preferences

Consider an individual  $i$  of culture  $o$ , which denotes his country of origin, working in country  $r$  (for residence). This individual splits his time endowment (which we standardize to one for convenience) between supply of labor with measure  $l_{ior}$ , and leisure with measure  $1 - l_{ior}$ .<sup>8</sup> The subscript “ $ior$ ” makes explicit that the individual labor supply depends on individual characteristics and also on features of the country of origin  $o$  and of the country of residence  $r$ . The choice of  $l_{ior}$  is made in order to maximize a utility function which depends positively on consumption  $c_{ior}$  and negatively on the amount of labor supplied  $l_{ior}$  as follows:

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<sup>7</sup>Giavazzi *et al.* [25] include the appropriately lagged values of the regressors, and predetermined religious beliefs as additional instruments in IV regressions.

<sup>8</sup>If time is continuous one can think of  $l_{ior}$  as fractions of hours worked every day. If there are indivisibilities of labor one can think of  $l_{ior}$  as fraction of weeks worked in a year. This would translate, when we observe data about employment in a specific week, into the probability of working (being employed) that week.

$$U_i = c_{ior}^\delta - \frac{l_{ior}^\eta}{\theta_{ior}} \quad (1)$$

For simplicity, we assume the parameters  $\delta$  and  $\eta$  ( $\geq \delta$ ) are between 0 and 1 and common to all individuals so that the marginal utility of consumption is positive and decreasing and the marginal utility of labor is negative and also decreasing in absolute value. The parameter  $\theta_{ior}$  captures the individual preference for labor relative to leisure, which we also call the preference for working. A larger value of this parameter implies that an individual experiences a lower marginal disutility when increasing the labor supply. This can be due to the fact that he/she offsets part of the disutility from effort with some enjoyment from work.

### 3.1.1 Cultural and Individual Preferences, and Selection/Sorting of Migrants

The coefficient  $\theta$  capturing the preference for labor can be thought as a random variable distributed across the population of country of origin  $o$ , whose realization is specific to individual  $i$ . We assume that the culture-specific component of the variable is the average preference in country of origin  $o$ , common to all individuals from that culture of origin. Namely, while there is variation among individuals in their culturally determined preference for labor, there is an average level determined by norms and traditions and culture in a country. For simplicity we assume that the labor-preference parameter is log linear in its average cultural component and in its idiosyncratic component, so that for a generic individual born in country  $o$  it can be written as:

$$\ln \theta_{io} = \ln(\bar{\theta}_o) + \ln(\theta_i). \quad (2)$$

The idiosyncratic component,  $\ln(\theta_i)$ , varies across individuals and, once the culture-specific average,  $\ln(\bar{\theta}_o)$ , is subtracted this component has a zero mean across the population in the country of origin. It is important to emphasize that the idiosyncratic component may not be orthogonal to other characteristics of the individual (such as her productivity,  $e_i$ , that we will introduce below). This implies part of the correlation between  $\ln \theta_{io}$  and labor supply can be due to correlation with the unobserved component of  $e_i$ .

Moreover there is a second potential issue in considering the parameter  $\theta_{ior}$  for emigrants of country  $o$  to country  $r$ . If there is selection and sorting of emigrants along the preference dimension, then the average value of  $\theta_i$  for migrants from  $o$  to  $r$  can be non zero and possibly correlated with some feature of the country of residence  $r$ . The expression of preference for the group of migrants from  $o$  to  $r$  can therefore be written as:

$$\ln \theta_{ior} = \ln(\bar{\theta}_o) + \ln(\bar{\theta}_{or}) + \ln(\theta_i^1). \quad (3)$$

In expression (3) the term  $\ln(\bar{\theta}_{or})$  represents the average (positive or negative) selection and sorting of the migrants to country  $r$ , and  $\ln(\theta_i^1)$  is the idiosyncratic residual preference of that group of migrants. A problem will arise if the selection term is correlated with characteristics of country  $r$  such as its productivity and economy. As we will see below, such correlation may bias the estimates of the impact of preferences on labor supply.



Our focus, however, is on identifying the impact of the "culturally-determined" component of preferences,  $\ln(\bar{\theta}_o)$ . This value can be measured on the total population from country  $o$  and it is orthogonal to individual characteristics and to immigrant selection. If the three components are log linearly separable and independent, as assumed above, then a consistent estimate of the culture-specific preferences for the country of origin is the average preference of people born in country  $o$ , which is very close (as emigrants are usually a small fraction of the population) to the average preference of non-migrants in country  $o$ .

### 3.1.2 Labor Supply

The labor supply of individual " $ior$ " is easily derived if we assume that she only perceives labor income and she consumes all of it in one period (which can be treated as one year). This implies the budget constraint,  $c_{ior} = l_{ior}w_{ior}$ , where  $w_{ior}$  is the wage (yearly earnings) earned by an individual  $i$  from culture of origin  $o$  in country of work and residence  $r$ . Substituting this constraint into the utility function (1) and maximizing with respect to  $l_{ior}$ , we obtain the labor supply for the individual worker  $i$  of origin/culture  $o$  in country of residence  $r$  as an interior solution of the optimization problem:

$$l_{ior} = \frac{\delta}{\eta} \frac{1}{\eta-\delta} \theta_{ior}^{\frac{1}{\eta-\delta}} w_{ior}^{\gamma} \quad (4)$$

Expression (4) is a log-linear individual labor supply that depends on individual preferences for work,  $\theta_{ior}^{\frac{1}{\eta-\delta}}$ , and on the individual wage,  $w_{ior}$ , with an elasticity equal to  $\gamma = \frac{\delta}{\eta-\delta} \geq 0$  that captures how individual supply of labor responds to the wage rate. Such elasticity is positive but typically small, in the order of 0.1 to 0.2. The larger the preference for work parameter,  $\theta_{ior}$ , the larger is the labor supply of an individual.

## 3.2 Labor Demand

We consider all individuals of origin  $o$  as perfect substitutes in production when working in country  $r$ . However, we allow the productivity of each individual  $i$  to be different and captured by a scalar term  $e_i$  that depends on the skills of the individual (education, age, occupation) as well as some non-observable features such as innate ability and effort produced. We call this term the individual labor "effectiveness". Hence we define the aggregate effective labor input from individuals of origin  $o$  in country of residence  $r$  as:

$$l_{or} = \sum_i e_i l_{ior} \quad (5)$$

We also assume the production function of the final good in country  $r$ ,  $Y_r$ , can be expressed (as in Card, [14]) as a constant returns to scale aggregation of workers from different countries of origins. In particular, we allow some characteristics of the country of origin, such as the quality of its schools or the prevailing culture, religion or set of beliefs, to affect productivity of workers through the term  $A_o$  in the same way across countries

of residence. Finally, the country of residence may have specific productivity level,  $A_r$ , affecting all workers employed there. The aggregate production will be as follows:

$$Y_r = A_r \left( \sum_o A_o l_{or} \right) \quad (6)$$

In equation (6) the term  $A_r$  captures technological and institutional factors of country  $r$  that affect the efficiency and productivity of the country and its labor demand. Similarly,  $A_o$  captures common characteristics of workers from culture of origin  $o$  that affect their productivity. We have assumed perfect substitutability between workers of different countries of origin and skill, but the framework can easily extend to imperfect substitutability of immigrants and natives or workers of different skills (as in Ottaviano and Peri [39], or in Ottaviano and Peri [40]). In case of imperfect substitutability, the final expression will include an extra term that depends on the relative supply of immigrants and natives, or of different skill groups. Taking the marginal productivity of worker  $i$  from culture/country of origin  $o$  working in country  $r$  and assuming that in equilibrium this has to equal the wage the worker is paid, we obtain the following labor demand condition:

$$w_{ior} = e_i A_r A_o. \quad (7)$$

This condition implies an horizontal labor demand for each individual  $i$  of culture of origin  $o$  in residence  $r$ . It essentially allows for the (marginal) productivity of a worker to depend on three components. First, it depends on an individual's observable and unobservable abilities,  $e_i$ , determined by his schooling, ability, experience and skills. Second, it depends on the productivity of the country of residence,  $A_r$ , that varies with institutions, labor market conditions, demand, technology and efficiency in that country. Third, it depends on persistent characteristics of the country/culture of origin,  $A_o$ , that affect productivity of individuals from that culture, such as work ethic, values, language and beliefs.

### 3.3 Equilibrium Employment and Estimating Equation

If we substitute the marginal productivity expression (7) into the individual labor supply (4), we obtain the following equilibrium relation, representing the crossing point (equilibrium) of an upward sloping labor supply and an horizontal labor demand. The relationship represents how individual time worked as a fraction of total time available (or the probability of working) is related to individual preferences and to the determinants of labor productivity:

$$l_{ior} = \frac{\delta}{\eta} \theta_{ior}^{\frac{1}{\eta-\delta}} e_i^\gamma A_r^\gamma A_o^\gamma \quad (8)$$

Taking the natural logarithm on both sides of equation (8) and substituting the expression of  $\ln(\theta_{ior})$  with its decomposition into the culture-of-origin-specific, the migrant selection and the idiosyncratic/individual components from equation 3 we obtain:

$$\ln(l_{ior}) = \alpha + \beta \ln(\bar{\theta}_o) + \beta \ln(\bar{\theta}_{or}) + \beta \ln(\theta_i^1) + \gamma \ln(e_i) + \gamma \ln A_r + \gamma \ln(A_o) \quad (9)$$

In expression (9) the parameter  $\alpha$  equals  $\ln \frac{\delta}{\eta} \frac{1}{\eta - \delta}$  and the parameter  $\beta$  equals  $\frac{1}{\eta - \delta}$ . The variable  $\ln(l_{ior})$  measures (the logarithm of) the fraction of time (year) worked by individual  $i$  with culture of origin  $o$  who resides and works in country  $r$ . The variable  $\ln(\bar{\theta}_o)$  captures the culture-of-origin specific preference for working. This part is what we define as "culturally determined" preference and it is uncorrelated with the individual-specific part  $\beta \ln(\theta_i^1)$ . Hence the component  $\ln(\bar{\theta}_o)$ , which can be measured from all people with origin in country  $o$ , identifies the effect of culturally-determined labor-leisure preferences on the labor supply of migrants. The migrant sorting part,  $\ln(\bar{\theta}_{or})$ , is a term capturing migrant average preferences as a group, if they are different from those of all people with origin in  $o$ . The other variable specific to country  $o$  in equation (9) is the country-of-origin specific component of productivity described by  $A_o$  and it should be properly controlled for. While one might guess the labor-leisure preferences specific to country  $o$  may affect the labor market institutions and regulations of country  $o$  itself, the impact on employment of individuals of culture  $o$  working in a different country  $r$  is likely mediated by the culture-specific preferences alone. By considering first- and second-generation migrants, for whom  $r \neq o$ , we aim to isolate such an effect.

## 4 Data and Descriptive Statistics

Before discussing identification and estimation of equation (9) we describe our data, variables and we present some basic statistics and trends. Our primary data source is the European Social Survey (ESS). This is a multi-country survey, which was administered in 6 waves (one every two years) in 36 countries between 2002 and 2012. The data include detailed information on personal and family characteristics such as age, gender, education, marital status, number of children in the family, place of birth, and labor market characteristics such as employment status and work characteristics. It also includes detailed information on parental background, such as parents' education, employment status, occupation when the respondent was 14 years old, and country of birth. Finally, the data include individual preferences and beliefs (such as the attitudes on several social issues, religious sentiment, self-interest, work and family values). We concentrate on the time span 2004-2012 covered by the last five waves of the survey (i.e. ESS2-ESS6), as these include identifiers for father's and mother's country of birth as well as the year of immigration.<sup>9</sup> This information allows us to identify individuals that are not resident in the country where their parents were born and hence are first- or second-generation migrants. We adopt the convention by the earliest strand of the cultural economics literature (see e.g. Fernández and Fogli [24], and Luttmer and Singhal [37]), and identify the

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<sup>9</sup>In practice, we do not use the 2002 ESS wave for the main analysis. However, we include the sample of natives of this wave for estimates in Table 13, as it is useful to exploit the longest available time span to compare the effect of country-specific preferences with labor market institutions.

country of origin with the country of birth of the father.<sup>10</sup> In contrast to “migrants”, we call *natives* those individuals who are resident in the country of birth of the father. Let us emphasize that in many European countries second-generation migrants do not necessarily have citizenship in the country of residence because of the prevalence of the “*ius sanguinis*” in transmitting citizenship rights. By considering first- and second-generation migrants as belonging to the same culture of origin, we acknowledge a potentially slow process of cultural assimilation that our results will confirm.

Besides a set of core questions on values, attitudes and beliefs, each ESS wave includes a rotating component. In particular, the 2010 ESS wave included the statement: “*I would enjoy having paid job even if I did not need money*”. The corresponding variable is coded by us from 1 to 5, where 1 stands for “disagree strongly”, 2 for “disagree”, 3 for “neither agree nor disagree”, 4 for “agree” and 5 for “agree strongly”. Our basic measure of the individual preference for labor versus leisure is a dummy equal to one for people who “strongly agree” with the statement and zero otherwise.<sup>11</sup> As described in section 5, we identify the culture-specific component of this preference as the coefficient of the country-dummy after controlling for individual and parental characteristics in a regression with native individuals only and, as the dependent variable, the dummy described above. We check the robustness of our results to other measures of labor-leisure preferences, including beliefs regarding the importance of work and leisure for the individual and for the society as a whole. The significance of the original variable remains strong even adopting these alternative definitions.

Our dataset covers 26 countries.<sup>12</sup> We exclude observations with missing information on basic individual or father characteristics, and we also exclude observations of immigrants from countries not included in our sample (outside Europe). As a first step of our econometric analysis, we retrieve an encompassing indicator of country-specific preferences from the entire sample of natives, which includes both males and females, regardless of their labor market participation status (i.e. we include also students, retired, disabled, and houseworkers).

In our main empirical specification, we estimate the effect of the predicted preferences

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<sup>10</sup>A more recent strand of the literature associates culture with the country of origin of the mother, because mothers are more relevant than fathers in the cultural transmission process (see e.g. Rodríguez-Planas and Sanz-de-Galdeano [42]). Our robustness checks using the mother’s country of origin confirm this finding. See more on this in Table 7 below, where we also discuss the effect of having both parents foreign-born versus one only.

<sup>11</sup>As Algan and Cahuc [8] note, very often in individual survey questions only the two extreme answers have a clear meaning for the respondent. This is why our preferred definition groups together the answers “strongly agree” on one side and all other answers on the other side. As robustness checks we also codify differently the preference for labor versus leisure either by using the 1-5 index directly or extending the dummy to one if a person agrees or strongly agrees with the statement and zero otherwise. Our results suggest that these alternative codings produce similar results (see on line Appendix, Table C-3).

<sup>12</sup>We exclude all countries that do not appear in ESS5, as this is the only wave that includes our variable of interest. We also exclude countries that do not appear at least in two waves and have fewer than 10 people as emigrants. In the end, the countries in our sample are the following: Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Lithuania, Netherlands, Norway, Poland, Portugal, Russian Federation, Slovakia, Spain, Sweden, Switzerland, UK, and Ukraine. See the on-line Appendix for details of the construction and harmonization of the aggregate ESS dataset.

on individual employment and participation outcomes. To minimize noise in the measurement of the effect of preferences, in this second step we concentrate on the segment of the population with the strongest work incentives. Thus we include working-age individuals (between 15 and 64 years old) and we exclude individuals who are disabled, in school, retired, and people serving in the armed forces. Finally, we focus only on males. This avoids gender and family issues, and the problem of discontinuous working careers, that have been studied extensively by other authors in connection with culture and labor market decisions (e.g. Fernández and Fogli [24], and Alesina and Giuliano [1]). Our final sample for the main analysis includes 48,119 individuals of which 45,433 are natives, 1,483 are first-generation migrants and 1,203 are second-generation migrants.

Table 1 describes some aggregate characteristics of the main dependent variables and of the explanatory variables and demographic controls of the sample, separately for natives, immigrants and for the whole population. We see that, in aggregate, 10% of the sample strongly agrees with the statement about enjoying paid work, and 50% either agrees or strongly agrees. These percentages in aggregate are quite similar for natives and first- or second-generation migrants.

In terms of the outcome variables, the employment probability (rate) is on average about 0.9; however, it exhibits (as we will see below) significant cross-country variation.<sup>13</sup> Hours of work is, on average, one full time equivalent (i.e. 40 hours), while the current unemployment probability in the reference week was about 9% and the probability of ever being unemployed for 12 months or more was about 13%. About 40% of the sample has some tertiary education, while 44% has some secondary education. We consider "prime-age" individuals as those between 20 and 50 years of age among all working-age males. They constitute 72% of all workers in the sample. Finally, about two-thirds of individuals are married and the majority live in households with children. The aggregate characteristics of the sample of natives and migrants reveal the two groups are rather similar, with a greater tendency for first-generation migrants to be married and to come from more educated and entrepreneurial families.

[TABLE 1 AROUND HERE]

Table 2 reports means and standard deviations of employment rates for working-age native male workers and for workers aged 20-50 years for each country in the sample, averaging across years. Average employment rates display considerable cross-country variation. Even considering only prime-age males, their employment/population ratio varies from about 0.95 (in Norway and Switzerland) to less than 0.80 (in Croatia and Bulgaria). Usually, Western European, UK and Nordic countries show relatively high employment rates (above the sample average of 90%), and low employment rate dispersion (below the sample average of 30%). On the other side, Mediterranean countries, and countries from Central and Eastern Europe (with the exception of the Czech Republic) are characterized by low average employment rates and high employment rate dispersion.

[TABLE 2 AROUND HERE]

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<sup>13</sup>The high average employment probabilities are due to the fact that we exclude from the population sample a number of individuals that do not usually supply labor despite being of working age (e.g. people in school, or disabled). These individuals are generally included in country aggregates provided by national statistical offices.

Before presenting the empirical analysis, we present and discuss some important features of the data. Some simple graphs allow us to show that labor-leisure preferences have a component common to all people with the same culture of origin and that this component is correlated with the employment behavior of migrants from that culture of origin.<sup>14</sup> Figure 1 shows on the horizontal axis the country-specific component of labor-leisure preferences, estimated as the coefficient on the country-fixed effect in the regression of native-only preferences after controlling for all individual and parental characteristics. On the vertical axis it shows the country-of-origin component in the labor-leisure preferences (coefficient on the country-of-origin fixed effect after controlling for country of residence effects) for migrants only. The graph shows a statistically significant positive correlation (coefficient equal to 0.12 and standard error equal to 0.06) between the labor-leisure preference of natives and migrants from the same culture of origin. When constructing the vertical axis variable we only include migrants outside the country of origin, hence the correlation is not driven by exposure to common labor market conditions or common institutions. That correlation has to derive from the fact that emigrants share preferences with people in their country of origin.<sup>15</sup>

[FIGURE 1 AROUND HERE]

The second correlation, shown in Figure 2, is between the culture-of-origin work-preferences, reported on the horizontal axis and the employment rate of emigrants from the same culture-of-origin, aggregating all destinations. While there is a large amount of noise and variation, produced by many other confounding factors, we see a positive correlation that indicates emigrants from countries with higher labor-leisure preferences have a higher probability of being employed when abroad. The OLS coefficient is equal to 0.38 with a standard deviation of 0.27, hence not quite significant but suggestive of a positive association. Figure 3 shows the correlation of culture-of-origin labor-leisure preferences with employment of natives in their own country of origin. A much lower correlation is detected. While the empirical analysis will be able to control for several other factors and isolate an association more precisely, the scatterplots help to understand the importance of using emigrants to separate the impact of culture-of-origin preferences on employment from that of other factors and reverse causality. The correlation between preference for work and employment in the country of origin could work through institutions or even labor demand and obfuscate the pure effect through supply. When considering emigrants, instead, those confounding effects are not present. In showing this, Figures 2 and 3 already illustrate the important role of the migrant-based "epidemiological approach" in isolating the effect through preferences and labor supply.

[FIGURES 2 AND 3 AROUND HERE]

Another important feature of our data is that migrants in our sample do not seem to sort systematically in the countries of destination based on their work preferences. Table 3

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<sup>14</sup> We omit Bulgaria in the scatterplots. The labor-leisure average preference for this country is a big outlier, raising some doubts on the actual comparability of answers between this and other countries. In the regressions, however, we include Bulgaria, and also check robustness of the results after dropping it.

<sup>15</sup> Size and statistical significance of the correlation becomes even larger when we regress individual preferences of immigrants on country-specific preferences, i.e. describe the cultural transmission of individual preferences featuring Luttmer and Singhal [37] and Fernández and Fogli [24] (see on line Appendix, Table C-2).

displays correlations between country-specific labor-leisure preferences of migrants and the average characteristics of the host countries they migrated to.<sup>16</sup> In Panel A, we report the correlation with the labor market and political institutions of the country of destination. In Panel B, we show the correlation with indicators of labor market performance and inequality in the destination. In Panel C, we look at correlations with investments and performance in education. Results show that preferences for work are not strongly correlated with any characteristic of the destination, with the exception of the net unemployment benefit replacement rate (negative correlation). This evidence attenuates concerns of a systematic sorting of immigrants based on observable hosts' characteristics.<sup>17</sup>

[TABLE 3 AROUND HERE]

Finally, it is also worth noting that our measure of country-specific labor-leisure preferences strongly correlates with individual evaluations of work of migrants available from other survey data (e.g. the European Value Study). For example, individuals from countries characterized by high country preferences for working are much less likely to consider leisure less important than work in life. On average, these migrants will consider work as a *"duty towards the society"*. They believe that *"work always comes first"*, that *"it is needed to develop talents"*, while *"not working makes people lazy"* (see Table C-13 in the on line Appendix).

To complete the description of the data sources, the country level indicators on institutions, economic conditions (i.e. economic performance and growth, labor market performance, and income inequality), and education quality (i.e. expenditure in education, enrollment rates, pupils-to-teachers ratios, and PISA scores) were obtained from World Bank and OECD data. Indicators of labor force quality and linguistic proximity are taken from Hanushek and Kimko [32], and Melitz and Toubal [38], respectively. More details on the construction of the variables and on the data sources are contained in the on-line Data Appendix).

## 5 Empirical Implementation and Discussion of Identification

Equation (9) provides the structure to discuss important issues of estimation, identification and potential biases. First, let us emphasize that we are interested in the estimates of parameter  $\beta$  in equation (9). This parameter captures the causal impact of culture-of-origin specific preferences,  $\ln(\bar{\theta}_o)$ , on employment outcomes for individual  $i$  from culture  $o$  working in country  $r \neq o$ . Notice that in equation (9) the parameter  $\beta$  is also the coefficient of the term  $\ln(\theta_i^1)$  and of the term  $\ln(\bar{\theta}_{or})$ , capturing individual specific preferences and average origin-specific preferences of the group of migrants in the destination. The

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<sup>16</sup>In practice, for each destination country indicator ( $d$ ), we have constructed an average by country of origin ( $o$ ), where the values of the indicator by  $d$  are weighted by the corresponding share of immigrants from  $o$ .

<sup>17</sup>Along similar lines, Figure 1 in the on line Appendix shows that the share of migrants from a given origin in each destination is uncorrelated with the distance in preferences for work between the destination and the origin.

problem with including these two measures of preferences is that individual preferences can be correlated with the unobserved components of skills and abilities, the term  $\ln(e_i)$ , while the selection component of migrant preferences  $\ln(\bar{\theta}_{or})$  can be correlated with country of destination productivity  $A_r$  or institutions. These correlations, if not properly controlled for, would imply that the estimated coefficient on those variables is a combination of  $\beta$  and  $\gamma$ . For instance, if more motivated people who value labor more than leisure are also more skilled in a non observable way, then this non-observable characteristic will generate a positive correlation between  $\ln(\theta_i)$  and  $\ln(e_i)$ , inducing a bias in the estimate of  $\beta$ . Alternatively, if migrants to country  $r$ , as a group, are positively selected in their preference for working because country  $r$  has institutions that help effectiveness of workers in a way that is not perfectly observed, that will generate a correlation between  $\ln(\theta_{or})$  and  $\ln A_r$  which could bias the corresponding coefficient. Hence in our analysis we isolate the measure of  $\ln(\bar{\theta}_o)$  and its coefficient as the one of interest. This measure is generated using all individuals with origin from  $o$  and therefore independent from migrant selection and individual bias and it partials out individual characteristics' effects.

As described above, in order to measure preferences for work of an individual,  $\ln(\theta_i)$ , we use a dummy equal to one if the person strongly agrees with the statement, "*I would enjoy having a paid job even if I did not need the money*", and equal to zero otherwise. While it is not immune to criticisms, this statement describes well individual preferences for work, for two main reasons. First, by measuring preferences for a *paid job* it abstracts from volunteering and supply of non-paid work, which may be due to an altruistic motive. Second, the conditional clause *even if I did not need money*, prompts a direct evaluation of work, which abstracts from economic needs. In order to "extract" the culture-specific component of preferences for work,  $\ln(\bar{\theta}_o)$ , we regress the individual dummies on a set of controls for individual and parental characteristics (identical to those used in the regressions in Table 2) and on country-specific dummies. This regression is performed only on data of the 2010 wave of the ESS, which was the only one in which the question above was asked. The coefficients of the country-specific effects are taken as the country-specific component of the preferences for work. This describes a "latent" component of preferences which relates to the country of origin only. Being obtained after partialling out the effect of individual and parental characteristics, this component is immune to reverse causality going from economic outcomes to individual preferences, which is a typical advantage of the epidemiological approach. In fact, our analysis follows the epidemiological approach as in Fernández [21].<sup>18</sup> These values are then associated with the country of origin of parents of the individuals, and capture the "culture of origin" attitude in working preferences of an individual,  $\ln(\bar{\theta}_o)$ .

In our main empirical specification the outcome of interest—a proxy for the fraction of time worked,  $\ln(l_{ior})$  in expression (9)—is either a dummy for working/not working in the reference week,  $l$ , or the logarithm of hours worked,  $\ln(h)$ . The key explanatory

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<sup>18</sup>This is because the measure of country-specific preferences obtained applying the epidemiological approach is conditional on individual and parental characteristics. This is to be preferred to a simple unconditional average, which aggregates individual preferences, thus incorporates feedback effects from economic outcomes. In line with our expectations, coefficients for the auxiliary regression reported in on line Appendix B show that education is positively related with the preference for working and age is negatively correlated with it.



variable is the culture of origin labor-leisure preference calculated as described above. This variable, which we call  $(workpreference)_o$ , varies across countries of origin,  $o$ , but not across individuals and years. The corresponding variable at the individual level is  $(workpreference)_{ior}$ , which includes culture-specific, idiosyncratic, and selection terms. The units of observation for our regressions are individuals  $i$  from country of origin  $o$  resident of country  $r$  in year  $t$  that corresponds to the survey years. In our baseline regressions we limit our analysis to first- and second-generation migrants, hence only to individual who reside in countries different from those of their culture of origin,  $o \neq r$  and we consider as culture of origin the country of birth of the parents of the individual. Hence the basic estimated specification is:

$$l_{iort} = a + b(workpreference)_o + \phi_{rt} + b_1 X_{it} + b_2 X_{it}^{Parents} + b_3 m_{or} + b_4 C_o + b_5 Values_{it} + \varepsilon_{irot} \quad (10)$$

The dependent variable  $l_{iort}$  is a measure of employment (probability of being employed or the logarithm of hours worked) for individual  $i$  from culture  $o$  who resides in country  $r$  in year  $t$ . The coefficient of interest,  $b$ , captures the impact of culture-of-origin preferences for labor versus leisure  $(workpreference)_o$ , which we expect to be positive i.e  $b > 0$ . The term  $\phi_{rt}$  indicates a set of country of residence by year fixed effects. This rich set of fixed effects captures the determinants of term  $\ln A_r$  in equation (9) and its variation over time. In particular, policies, institutions, endowments, laws and demand shocks in the country of residence that affect employment are absorbed by this term. The variable  $X_{it}$  controls for the observable individual characteristics (age, schooling, marital status, having children) that are important determinants of productivity and efficiency (the term  $\ln(e_i)$  in equation (9)) while the parental characteristics,  $X_{it}^{Parents}$  (education and occupation of the father), are also likely to affect human capital inputs and hence other aspects of  $\ln(e_i)$ . The term  $m_{or}$  is the (log of the) bilateral stock of immigrants from origin  $o$  into destination  $d$ . This accounts for the term  $\ln(\bar{\theta}_{or})$ , which describes the selection and sorting of migrants into destinations in equation (9). In particular, controlling for country of origin characteristics, the larger is the flow of migrants in a bilateral corridor, the smaller is the selection, so that controlling for the intensity of bilateral migration indirectly control for the strength of bilateral sorting/selection. In some specifications we also control for the bilateral stock of highly educated migrants, which proxies even more closely for the intensity of selection and sorting along the educational component. The term  $C_o$  captures some country of origin characteristics that potentially affect individual unobserved human capital and productivity (such as quality of schooling in the country of origin, language, income per person of country of origin) and which may be correlated with the culture of origin preference for working, namely the term  $\ln A_o$  in equation (9). Finally, the vector  $Values_{it}$  includes measures of other individual preferences with a potentially strong "cultural" component that can be correlated with work attitudes and employment outcomes (e.g. trust, conservative work culture, religious attitudes). Their inclusion makes us more confident that the effect of  $(workpreference)_o$  can be interpreted as the specific effect of labor-leisure preferences, rather than of generic cultural traits. The term  $\varepsilon_{irot}$  is a zero-average idiosyncratic error, capturing measurement error and other unobservable characteristics affecting employment of individuals.

Given the arbitrary units of the variable  $(workpreference)_o$  we estimate the parameter  $b$  using a reduced-form epidemiological approach, rather than estimating a two-stage specification in which culture of origin is a proxy (instrument) for individual labor-leisure preferences. The identifying assumption in equation (10) is that, conditional on the other individual, parental and country of residence controls, the culture of origin preferences for labor and leisure affect individual employment in the country of residence only via own preferences.

While immune to reverse causality, the epidemiological approach is sensitive to selection and sorting of migrants into destinations. If people select themselves into migration and to specific destination as a function of their work-preferences then migrants as a whole will have different preferences than the average in the country of origin and this may generate a bias in the estimate. In addition to that, a bias to our estimates may also arise through a “mechanical” effect of selective migration on the distribution of preferences in the native population. If emigrants were a selected group of individuals with different preferences relative to non-migrants, the group of natives used to estimate  $(workpreference)_o$ , would be distorted. If the size of migratory outflows is very large, the predicted  $(workpreference)_o$  would then overstate (or understate, depending on the nature of selection) the true country-specific preferences.

To ensure that these issues of selection and sorting do not bias our estimates significantly we perform several important checks. First, we check correlations of country-specific preferences with characteristics of the country of destination, to see if there is a systematic selection of people with some preferences to some countries and we do not find significant correlations. Second, as we discussed above, we include bilateral migration stocks (or the bilateral stock of high skilled migrants) in our empirical specification (10) as control. This allows us to use the size of bilateral (skilled) migrant population as proxy of the intensity of selection and sorting between two countries, so that including those the potential impact of bias should be reduced. Third, to eliminate the potential “mechanical” effect of selective migration on preference of non-migrants, we use as a main explanatory variable the culture-of-origin preferences predicted including all individuals (i.e both natives and migrants) sharing the same origin. The robustness of our main results to these variations reassure us that selection and sorting do not drive our estimates.<sup>19</sup>

Finally, we perform a number of robustness checks to account for potential measurement error of the preferences, and for its possible correlation with individual productivity. We check the robustness of our results to alternative measures of country-specific preferences and in all our specifications we only use first and second migrants.

## 6 Main results: the effect of labor-leisure preferences

[TABLE 4 AROUND HERE]

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<sup>19</sup>The battery of correlations is presented in Table 3 below. The inclusion of bilateral migration rates is presented in Table 8. The check on the measurement of culture using the entire population of origin (i.e. natives and emigrants) is in Table 11. We also show that our results are robust to the inclusion of high skilled emigration rates as controls (see Table C-9 in the on line Appendix).

In Table 4 we show the main results of the paper. In Row (b) and below we report the estimates of the coefficient on the variable  $(workpreference)_o$  that captures the culture-of-origin preference for working, measured as the coefficient on the country fixed effect of the auxiliary regression described in section 5 above. Specifications from Column [1] to Column [3] include progressively more controls. In Column [1] we only include country-of-residence-by-year fixed effects, capturing all time-varying institutional and economic features of the country of residence. In Column [2], we add controls for individual characteristics, namely age, education, marital status, a dummy for the presence of children living in the household and a dummy for being in the country for less than 20 years. These characteristics may clearly affect productivity and preferences, and have an impact on employment probability. In Column [3], we include additional controls for parental characteristics, namely father's education, employment status and occupation when the respondent was 14 years old. Some unobservable human capital characteristics of individuals derive from parental investment, and these controls allow us to account for them.<sup>20</sup> Row (a) of Table 4 differs from the others in that it shows the coefficient on the variable  $(workpreference)_i$ , measured for the individual. As discussed above, the individual preference has an idiosyncratic and potentially endogenous part, as well as a culturally determined, more persistent part captured by the country-specific preferences indicator  $(workpreference)_o$  which is the explanatory variable of the specifications in Rows (b)-(e), following the epidemiological approach (EA). Hence the estimates in Rows (b)-(e) can be interpreted as the effect of culture-of-origin work preferences on employment probability, while the estimates in Row (a) show how endogeneity and omitted variable bias substantially affect the correlation at the individual level. For all specifications we compute robust standard errors, two-way clustered by origin-destination country as unobserved characteristics can be correlated within origin and destination (Cameron *et al.* [13]). We also re-run all estimates with bootstrapped standard errors by country of origin to account for measurement error in the estimated  $(workpreference)_o$  variable. We also run probit models to accommodate non-linearity. All these estimates confirm the statistical significance and qualitative features of the coefficients (and are shown in the on line Appendix, Tables C-4 and C-5).

The dependent variable in each specification of Table 4 is a dummy equal to one if the person is working during the reference week and zero otherwise. The estimates of Row (a) show that there is a significant negative correlation between the individual statement about work preference and the probability of being employed. It reveals that individuals who are less likely to be employed are more likely to state that they enjoy having a paying job. Frustration with unemployment or perceived job insecurity (see Dickerson and Green [17]) may lead to overstating one's preference for work (reverse causality). Alternately, unobserved individual characteristics may negatively affect employment chances as well as lead them to overemphasize their enjoyment of work. Both of these problems would induce a spurious negative correlation between employment and stated preferences for labor. Things change when we assign to individuals the average preference for work from the culture of origin.

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<sup>20</sup>In Table C-6 of the on line Appendix we also account mother's characteristics as these are important predictors of son's outcomes. See Fernández *et al.* [20].

In Specifications (a) and (b) we have only considered a cross section of individuals in year 2010, the year in which the question on work preferences is asked in the survey. Estimates in Rows (c)-(e) include individuals in all waves (from 2004 to 2012) in the analysis. The variable (*workpreference*)<sub>o</sub> is still calculated using 2010 data, thus we assume the country-of-origin preferences are stable over the decade. Some studies, such as Giavazzi *et al.* [25] emphasize that cultural preferences evolve, albeit slowly, over time. In our case, we focus on the cross-country differences in preferences as the analysis is limited to one decade—a period over which we consider them constant. Row (c) includes natives and immigrants in the regression, while Rows (d) and (e) consider only migrants. Row (e) focuses on the group of migrants aged 20-50, which has the highest employment rates in our surveys. The results show a strong, positive and statistically significant coefficient of the work preference on employment probability, especially large when we limit our analysis to migrants (Row (d)). Using the more conservative estimate from Column [3], an increase by 0.05 in the country-of-origin preference for work, which is as large as one standard deviation across countries and equal to about half the difference between the preferences of people from Spain and Norway, would imply a difference in employment probability by 2 to 2.5 percentage points for males. This is about half of the actual difference in employment rates of males between Spain (0.9) and Norway (0.95).<sup>21</sup>

[TABLE 5 AROUND HERE]

In Table 5, we focus on the specification used in Row (d) of Table 4, which includes only migrants and looks at the entire period from 2004 to 2012, and considers different measures of individual labor supply. In Panel A of Table 5, we use as a dependent variable the participation rate (Row (a)), the logarithm of average hours worked in a year for employed people (Row (b)) or all working-age individuals (Row (c)). These estimates also show a significant impact of country-of-origin preferences on the intensive margin of hours worked for employed people. Estimates in Row (c), which account for both the extensive (employment) and intensive (hours per worker) margins of labor supply, suggest a one standard deviation increase in preferences for work is associated with an increase in hours of work by about 0.02 full-time equivalents, about one hour of work per week.

In Panel B of Table 5 we show the estimates when considering various measures of unemployment and non-employment as the dependent variable. In particular, these measures relate the country-of-origin preference with “cumulated” non-employment over the lifetime of a person. In Row (d), the outcome is being currently unemployed; in Row (e) it is a dummy for having ever had a 3-12 month unemployment spell; and in Row (f) it is a dummy for having experienced at least one unemployment spell lasting more than 12 months. Row (g) considers never having had a paid job as the outcome. The estimated coefficient of the country-of-origin preference for work on all these measures of non-employment is negative and very significant. These results are consistent with peo-

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<sup>21</sup>Similar magnitudes are confirmed in specifications that capture the country-of-origin preference for work using different codifications of the variable that states individual’s preferences i.e. a dummy equal to one if he agrees or strongly agrees with the statement (rather than only “strongly agree”) about enjoying work and the initial index ranging from 1 to 5 (from strong disagreement to strong agreement) directly. Estimates using these alternative mappings of country specific preferences are reported in Table C-3 in on line Appendix.

ple from countries with stronger work-preferences being less likely to be unemployed and having a history of unemployment or non-employment.

## 6.1 Cultural Integration and Cultural Transmission

[TABLE 6 AROUND HERE]

Assimilation into the culture of the country of residence is certainly a process that may attenuate the influence of the country-of-origin preferences on the behavior of migrants. Estimates in Tables 4 and 5 consider all migrants together. In this section we test whether assimilation in the country of residence affects the strength of the impact of culture of origin on employment. A long period of residence in the host country and more open attitudes towards integration into a different culture are features that should affect the degree of assimilation of migrants. In Table 6, we analyze this issue by partitioning migrants into groups with different characteristics that should be related to their degree of assimilation. The first is the length of time the immigrant has been in the country. Immigrants that spent a long time in the country of residence are more likely to have absorbed aspects of the local culture. The second dimension is their citizenship. The restrictive conditions on obtaining citizenship in European countries (e.g. by marriage, or naturalization) require effort from immigrants, a commitment to integrate, and to have long-term residence in the country. Moreover, the benefits of citizenship can be rather limited for the group we are considering as they are intra-European migrants, many of whom already have access to most of the rights of citizenship via EU or intra-Schengen agreements.<sup>22</sup> Hence only immigrants with a strong commitment to their host country, or their children, may decide to become citizens. A final important feature we consider is immigrants' own attitude and inclination to become integrated with the culture of the country of residence. One piece of information to evaluate the migrants' attitude is their answer to the question whether they consider important "*understanding different people*". An affirmative answer to this question implies a more open attitude toward different people and cultures. We interpret this variable as a proxy for the migrant's individual openness to integration.<sup>23</sup>

We split the sample in two groups along each of the three characteristics described above and present the results in Panels A, B and C of Table 6. In each panel, we report first the coefficient on the preference for work from a regression with the employment probability as dependent variable, conditional on the relevant measure of cultural integration (denoted by *(i)* in each panel). We also report the estimated coefficients when interacting preferences for work with two dummies describing the heterogeneity in each dimension (denoted by *(ii)*). For this second set of regressions, we also show the p-value of a test of the null hypothesis that the coefficients on the two interactions are equal.<sup>24</sup>

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<sup>22</sup>Conversely, benefits of acquiring citizenship of the residence country can be relatively high (e.g. in terms of easiness of getting a work permit) for immigrants coming from countries outside of the Schengen area. In our sample these are Bulgaria, Croatia, Cyprus, Israel, Ukraine and Russian Federation.

<sup>23</sup>This may be an imperfect measure of the openness to cultural assimilation. Other measures of such attitude could be questions related to "speaking the residence language" or "respecting a Host Country's Law". These questions, however, are asked in other survey data (e.g. the European Value Study. See Litina *et al.* [36]) but not in the ESS.

<sup>24</sup>Notice that we focus on the entire pool of migrants. In fact, distinguishing between first and second

First, in each panel we find a significant average coefficient of the country-of-origin preference for work, even after controlling for assimilation using our proxy variables. Second, in each of the three cases considered, there is some evidence that assimilation reduces the effect of culture of origin on the probability of employment. Panel A(ii) shows a significant and stable effect only for workers who spent less than 20 years in the country of residence. The coefficient of this effect in the more conservative specification [3] is equal to 1.04 with a standard error equal to 0.08. Workers who lived in the host country more than 20 years do not exhibit any effect of country-of-origin work preference on employment after controlling for individual and parental characteristics, significant at the 1% level. In Panel B(ii) specification [3] shows that, after controlling for individual characteristics, having the citizenship of the host country reduces the impact of the country-of-origin culture. The estimated coefficient is 0.50 for non-citizens and 0.28 for citizens, with the difference between the two coefficients being statistically significant at the 5% level in column [3]. Finally, Panel C(ii) suggests individuals who agree with the statement "*it is important to understand different people*" are less affected by their culture of origin in their employment (coefficient 0.39) relative to those stating that it is not important to understand different people (coefficient of 0.74), with the difference being significant at the 1%. Overall, these checks are consistent with the view that the effect of country-of-origin preferences weakens with assimilation.

[TABLE 7 AROUND HERE]

In Table 7, we analyze the issue of intergenerational transmission of preferences looking more closely at the second generation of migrants. The table shows the effect of country-of-origin preference on the employment outcomes of second-generation immigrants only. In the analysis we separate the culture of origin effect between individuals with either an immigrant father, an immigrant mother, or both. We focus on whether having a native parent (i.e. born in the country of residence) significantly reduces the culture of origin effect on the second generation. A native parent may certainly increase the effectiveness of assimilation into the culture and values of the country of residence. At the same time, a native parent may also have an impact on employment opportunities independent of the culture of origin, by transferring country-specific skills and network connections that are useful for productivity and the job finding. In Panel A, we consider the case of second-generation immigrants with an immigrant father by giving these individuals the working preference of their father's country of origin. This replicates what we did in the previous tables. In Panel B, we consider second-generation whose mother is an immigrant. We give these individuals the working preference in the mother's country of origin.<sup>25</sup> Let us emphasize that the focus on second-generation substantially reduces worries of selection/sorting of migrants as the migration decision was taken by the migrant's parent (first generation) and hence does not depend on the employment outcome of the offspring (see Fernández [21]).<sup>26</sup>

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generation would entail a large reduction of the number of observations available in each cell.

<sup>25</sup>This implies that for estimates in Panel A we adopt the same definition of migration status as in Tables 4 - 6 (i.e. based on the father's country of origin), while in Panel B we switch to the mother's country of origin.

<sup>26</sup>Selective migration may still be present in second generation migrants if individual employment outcomes are correlated across generations.

In Columns [1]-[3], we present the basic results. At first glance, the second generation—similarly to people who have been in the country for more than 20 years—does not seem to exhibit much effect from the father’s culture of origin on employment probability. The estimates in Columns [1]-[3] are small and sometimes not significant. Then in Columns [4]-[6] we distinguish between individuals who have both immigrant parents (coefficient in the first row of Specifications [4]-[6]) and those who have a native mother and immigrant father (sum of the coefficients in the first and third row of Columns [4]-[6]). Children with two immigrant parents exhibit a strong positive effect from the father’s country-of-origin preference for work on their employment probability (coefficient between 0.52 and 0.67 with standard errors 0.12 – 0.16 in Columns [4]-[6]), while having a native mother completely offsets this effect (possibly the father’s country-of-origin preference has a negative impact on employment in Specification [4]-[6]) and ensures full assimilation. Having a native mother also increases, per se, the probability of second-generation migrants being employed (second row), possibly because having a native mother improves the acquisition of country-specific skills. To investigate more the relevance of the mother compared to the father in the cultural transmission process, in Panel B we report results of similar specifications but with “culture of origin” now relative to the mother of the second-generation immigrant. From Specifications [1]-[3], we see the mother’s country-of-origin preferences have a stronger impact on employment of the second generation than the father’s country of origin. The coefficient is around 0.85 and very significant. Even in this case, the effect is concentrated on second-generation immigrants with two immigrant parents (first row, Specifications [4]-[6] of Panel B). The positive effect of mother’s culture-of-origin preference for work is between 1.48 and 1.86 in its impact on employment. Even in this case, the presence of a native father reduces to zero the impact of mother’s culture of origin on employment. Having a native father has a similar effect as having a native mother on the probability of having a job (similar effects in second row coefficients in Panel A and B).

Two considerations are in order. First, a marriage with a native person weakens the impact of preferences from the country of origin of the immigrant parent on the second generation job probability. This is an interesting result, consistent with the view that the persistence of culture depends on several factors related to social interactions of migrants in the host country, particularly for second (and higher) generations (see e.g. Giavazzi *et al.* [26]). Our findings point at the great role of intermarriage in the assimilation of the second generation. However one has to be careful in interpreting causally these results. Clearly intermarriage is not random, and the effect we estimate may be entirely due to the selection of immigrants with weaker ties to their country of origin culture into marriage with natives, followed by a weak transmission of their preferences to the children.

Second, our results are consistent with the view that the mother is more relevant than the father in the formation of the working attitudes of sons. This confirms existing evidence that growing up with a work-oriented mother has a specific influence on man’s preferences: women who worked set an example for their sons (Fernández *et al.* [20]). From an empirical perspective, this also implies that our choice of the fatherly cultural channel in the baseline specification in Table 4 (Row (d)) is very conservative: the size coefficient of country-specific preferences in the baseline specification increases by roughly the 50% once we benchmark the cultural transmission process to the motherly instead of

the fatherly channel (see Table C-6 in the on line Appendix). Our results are robust to the inclusion of the characteristics of the mother in the set of parental controls (see Table C-12 in the on line Appendix).

## 7 Extensions and Checks

### 7.1 Sorting of Immigrants: Bilateral Destination-by-Origin Stocks

As mentioned above, one concern in the identification strategy adopted so far is that migrants may select from their origin based upon some unobserved culture-specific feature, and sort in the destination country based on their employability there. This mechanism may introduce some spurious correlation between the variable  $(workpreference)_o$  and  $l_{iort}$  (as described by the term  $\ln(\bar{\theta}_{or})$  in equation (9)).

In Table 3 we have already presented some descriptive evidence that reassures us about the lack of a systematic correlation between country-specific preferences for work, and observable characteristics of the destination e.g. related to its institutions, labor market performance and education system. In Table 8 below we move one step further, and check the robustness of our results once we explicitly account for the selection and sorting of immigrants from a certain origin to a specific destination. We do this by including the term  $m_{or}$  in equation (10) which is the logarithm of the bilateral stock of migrants. In Columns [1]-[3] we include in the set of controls the bilateral stocks of migrants in the destination by country of origin in 2010, i.e. at the time of the measurement of preferences. To avoid any feedback effects, in Columns [4]-[6] we measure the stocks at their predetermined 2000 level.

Results from both specifications suggest a negative effect of bilateral stocks on the employment probability of immigrants in the destination, which is significant at the 1% level. The negative sign may derive from a labor market competition effect between immigrants from the same origin: an increase in the stock of migrants from the same ancestry reduces the probability of the individual migrant to have a job in the destination. This result is consistent with the view that labour markets of EU destinations are often segmented by region of origin (Felbo-Kolding et al. [19]). As we account for this effect, the estimated coefficients of preferences for work in all specifications in Table 8 become slightly larger than the corresponding baseline estimate in Table 4 (Row d). The same is true when we focus only on bilateral stocks of high skilled immigrants (see Table C-15 in the on line Appendix). These results may suggest that the selection and sorting of immigrants in the destination, if not controlled for, produces a downward bias to our estimates. This would be true if migrants are positively selected and sorted along the "work preference" dimension. The estimates, however, are rather similar to those of 4 indicating this bias not to be too large.

[TABLE 8 AROUND HERE]



## 7.2 Omitted Variables: Country of Origin Characteristics, General Attitudes and Values

[TABLE 9 AROUND HERE]

A second identification concern is that other country of origin characteristics may be affecting skills and abilities of migrants, and may be correlated with the variable (*workpreference*)<sub>o</sub> that measures working preferences in the country of origin (i.e. the term  $C_o$  in equation (9)). We address this issue in Table 9 below. Some of these robustness checks are in the spirit of Fernández and Fogli [24]. One characteristic that may have long-lasting effects on the employment possibilities of a migrant, by affecting his/her skills, is the quality of schooling and education in the country of origin. In columns [1]-[3] we address this issue and check the robustness of the coefficient estimates to the simultaneous inclusion of country-of-origin indicators that are correlated with school quality: education expenditure as a percentage of GDP, school enrollment rate for individuals in primary school age, a measure of pupil-to-teacher ratios (PtT) in primary school and the measure of labor force quality in the country of origin (at World basis) by Hanoushek and Kimko [32]. The estimates of the coefficient of (*workpreference*)<sub>o</sub> remains roughly stable and very significant across specifications, suggesting that our main results are not driven by unobserved skills related to school characteristics in the country of origin. Most proxies for education quality in the country of origin take the expected sign. In particular, larger education expenditure as a percentage of GDP and lower pupil-to-teacher ratios in the country of origin are associated with higher employment probability of migrants, with the effect of education expenditure being statistically significant. Overall, these results suggest that quality of schooling in the country of origin is likely to matter for the human capital of an individual<sup>27</sup> and hence his probability of employment. The labor force quality indicator by Hanoushek and Kimko [32], which is based on performance on international standardized tests has a negative coefficient. This may signal a selection effect: highly employable individuals emigrate less from countries with a highly qualified workforce. This effect however is no longer significant in column [3], after we account for parental characteristics.

Institutions and culture may constitute unobserved factors associated with each origin, or each destination-origin couple. In columns [4]-[6] we present additional robustness checks along these lines. Our results are unchanged when we include indicators of quality of institutions in the country of origin (i.e. government effectiveness, regulatory quality, rule of law, control of corruption), geographical proximity between origin and destination (measured as the inverse of the CEPII indicator of distance between capitals), a measure of linguistic proximity (see Melitz and Toubal [38]), and the size of the network of co-immigrants in the same destination. Size and significance of the controls' coefficients signal that migrants coming from countries with more efficient rule of law (e.g. in terms of contract enforcement, property rights, etc..) and less pervasive state regulations, are more likely to have a job in the destination. Also, geographical and, linguistic proximity enhance the portability of migrants' skills from origin to destination, and

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<sup>27</sup>See Schoellman [43] for a quantification of the importance of education quality using migrants' human capital.

are positively associated with employability. Finally, a large size of the co-immigrants' group may foster competition for jobs in the same labor market segment by reducing the employment probability of each individual immigrant finding a job.

More generally, one concern of our approach is that economic conditions in the country of origin may affect the employment outcome of migrants, either through abilities or through the perception of migrants in destination countries. In both cases, economic success in the country of origin may be an omitted driver of employment probability of migrants. An alternative possibility is also that economic characteristics of countries of origin affect the selection of migrants, in turn affecting their performance in the host country. In columns [7]-[9] we control for these possibilities by including simultaneously several different economic indicators from the migrants' country of origin. We include (log) GDP per capita, the employment to population ratio, a measures of income inequality (the 90/10 percentile ratios), and the emigration rate from the country of origin. The effect of culture-of-origin work preferences on individual employment probability remains positive and significant. As for the controls, migrants from countries with lower GDP per capita, lower inequality, and lower emigration rates seem to have a higher probability of employment in the host country, while the employment to population ratio has no significant effect. These findings may be consistent with the idea that selection of more skilled emigrants is stronger from countries with worse economic performance, so that more skilled individuals (in non-observable dimensions) are more likely to migrate and have better employment opportunities in their destination.<sup>28</sup>

Finally, in columns [10]-[12] we include simultaneously all the controls that turned out to be significant in previous specifications. The coefficient of country-specific preferences remains significant and stable in these more demanding specifications.<sup>29</sup>

[TABLE 10 AROUND HERE]

Our analysis is focused on isolating the impact of preferences for work on labor supply. However, country-of-origin culture influences other personal values and beliefs and, in turn, behaviors of migrants. We considered several other values as potentially having important economic consequences and also possibly affecting the inclination to work. Religious denomination and religiosity (see e.g. Guiso *et al.* [30]; Giavazzi *et al.* [25]), self-interest or trust (Guiso *et al.* [31], Algan and Cahuc [8]) and attitudes towards the family and towards gender (Alesina and Giuliano [1], Giavazzi *et al.* [25]) all can affect willingness to work. In Table 10 we analyze whether the effect of work preferences is robust to the inclusion of these additional characteristics as controls in EA estimates. In columns [1]-[3] we add measures of religiosity and religious denomination as controls.

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<sup>28</sup>An alternative explanation of these coefficients is that worse economic conditions at origin push migrants to work harder and to be more inclined to accept jobs, as their outside option is worse, reducing their probability of non-employment.

<sup>29</sup>In Tables C-8, C-9, C-10 in the on line Appendix we replicate the exercise by including these and other indicators singularly. For education quality, we also consider education expenditure as a percentage of total public expenditure, enrollment rates and PtT ratios in secondary education, PISA scores in reading and science, and the measure developed by Hanoushek and Kimko [32] at a US basis. For economic conditions, we also consider growth of GDP per capita, the unemployment rate, the 80/20 percentile ratio, the emigration rates of individuals with tertiary education, and the share of co-emigrants with tertiary education. For cultural proximity we consider the existence of past colonial linkages between destination and origin. Our results go through in these robustness exercises.

In columns [4]-[6] we include an index of lack of generalized trust and a measure of beliefs regarding women’s role in the labor market. The estimates show that significance of the coefficient on preferences for work does not change much, although the size of the coefficient decreases in columns [4]-[6] as the sample size becomes smaller. Among the controls, identifying with a Jewish religious denomination is associated with a higher employment probability. Religious intensity, distrust, and a negative view of women’s role in the labor market have a negative impact on employment rates of our sample and are statistically significant. Existing studies show these three dimensions of individual preferences are strongly correlated (Guiso *et al.* [30], Guiso *et al.* [31], Giavazzi *et al.* [25]), and the presented regression shows they are also associated with decreased employment probability of men.<sup>30</sup> Finally, our results still stand in columns [7]-[10], when we include all controls simultaneously.

### 7.3 Measurement of Country-specific Preferences for Work versus Leisure

[TABLE 11 AROUND HERE]

In Table 11 we report an additional set of estimates to check the robustness of our results to alternative measures and definitions of country-specific preferences for work versus leisure.

Estimates in Panel A consider alternative measurement of country-specific preferences for work. In Row (1) we report results when we construct a measure of  $(workpreference)_o$ , which is robust to the mechanical effect of selection on the distribution of natives/stayers in the country of origin. As discussed in Section 5, selective migration may bias upwards our estimates provided that migrants have lower preferences for work than the average of their country of origin, if the size of migratory outflows is large enough. To address this concern, we predict  $(workpreference)_o$  using all individuals with origin in a country (i.e. including the first and second generation emigrants back in the country of origin). In this way we avoid selection in the measure of country-specific preferences that would arise if migrants and non-migrants have strongly different preferences. In Row (1) the coefficient of  $(workpreference)_o$ , estimated in this way, is larger than in the baseline specification. This confirms that (positive) selective migration imposes a downward bias to our estimates: emigrants are a selected group of people that have positive preferences for working relative to non migrants. Accounting for the preferences of emigrants slightly reinforces the impact of culturally-transmitted preferences on migrants’ employment outcomes. In Row (2) we measure country specific preferences as a simple (unconditional) mean preference of natives who reside in their origin country. In this way, we reduce significantly the measurement error introduced by estimating the main regressor, but also introduce potential omitted variable bias to the estimates as we no longer control for individual and parental characteristics. Estimates in Row (2) confirm our main results, while the coefficient becomes slightly smaller in size.

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<sup>30</sup>In Table C-11 of the on-line Appendix we include indicators one-by-one, and also consider perceived job insecurity and lack of loyalty. The former is associated with a higher employment probability, which is consistent with the view that insecurity increases job-search and in-work effort (Clark *et al.* [16]). Lack of loyalty towards friends does not seem to be correlated with individual employment probabilities. More importantly, our results on country-specific preferences are always confirmed.

In Panel B we include individual characteristics, which may also present a country of origin specific component (e.g. correlated with unobserved individual productivity) and can also be correlated with  $(workpreference)_o$ . To properly account for these factors, we report results when we use a measure of  $(workpreference)_o$  obtained from a first-stage specification augmented by controlling for individual characteristics such as generalized distrust and conservative work culture (Row 3), a dummy for native language belonging to the Latin linguistic group (Row 4), dummies for individual being unemployed or belonging to a discriminated group (Row 5). The estimated effect of  $(workpreference)_o$ , obtained from any of these augmented first-stage specifications is basically unchanged, which confirms that our baseline results are not driven by unobserved differences.<sup>31</sup> In Row (6) we deal with another concern, associated with the wording of the statement we use to estimate country-specific preferences. The statement “*I would enjoy having paid job even if I did not need money*” could simply reveal a high marginal utility of money (rather than a low marginal cost of working). Hence, we check whether our results are robust to the inclusion, in the first stage, of a variable capturing country-specific preferences for money (rather than work). This is a dummy equal to one if natives consider important “*to be rich, have money and expensive things*”, and zero otherwise. Our results are unaffected.

In Panel C we further explore the effects of country-specific preferences for work on individual employment outcomes, reporting results when we use alternative indicators of preferences for labor-leisure as a dependent variable in the first stage. In Row (7) we use a measure of work-preference describing the value of work for the individual. This is retrieved by a principal component analysis (PCA) on country-specific indicators of “*I put effort in my work to keep my job*”, “*Work always comes first*” and “*Work is important in life*”. In Row (8) we use an alternative measure describing the value of work for the society as a whole. This is retrieved by a PCA on country-specific indicators of “*Work is a duty towards the society*”, “*Work is needed to develop talents*” and “*People turn lazy without working*”. Results confirm that country-specific preferences for work defined in these ways are also associated with higher employment probabilities.<sup>32</sup>

Finally, we construct measures of country-specific preferences for leisure, as the predicted origin FE from regressions of the individual evaluation of leisure, after controlling for the usual set of individual and parental characteristics. In Row (9) we adopt a definition based on beliefs regarding the importance of leisure for one’s life. In Row (10) we adopt the same measure of preferences for leisure used by Giavazzi *et al.* [25]. They found a negative effect of country-specific preferences for leisure on aggregate hours of work. We extend this result showing a negative association with individual employment probabilities.

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<sup>31</sup>In Table C-7 (Panel A) of the on line Appendix, we also include productivity measures associated with religious intensity and denomination (Row 1) and (log) wages (Row 2). In Table C-14 we show our results hold when we measure country specific preferences only on employed native males.

<sup>32</sup>Notice that all country-specific indicators used in the PCAs except “*I put effort in my work to keep my job*” are not reconstructed from the European Social Survey, but from the European Value Study. In practice, to construct country-specific indicators from EVS data we performed the first stage on the sample of natives available from the 2008 wave of the EVS (the only wave with information about natives/migrants) and then “attached” the predicted country-specific preferences to the ESS sample of migrants. Table C-7 in the on-line Appendix reports results from regressions using the single country-specific indicators. Also in these estimates, our results are confirmed.

## 8 The Role of Redistribution

The connection between work preferences and employment that we have studied so far may interact with redistribution in two ways. First, individuals who have more leisure-oriented preferences may see as desirable that social protection and redistribution in a society allows low income people the possibility of working less. The preference for leisure may be related to stronger preferences for redistribution. On the other hand, the generosity of redistribution (labor market insurance, and size and progressivity of taxation) is itself an important determinant of employment decisions. Hence we will quantify how important preferences are, relative to taxation and unemployment insurance, in affecting employment of individuals.

### 8.1 Preferences for Work and Redistributive Attitudes

In Table 12, we investigate the effect of country-of-origin work preferences on opinions and choices in the area of social equality and government redistribution. A low preference for working implies an individual considers labor a burdensome activity, and it seems compatible with a position in favor of government redistribution and regulation of labor. The outcome variables we explore in the first two rows of Table 12 are a dummy equal to 1 if the respondent indicates the government should ensure safety for all workers (Row (a)), or if the respondent agrees that the government is responsible for the living standards of the unemployed (Row (b)). Next, we consider whether the respondent was ever a member of a trade union (Row (c)), or if he/she self-reports a left-wing ideology (Row (d)). Finally, we consider if the respondent reports that it is important "to treat people equally" (Row (e)). The estimates reveal that individuals from cultures of origin that value labor over leisure are less likely to state that government should ensure safety and living standards of workers, and are less likely to participate in a trade union. A one standard deviation increase in country-of-origin preferences for work is associated with about a 2.5 percentage point decrease in the probability the respondent indicates the government should guarantee safety, and about a 3 percentage points decrease in the probability the respondent has been a member of a trade union. No significant association of preferences for work emerges with preferences for equality or left wing ideology. This is reasonable as both of those preferences clearly imply a much larger set of political and social attitudes not limited to the attitude towards labor. Stronger preferences for working seem to go together with more "market oriented" attitudes vis-a-vis labor interactions, and with support for a smaller role for government. This is consistent with other findings from the existing literature investigating the cultural determinants of attitudes towards redistribution (see Alesina and Giuliano [2] for a review). This literature shows that individual preferences for redistribution are often rooted in a "history of misfortune" in the country of origin that may reduce self-reliance and willingness to exert individual effort (hence dislike work) and make people more likely to prefer government and institutions that pursue social insurance and redistribution (see e.g. Giuliano and Spilimbergo [27]; Alesina and Glaeser [5]). Such preferences are culturally inherited over time and may persist even for generations who are not exposed to adverse economic shocks (see Luttmer and Singhal [37]).

[TABLE 12 AROUND HERE]

## 8.2 Labor Market Institutions and Taxation in the Host Country

Redistributive policies and taxation are also very different across European countries. In Table 13 we explicitly include indicators of institutions and policies in the country of residence of the immigrant as determinants of employment. When we do so, we need to remove from the regressors the country-of-residence-*by-year* effects and only include country-of-residence *and* year effects. In columns [1] and [2] we consider the role of labor market institutions. The first is the unemployment benefits replacement rate that captures the generosity of the unemployment system in a country, and the second is the share of unionized workers (union density) that captures the potential impact of bargaining power on employment. We also include in these regressions *both natives and migrants in the destination country*. This increases the comparability of the estimated effect of country-specific preferences with institutions (which mostly operate on natives in the residence country) and recalls the literature that investigates the role of labor market institutions for the aggregate (un)employment performance of a country (Bassanini and Duval [11]).

The results in columns [1]-[3] confirm the finding of previous research that implies lower employment probability when the replacement rate is higher (as measured by the unemployment benefits replacement rate). As it is usually the case in cross-country panel analysis, union density does not provide a good measure of union power in EU countries (this is generally ascribed to the widespread presence of extension mechanisms in EU countries. See Arpaia and Mourre [10] for a review).

In columns [3]-[5] we thus exclude union density, and consider the effect of labor taxation (see e.g. Alesina and Giuliano [1]). In particular, we choose measures of labour taxation based on average tax rates (*ATR*) at different points of the earnings distribution, namely: 67% of the average wage, at the average wage (i.e. 100%) and at 167% of the average wage.<sup>33</sup> From the above information, we compute retention rates, namely the percentage of income left after tax,  $ret_{j,i,t} = (1 - ATR_{j,i,t})$  where  $j = 67\%, 100\%, 167\%$  with respect to the average wage in country  $i$  and year  $t$  (the retention rates, therefore, are in percentage points), and express them in logarithms. In column [2] we include only  $\ln(ret_{100,i,t})$ , which features the typical empirical proxy for the average tax wedge on labor used in the unemployment literature (see Bassanini and Duval [11]). In countries in which the tax wedge is larger, the incentive to work should also be reduced. In column [3] we include measures of the retention rates at the other two points of the distribution,  $\ln(ret_{67,i,t})$ , and  $\ln(ret_{167,i,t})$ . In column [4] we include  $\ln(ret_{100,i,t})$  and a global progressivity indicator, which consists of the logarithm of the ratio of retention rates at 67% and 167% of the average wage. In column [5] we add culturally transmitted preferences for work. The estimated effect shows that increased retention rate and increased progressivity of taxes (which implies lower relative burden for low-income people) increase the supply of labor, as expected. Estimates in column [6] compare the magnitude of the effect

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<sup>33</sup>These indicators are harmonized over time and across OECD countries and encompass income taxation by central and local governments and employers and employees social security contributions. We focus on single individuals without children.

of preferences for work with the effect of the replacement rate, average taxation, and progressivity. Even controlling for those factors, the country of origin preference for work turns out to be strongly significant and large. In particular, it is much larger than the effect of tax progressivity, but significantly smaller than the effect of the replacement rate and average taxation (between five and nine times smaller).

Overall, the effect of culture of origin preferences for work is robust and important. This finding extends to individual employment outcomes the results obtained by Giavazzi *et al.* [26] for aggregate country level employment rates. While the impact of culture on employment probability is much smaller than the impact of unemployment insurance or tax wedge, it is still significant and more important than the estimated impact of tax progressivity. A small but non trivial percentage of the variation in adult employment rates across countries seems due to preferences and not to frictions. These findings qualify Algan and Cahuc [7]’s view that exogenous culture plays the dominant role in explaining low European employment. This is not the case in our study, where we account for the culturally transmitted component of preferences. Our results are more in line with the intuition in Prescott [41] that labor taxes are important determinants of labor supply elasticities in Europe and adds a precise measure of cultural-specific preferences quantitative impact.

Finally, we use these estimates in simple calculations that provide a magnitude for the effects of culturally transmitted preferences on employment performance across European Countries. Focusing on the 90-10 percentile difference in employment rates across the European countries considered in this analysis. We take the coefficient of preferences for work estimated in Table 13, multiply it by the differences between the country dummies at the 90th and 10th percentile in the auxiliary regression that estimates work preference across countries, and see how this product compares with the difference in employment rates of males between the country at the 90th and the country at the 10th percentile. The 90-10 difference in employment rates is given by the difference between the average employment rates of Sweden and Ireland ( $0.11 = 0.94 - 0.83$ ), while the 90-10 difference in work preferences is given by the difference between the country effect in working preferences of Hungary and Sweden ( $0.10 = 0.23 - 0.13$ ). This implies that preferences explain up to  $[(0.10 * 0.264) / 0.11] * 100 \approx 24\%$  of 90-10 variation in employment in the sample. This is significant. It is also much smaller than what could be explained by the estimated effects of differences in replacement rates: the 90-10 variation in the unemployment benefits replacement rate (0.25, i.e. the difference between the replacement rates of Ireland and Slovakia) explains up to  $[0.25 * (-0.396) / 0.11] * 100 \approx 90\%$  of 90-10 reduction in employment in the sample. A similar magnitude would be estimated if we consider differences in labor taxation between the country at the 90th and 10th percentile of the distribution.

So while institutional variables are certainly very relevant, cultural differences produce up to a fourth of the employment rate differences between high and low employment rate countries, even in absence of institutional differences.

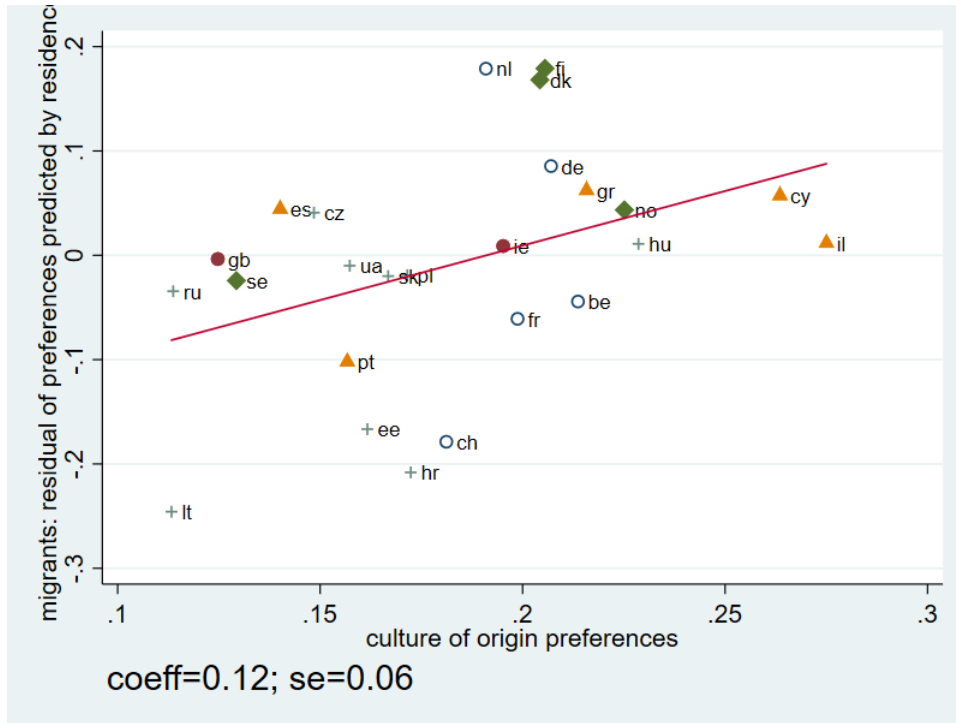
[TABLE 13 AROUND HERE]

## 9 Conclusions

People with a distaste for working are less likely to work and work fewer hours than people who strongly enjoy working. The attitude toward working is, in part, determined by one's experience or personality, but, in part, by cultural norms. In some cultures, working hard and being successful at work are considered great virtues. Other cultures emphasize the importance of enjoying free time, instead. It is hard, however, to extract information on these cultural attitudes about work, and to identify how much they affect one's probability of working. In this paper we do just that: we estimate how much culturally-determined preference for working translates in higher probability of employment. The basic model of labor supply implies that different relative preferences for leisure and work imply different labor supply choices. We use information on how much individuals *"would enjoy having a paid job even if (they) did not need the money"* to extract this preference at the individual level. However, as the individual response can be contaminated by omitted variables and reverse causation, we proxy one's attitudes towards work using an index capturing the average preference in the country of origin. We then focus on migrants across European countries who reside in a country different from that of origin, and analyze whether the country-of-origin preference for work still affects employment probability in the country of residence. We find that country-of-origin preference for work strongly affects the probability of being employed. This effect generates a variation in employment probability that can explain about twenty percent of the differences in working-age male employment rates between countries in Europe. Our results also suggest that this effect is weakened by cultural assimilation forces at work for both first- and second-generation migrants. While other labor market features, such as generosity of unemployment insurance, taxation of labor have a stronger effect on employment, culture-based preferences are an important variable to consider when analyzing differences in performances across European Labor markets.

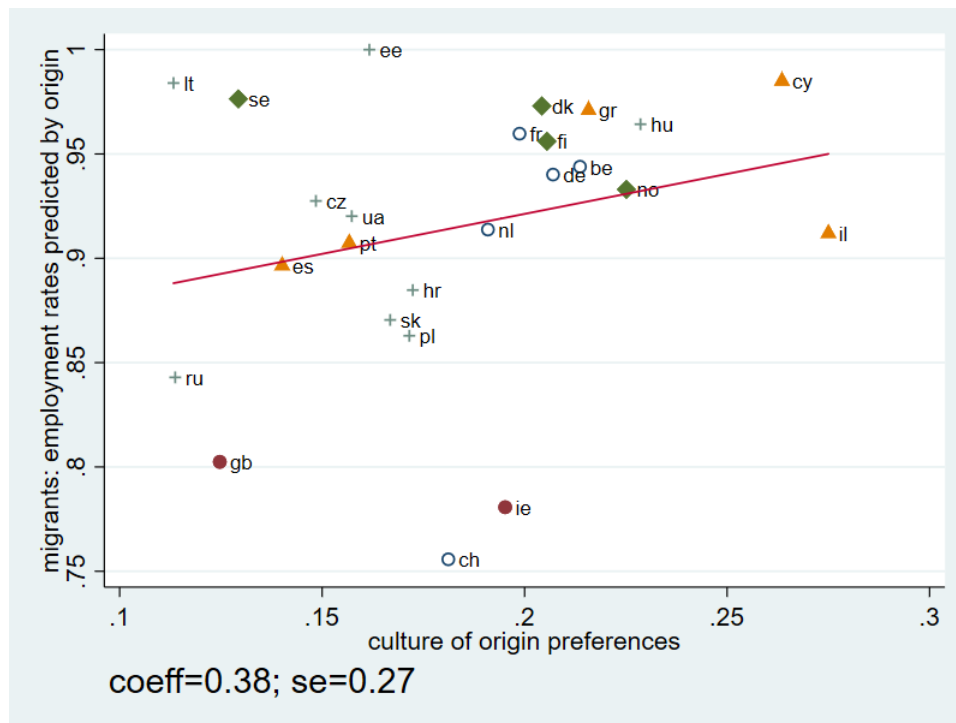


Figure 1: Culture of origin and labor-leisure preferences of migrants



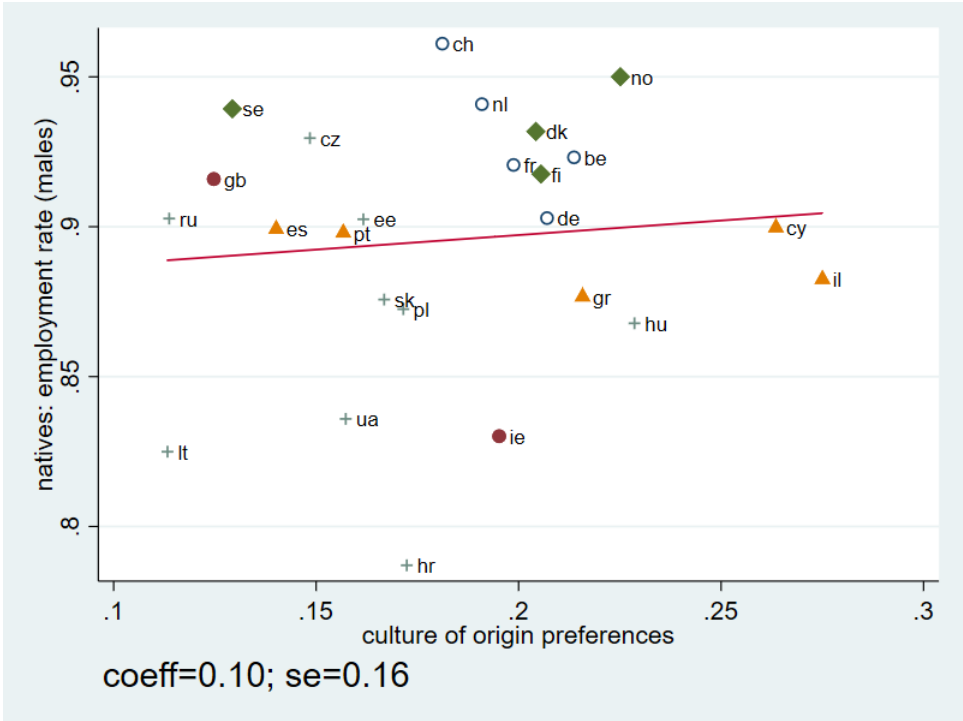
**Notes:** On the y-axis the estimated coefficient of the country-of origin FE, after controlling from country of residence FE in a regression using individual preferences of migrants from a certain origin in their destination. On the x-axis, the estimated coefficient of the country FE in a regression using individual preferences for work of natives (i.e. individual residing in their country of origin), after controlling for individual and parental characteristics. We measure individual labor-leisure preferences as a dummy equal to 1 if the respondent strongly agrees with the statement "I would enjoy having a paid job even if I did not need any money", and equal to 0 otherwise. Source: European Social Survey, 2004-2012.

Figure 2: Culture of origin preferences and employment rate of migrants



**Notes:** On the y-axis the employment rate of male migrants to all destinations predicted by the country-of origin FE. On the x-axis, the estimated coefficient of the country FE in a regression using individual preferences for work of natives (i.e. individual residing in their country of origin), after controlling for individual and parental characteristics (same as in Figure 1). We measure individual labor-leisure preferences as a dummy equal to 1 if the respondent strongly agrees with the statement "I would enjoy having a paid job even if I did not need any money", and equal to 0 otherwise. Source: European Social Survey, 2004-2012.

Figure 3: Culture of origin preferences and employment rate of natives



**Notes:** On the y-axis the employment rate of native individuals predicted by their country FE. On the x-axis, the estimated coefficient of the country FE in a regression using individual preferences for work of natives (i.e. individual residing in their country of origin), after controlling for individual and parental characteristics (same as in Figure 1). We measure individual labor-leisure preferences as a dummy equal to 1 if the respondent strongly agrees with the statement "I would enjoy having a paid job even if I did not need any money", and equal to 0 otherwise. Source: European Social Survey, 2004-2012.

Table 1: Summary statistics for Migrants, Natives and Total Population

	Natives		Migrants, 1st		Migrants, 2nd		Total	
	mean	sd	mean	sd	mean	sd	mean	sd
Enjoy paid job, strongly agree	0.10	0.31	0.11	0.31	0.05	0.22	0.10	0.30
Enjoy paid job, agree or strongly agree	0.50	0.50	0.56	0.50	0.44	0.50	0.50	0.50
Employed	0.89	0.31	0.88	0.33	0.88	0.32	0.89	0.31
Hours of work (Full Time Equivalent)	1.00	0.44	0.97	0.45	1.00	0.46	1.00	0.44
Unemployed	0.09	0.28	0.10	0.30	0.10	0.30	0.09	0.28
Ever unemployed for 12 months or more	0.13	0.34	0.13	0.34	0.15	0.36	0.13	0.34
Never employed	0.01	0.10	0.01	0.11	0.01	0.08	0.01	0.10
Tertiary educated	0.39	0.49	0.42	0.49	0.40	0.49	0.39	0.49
Secondary educated	0.44	0.50	0.42	0.49	0.49	0.50	0.44	0.50
Age 20-50	0.72	0.45	0.76	0.43	0.68	0.47	0.72	0.45
Married	0.62	0.49	0.67	0.47	0.60	0.49	0.62	0.49
Father with tertiary education	0.22	0.41	0.32	0.46	0.23	0.42	0.22	0.41
Less than 20 years spent in the country (migrants, 1st only)	0.00	0.00	0.64	0.48	0.00	0.00	0.01	0.12

**Notes:** All the statistics are calculated on the population of Male individuals in working age (age 15-64), merging all the waves of the survey (years 2004-2012)

Table 2: Employment Rates by country

<b>country</b>	<b>Working age</b>	<b>Age 20-50</b>	<b>country</b>	<b>Working age</b>	<b>Age 20-50</b>
Belgium	92.1 (26.9)	94.1 (23.7)	Bulgaria	74.6 (43.5)	74.9 (43.4)
Switzerland	96.1 (19.5)	96.1 (19.3)	Cyprus	89.1 (31.2)	89.3 (31.0)
Czech Republic	92.5 (26.3)	92.9 (25.7)	Germany	90.7 (29.7)	29.1 (29.0)
Denmark	93.1 (25.3)	92.8 (25.9)	Estonia	89.6 (30.5)	90.0 (30.1)
Spain	89.4 (30.8)	90.1 (29.9)	Finland	91.7 (27.6)	93.3 (24.9)
France	91.9 (27.2)	92.5 (26.4)	UK	91.5 (27.9)	91.7 (27.6)
Greece	86.1 (34.6)	87.1 (33.5)	Croatia	76.0 (42.8)	78.9.7 (40.9)
Hungary	85.8 (34.9)	86.3 (34.4)	Ireland	82.3 (38.2)	82.4 (38.3)
Israel	87.3 (33.3)	88.5 (31.9)	Lithuania	80.2 (39.9)	83.8 (36.9)
Netherlands	94.0 (23.7)	95.1 (21.5)	Norway	94.9 (22.1)	94.8 (22.2)
Poland	86.3 (34.4)	88.0 (32.6)	Portugal	87.7 (32.9)	89.9 (30.2)
Russia	87.7 (32.8)	87.3 (33.3)	Sweden	93.9 (23.9)	94.6 (22.6)
Slovakia	86.9 (33.7)	87.5 (33.1)	Ukraine	80.8 (39.4)	82.6 (38.0)
Total	89.3 (30.9)	89.8 (30.3)			

**Notes:** The population of reference are all male individuals; the average and standard deviation of employment rates are calculated across all years of the survey 2004-2012.

Table 3: Battery of correlations of preferences for work with characteristics of host countries

	dependent variables in columns [1]-[6]					
	[1]	[2]	[3]	[4]	[5]	[6]
<b>Panel A: Labor market and political institutions</b>						
	NRR	UNDENS	GEE	RQE	RLE	CCE
Preferences for work	-42.933** (20.696)	30.942 (57.124)	0.814 (1.346)	0.907 (0.918)	0.864 (1.122)	1.375 (1.714)
Observations	26	26	26	26	26	26
<b>Panel B: Labor market performance and inequality</b>						
	ERATE	GDPXC	GINI	TB10	PRATE	URATE
Preferences for work	5.699 (10.641)	1.866 (2.257)	11.987 (9.779)	12.241* (6.199)	-0.757 (8.001)	-10.719 (8.616)
Observations	26	26	26	26	26	26
<b>Panel C: Education investments and performance</b>						
	EDUGDP	EDUPEXP	PtTII	ENROLI	ENROLII	ENROLIII
Preferences for work	-0.559 (2.712)	-4.947 (3.881)	-10.790 (6.481)	1.168 (4.013)	4.817 (10.718)	27.026 (29.160)
Observations	26	26	26	26	26	26

**Notes:** Columns [1]-[6] report correlation between origin-specific preferences for work and a weighted index of the corresponding characteristic of the host country. The indicator of preferences for work is the estimated coefficient of the country FE in a regression using individual preferences for work of natives (i.e. individual residing in their country of origin), after controlling for individual and parental characteristics (same as in Figure 1). Each host country characteristic is averaged by country of origin, using as weight the share of emigrants from each origin attracted by the host country. Preferences for work and immigration rates are taken in 2010, while host country characteristics are predetermined and taken in year 2000. Labor and political institutions in Panel A include net unemployment benefits replacement ratio (NRR), union density (UNDENS), government effectiveness (GEE), regulatory quality (RQE), rule of law (RLE), control of corruption (CCE). Labor market performance and inequality indicators in Panel B include the employment to population ratio (ERATE), per capita real GDP (GDPXC), Gini inequality index (GINI), the 90 to 10 income percentile ratio (TB10), the labor force participation rate (PRATE) and the unemployment rate (URATE). The indicators of education investment and performance in Panel C include education expenditure as a percentage of GDP (EDUGDP) and public expenditure (EDUPEXP), the pupils to teachers ratios in secondary education (PtTII) and enrollment rates in primary secondary and tertiary education (ENROLI,II,III). Source: ESS OECD Outlook, OECD DIOC, World Governance Indicators (World Bank).

Table 4: Preferences for working in the culture of origin and employment probability

	[1]	[2]	[3]	Observations
(a) OLS, natives and migrants (2010)	-0.079*** (0.006)	-0.082*** (0.006)	-0.084*** (0.005)	9595
(b) Epidemiological Approach (EA), natives and migrants (2010)	0.583*** (0.042)	0.411*** (0.037)	0.353*** (0.032)	9595
(c) EA, natives and migrants (2004-2012)	0.319*** (0.049)	0.299*** (0.032)	0.246*** (0.035)	48119
(d) EA, migrants only (2004-2012)	0.532*** (0.051)	0.498*** (0.050)	0.398*** (0.048)	2686
(e) EA, migrants with age 20-50 (2004-2012)	0.410*** (0.060)	0.372*** (0.056)	0.310*** (0.056)	1927
country-by-year FE	yes	yes	yes	
individual controls	no	yes	yes	
parental controls	no	no	yes	

**Notes:** The dependent variable is a dummy equal to one for working during the reference week and 0 otherwise. The sample includes working age male natives and first, second generation migrants. Specification (a) shows the estimated coefficient of the individual explanatory variable capturing preference for working measured by a dummy equal to 1 if the respondent strongly agrees with the statement "I would enjoy having paid job even if did not need money". In rows (b)-(e), we show the coefficient on the culture of origin preference for working obtained from the auxiliary regression described in the text. As described in the text culture of origin is based on father's country of birth. Column [1] includes country-by-year FE only. Column [2] includes country-by-year FE and individual characteristics (dummies for age, education, marital status, child living in family, dummy for migrant spending less than 20 years in a country) as controls. Column [3] includes country-by-year FE, individual characteristics and father characteristics (dummies for father's education, employment status and occupation when respondent was 14 years old) as controls. The number of observations reported in each row refers to all columns. Robust standard errors, clustered two ways by host and origin country in parentheses (Cameron et al. [13]). Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

Table 5: Preferences for working in the culture of origin, participation, hours of work and unemployment

	[1]	[2]	[3]	Observations
<b>Panel A: Participation and hours of work</b>				
(a) labor force participation	0.120*** (0.016)	0.123*** (0.016)	0.120*** (0.018)	2686
(b) weekly hours per employee (FTE)	0.064*** (0.008)	0.056*** (0.012)	0.082*** (0.012)	2280
(c) weekly hours per person (FTE)	0.472*** (0.025)	0.436*** (0.017)	0.385*** (0.018)	2580
<b>Panel B: Unemployment</b>				
(d) currently unemployed	-0.455*** (0.042)	-0.404*** (0.041)	-0.308*** (0.036)	2538
(e) ever had short unemployment spell (3-12 months)	-0.693*** (0.111)	-0.492*** (0.126)	-0.334** (0.146)	2580
(f) ever had long unemployment spell (12 months or more)	-0.264*** (0.101)	-0.400*** (0.118)	-0.319*** (0.109)	2580
(g) never had a paid job	-0.097*** (0.011)	-0.095*** (0.009)	-0.065*** (0.008)	2580
country-by-year FE	yes	yes	yes	
individual controls	no	yes	yes	
parental controls	no	no	yes	

**Notes:** Sample includes first and second generation migrants only. The dependent variable in row (a) is the participation rate i.e. the share of labor market participants (employed and unemployed) over the working age population. The dependent variables in (b) and (c) are equal to the logarithm of hours of work, computed in FTE terms (40 hours per week). In rows (d)-(g) the dependent variable is a dummy equal to one if the individual experiences the type of unemployment described in the first column of the table. Each entry of the table is the coefficient of the country of origin preference for work obtained from the auxiliary regression described in the text. Column [1] includes country-by-year FE. Column [2] includes country-by-year FE and individual characteristics (dummies for age, education, marital status, child living in family, dummy for migrant spending less than 20 years in a country) as controls. Column [3] includes country-by-year FE, individual characteristics and father characteristics (dummies for father's education, employment status and occupation when respondent was 14 years old) as controls. The number of observations reported in each row refers to all columns. Robust standard errors, clustered two ways by host and origin country in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.



Table 6: Assimilation and the relationship between culture of origin and employment probability

	[1]	[2]	[3]	Observations
<b>Panel A: Length of Stay (LoS) in the residence country</b>				2686
<i>(i) average effect of preference for work, (baseline)</i>	0.532*** (0.051)	0.498*** (0.050)	0.398*** (0.048)	
<i>(ii) heterogeneous effects, by LoS (years)</i>				
(Preferences for work)*(LoS<20)	1.047*** (0.074)	1.120*** (0.082)	1.043*** (0.077)	
(Preferences for work)*(LoS>20)	0.098** (0.041)	0.046 (0.049)	-0.076* (0.045)	
<i>pvalue on test of equal coefficients</i>	0.000	0.000	0.000	
<b>Panel B: Citizenship of the residence country</b>				2685
<i>(i) average effect, conditional on citizenship</i>	0.530*** (0.049)	0.453*** (0.045)	0.345*** (0.043)	
<i>(ii) heterogeneous effects, by citizenship</i>				
(Preferences for work)*(not citizens)	0.369*** (0.075)	0.513*** (0.095)	0.504*** (0.085)	
(Preferences for work)*(citizens)	0.593*** (0.068)	0.428*** (0.061)	0.278*** (0.057)	
<i>pvalue on test of equal coefficients</i>	0.049	0.510	0.054	
<b>Panel C: Important to understand different people</b>				2611
<i>(i) average effect, conditional on important</i>	0.557*** (0.053)	0.528*** (0.054)	0.425*** (0.053)	
<i>(ii) heterogeneous effects, by importance of understanding</i>				
(Preferences for work)*(not important)	0.890*** (0.057)	0.867*** (0.091)	0.744*** (0.079)	
(Preferences for work)*(important)	0.514*** (0.052)	0.485*** (0.063)	0.386*** (0.065)	
<i>pvalue on test of equal coefficients</i>	0.000	0.000	0.000	

**Notes:** Sample includes first and second generation migrants. The dependent variable is a dummy equal to one if the individual is employed in the reference week. The entry of the table represents the estimated coefficient on the explanatory variable of interest, equal to the country of origin preference for work and in specifications (ii) of each panel we include the interaction of that variable with a dummy defined in the first column. In panel A the effect is separated by length of stay, in panel B by citizenship and in panel C by individual attitudes. Column [1] includes country-by-year FE. Column [2] includes country-by-year FE and individual characteristics (dummies for age, education, marital status, child living in family, dummy for migrant spending less than 20 years in a country) as controls. Column [3] includes country-by-year FE, individual characteristics and father characteristics (dummies for father's education, employment status and occupation when respondent was 14 years old) as controls. The number of observations reported in each row refers to all columns. Robust standard errors, clustered two ways by host and origin country in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

Table 7: Second generation migrants: The role of father, mother and inter-marriage

	[1]	[2]	[3]	[4]	[5]	[6]
<b>Panel A: Origin based on father</b>						
Preferences for work	0.061*** (0.019)	0.049* (0.026)	-0.005 (0.046)	0.518*** (0.116)	0.610*** (0.151)	0.674*** (0.160)
Native mother				0.151*** (0.037)	0.179*** (0.047)	0.211*** (0.050)
(Preferences for work)*(Native mother)				-0.731*** (0.163)	-0.923*** (0.213)	-1.148*** (0.202)
Observations	1203	1203	1203	1203		
<b>Panel B: Origin based on mother</b>						
Preferences for work	0.864*** (0.072)	0.820*** (0.094)	0.855*** (0.096)	1.482*** (0.066)	1.747*** (0.098)	1.860*** (0.090)
Native father				0.234*** (0.033)	0.320*** (0.033)	0.341*** (0.038)
(Preferences for work)*(Native father)				-1.034*** (0.177)	-1.569*** (0.164)	-1.731*** (0.213)
Observations	1246	1246	1246	1246	1246	1246

**Notes:** Sample includes second generation migrants only. The dependent variable is a dummy equal to one if the individual is employed in the reference week. The entry of the table represents the estimated coefficient on the variable of interest, listed in the first column. Columns [1] and [4] include country-by-year FE as controls. Columns [2] and [5] include country-by-year FE and individual characteristics as controls. Columns [3] and [6] include country-by-year FE, individual characteristics and father characteristics as controls. Native father and mother are defined as father, mother born in the country of residence of the child. Robust standard errors and reported in parenthesis, clustered by residence and origin country. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

Table 8: Selective migration: bilateral (destination-by-origin) stock of immigrant working age population

	[1]	[2]	[3]	[4]	[5]	[6]
Preferences for work	0.735*** (0.057)	0.623*** (0.048)	0.535*** (0.049)	0.539*** (0.058)	0.495*** (0.056)	0.459*** (0.063)
Bilateral stock in 2010	-0.009*** (0.001)	-0.011*** (0.001)	-0.010*** (0.002)			
Bilateral stock in 2001				-0.008*** (0.001)	-0.009*** (0.001)	-0.009*** (0.002)
R sq.	0.088	0.108	0.113	0.085	0.105	0.112
N	2469	2469	2469	1784	1784	1784

**Notes:** Sample includes first and second generation migrants. The dependent variable is a dummy equal to one if the individual works in the reference week. The main regressor is the coefficient on the culture of origin preference for working as in Table 4, rows (b)-(e). Bilateral stocks are taken as percentages of total population of the origin country in 2001 (Source OECD DIOC). Columns [1] and [4] include country-by-year FE as controls. Columns [2] and [5] include country-by-year FE and individual characteristics as controls. Columns [3] and [6] include country-by-year FE, individual characteristics and father characteristics as controls. Robust standard errors, two-way clustered by host and origin country are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

Table 9: Omitted variables: education, culture and institutions, economic conditions of the country of origin

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Preferences for work	0.382*** (0.071)	0.354*** (0.071)	0.258*** (0.069)	0.385*** (0.043)	0.391*** (0.049)	0.314*** (0.056)	0.373*** (0.044)	0.438*** (0.066)	0.367*** (0.070)	0.368*** (0.030)	0.345*** (0.027)	0.249*** (0.025)
Education expenditure, % of GDP	0.129*** (0.036)	0.100*** (0.038)	0.085** (0.039)	0.069*** (0.015)	0.073*** (0.017)	0.060*** (0.016)	0.059*** (0.014)	0.059*** (0.018)	0.059*** (0.018)	0.082*** (0.013)	0.058*** (0.013)	0.037** (0.016)
Enrollment rates, primary school	0.010 (0.010)	0.006 (0.011)	0.000 (0.011)	0.026** (0.010)	0.014 (0.015)	0.005 (0.016)	0.026** (0.015)	0.014 (0.016)	0.005 (0.016)	0.053*** (0.015)	0.056*** (0.016)	0.045*** (0.015)
PtT, primary school	-0.024 (0.024)	-0.036 (0.029)	-0.040 (0.031)	-0.059*** (0.014)	-0.059*** (0.018)	-0.045** (0.018)	-0.059*** (0.014)	-0.059*** (0.018)	-0.045** (0.018)	-0.011 (0.011)	-0.016 (0.015)	-0.009 (0.016)
Quality of labor force (World basis)	-0.079*** (0.010)	-0.049*** (0.017)	-0.020 (0.023)	9.163*** (2.519)	6.811*** (2.146)	4.960** (2.354)	0.069*** (0.015)	0.073*** (0.017)	0.060*** (0.016)	0.053*** (0.015)	0.056*** (0.016)	0.045*** (0.015)
Geographical proximity to destination				0.026** (0.010)	0.014 (0.015)	0.005 (0.016)	0.026** (0.015)	0.014 (0.016)	0.005 (0.016)	0.053*** (0.015)	0.056*** (0.016)	0.045*** (0.015)
Linguistic proximity to destination				-0.107*** (0.031)	-0.126*** (0.037)	-0.126*** (0.036)	-0.107*** (0.031)	-0.126*** (0.037)	-0.126*** (0.036)	-0.055*** (0.015)	-0.083*** (0.018)	-0.097*** (0.018)
Size of co-immigrants' group in destination				0.088*** (0.017)	0.117*** (0.020)	0.135*** (0.018)	0.088*** (0.017)	0.117*** (0.020)	0.135*** (0.018)	0.077*** (0.018)	0.102*** (0.022)	0.117*** (0.023)
Government effectiveness				-0.027 (0.027)	-0.034 (0.030)	-0.043 (0.030)	-0.027 (0.027)	-0.034 (0.030)	-0.043 (0.030)	-0.055*** (0.008)	-0.083*** (0.009)	-0.097*** (0.010)
Regulatory quality				0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	-0.033*** (0.008)	-0.039*** (0.009)	-0.044*** (0.010)
Rule of law				0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	-0.033*** (0.008)	-0.039*** (0.009)	-0.044*** (0.010)
Control of corruption				0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	-0.033*** (0.008)	-0.039*** (0.009)	-0.044*** (0.010)
GDP per capita (log)				0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	-0.033*** (0.008)	-0.039*** (0.009)	-0.044*** (0.010)
90/10 income percentile ratio				0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	-0.033*** (0.008)	-0.039*** (0.009)	-0.044*** (0.010)
Emigration rate				0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	-0.033*** (0.008)	-0.039*** (0.009)	-0.044*** (0.010)
Employment to population ratio				0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	0.070 (0.027)	0.089 (0.030)	0.095 (0.030)	-0.033*** (0.008)	-0.039*** (0.009)	-0.044*** (0.010)
R sq.	0.071	0.087	0.094	0.070	0.089	0.095	0.070	0.089	0.095	0.077	0.094	0.101
N	2527	2527	2527	2655	2655	2655	2674	2674	2674	2686	2686	2686

**Notes:** Sample includes first and second generation migrants. The dependent variable is a dummy equal to one if the individual works in the reference week. The main regressor is the coefficient on the culture of origin preference for working as in Table 4, rows (b)-(e). The set of controls reported in each column refer to the country of origin of immigrants (sources: World Governance Indicators; World Development Indicators; Melitz and Toubal [38]; Hanushek and Kimko [32]). Columns [1], [4] and [7] include country-by-year FE as controls. Columns [2], [5], [8] include country-by-year FE and individual characteristics as controls. Columns [3], [6], [9] include country-by-year FE, individual characteristics and father characteristics as controls. Robust standard errors, two-way clustered by host and origin country are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

Table 10: Omitted variables: individual attitudes and values

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Preferences for work	0.526*** (0.052)	0.494*** (0.046)	0.442*** (0.048)	0.286*** (0.077)	0.336*** (0.066)	0.217*** (0.053)	0.203*** (0.065)	0.217*** (0.057)	0.136*** (0.049)
Protestant religion	-0.005 (0.013)	-0.011 (0.014)	-0.013 (0.014)				-0.018 (0.024)	-0.031 (0.023)	-0.035 (0.024)
Jewish religion	0.129*** (0.007)	0.106*** (0.008)	0.082*** (0.007)				0.158*** (0.008)	0.128*** (0.005)	0.103*** (0.011)
Islamic religion	-0.001 (0.064)	-0.006 (0.066)	0.015 (0.065)				0.230*** (0.013)	0.191*** (0.012)	0.212*** (0.022)
Other or no religion	-0.003 (0.010)	0.004 (0.009)	0.000 (0.009)				-0.013 (0.017)	0.004 (0.012)	-0.002 (0.013)
Attend service > once a week	-0.011 (0.009)	-0.024** (0.010)	-0.027*** (0.010)				-0.021** (0.010)	-0.046*** (0.013)	-0.053*** (0.015)
Pray > once a week	-0.044*** (0.015)	-0.045*** (0.014)	-0.045*** (0.014)				-0.038* (0.021)	-0.045** (0.021)	-0.043** (0.021)
Distrust other people				-0.036** (0.015)	-0.020 (0.013)	-0.018 (0.018)	-0.019 (0.013)	-0.004 (0.011)	-0.001 (0.013)
Jobs scarce: more right to men				-0.038 (0.025)	-0.045** (0.020)	-0.045** (0.021)	-0.066** (0.027)	-0.066*** (0.024)	-0.069*** (0.021)
R sq.	0.082	0.099	0.104	0.083	0.118	0.131	0.091	0.134	0.145
Observations	2145	2145	2145	1567	1567	1567	1340	1340	1340

**Notes:** Sample includes first and second generation migrants. The dependent variable is a dummy equal to one if the individual works in the reference week. The main regressor is the coefficient on the culture of origin preference for working as in Table 4, rows (b)-(e). In each column additional controls for individual attitudes and values (source: ESS). In Columns [1]-[3], the reference group is Catholic religion. Columns [1], [4] and [7] include country-by-year FE as controls. Columns [2], [5], [8] include country-by-year FE and individual characteristics as controls. Columns [3], [6], [9] include country-by-year FE, individual characteristics and father characteristics as controls. Robust standard errors, two-way clustered by host and origin country are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

Table 11: Alternative definitions of country-specific preferences for work and leisure

	[1]	[2]	[3]	Obs.
<b>Panel A: Alternative measurement of country-specific preferences</b>				
(1) Entire pool (natives + immigrants) by origin	0.618*** (0.051)	0.623*** (0.058)	0.526*** (0.057)	2686
(2) Average preferences by origin	0.503*** (0.051)	0.458*** (0.050)	0.355*** (0.051)	2686
<b>Panel B: Additional controls in the first stage</b>				
(3) Control for distrust, conservative work culture	0.530*** (0.050)	0.497*** (0.050)	0.398*** (0.047)	2686
(4) Control for Latin language spoken	0.548*** (0.050)	0.520*** (0.050)	0.421*** (0.049)	2686
(5) Control for unemployment, discrimination	0.538*** (0.049)	0.506*** (0.049)	0.404*** (0.047)	2686
(6) Control for “important to be rich” dummy	0.531*** (0.050)	0.497*** (0.050)	0.397*** (0.048)	2686
<b>Panel C: Alternative indicators of country-specific preferences for work or leisure</b>				
(7) Individual value of work (pca)	0.017*** (0.003)	0.023*** (0.003)	0.024*** (0.003)	2680
(8) Social value of work (pca)	0.011*** (0.002)	0.016*** (0.003)	0.017*** (0.003)	2680
(9) Leisure is important in life	-0.301*** (0.038)	-0.389*** (0.048)	-0.425*** (0.043)	2680
(10) Generous holidays are important in a job	-0.164*** (0.020)	-0.149*** (0.020)	-0.122*** (0.025)	2680

**Notes:** Sample includes first and second generation migrants. In Row (1) report results as in the baseline specification in Table 4, Row (d). In Row (2) country-specific preferences are predicted from all people coming from the same origin, including migrants to a different destination. In Row (3), country specific preferences are measured as (unconditional) averages of natives. In Rows (4)-(7) we included the following controls in the first stage: controls for generalized distrust, and preference for men’s over women’s work when jobs are scarce (Row 4); a dummy for the main spoken language belonging to the Latin group (Row 5); dummies for individual unemployed or discriminated (Row 6); a dummy for importance to be rich (Row 7). In Row (8) the value of work for the individual is retrieved by a principal component analysis (pca) on country-specific indicators of “I put effort in my work to keep my job”, “work always comes first” and “work is important in life”. In Row (9), the value of work for the society is retrieved by a pca on country-specific indicators of “Work is a duty towards the society”, “Work is needed to develop talents” and “People turn lazy without working”. In Rows (10) and (11) preferences are the predicted origin FE from regressions of the individual evaluation of leisure reported in each row, after controlling for the usual set of individual and parental characteristics. These measures are constructed using European Value Study data in the first stage. The number of observations reported in each row refers to all columns. Robust standard errors, two-way clustered by residence and origin country in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%

Table 12: Effect on individual preferences for redistribution

	[1]	[2]	[3]	Observations
(a) important the government ensures safety	-0.630*** (0.162)	-0.608*** (0.161)	-0.518*** (0.165)	2605
(b) government partly responsible for living standards of unemployed	-0.671*** (0.058)	-0.729*** (0.164)	-0.629*** (0.117)	628
(c) ever member of a trade union	-0.323 (0.202)	-0.775*** (0.206)	-0.745*** (0.222)	2668
(d) leftwing ideology	-0.152 (0.111)	-0.168 (0.152)	-0.132 (0.167)	2357
(e) important treating people equally	-0.315 (0.259)	-0.303 (0.301)	-0.363 (0.331)	2612

**Notes:** Sample includes first and second generation migrants. The dependent variable in each regression is the variable described in the first column. The entries of the table are the coefficients on the culture of origin variable obtained from the auxiliary regression as defined in the text. Column [1] includes country-by-year FE as controls. Column [2] includes country-by-year FE and individual characteristics as controls. Column [3] includes country-by-year FE, individual characteristics and father characteristics as controls. Method of estimation is least squares. The number of observations reported in each row refers to all columns. Robust standard errors, two-way clustered by host and origin country, are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

Table 13: Labor market institutions and taxation in the residence country

	[1]	[2]	[3]	[4]	[5]	[6] <i>standardized coefficients</i>
Unemployment benefits replacement rate	-0.601*** (0.025)	-0.379*** (0.017)	-0.355*** (0.016)	-0.393*** (0.015)	-0.396*** (0.015)	-0.049*** (0.002)
Union density	-0.047 (0.052)					
$\ln(\text{ret}100)$		0.619*** (0.029)	0.336*** (0.033)	0.630*** (0.029)	0.629*** (0.029)	0.089*** (0.004)
$\ln(\text{ret}67)$			0.174*** (0.015)			
$\ln(\text{ret}167)$			0.157*** (0.030)			
$\ln\left(\frac{\text{ret}67}{\text{ret}167}\right)$				0.044*** (0.016)	0.039** (0.016)	0.002** (0.001)
Preferences for work					0.264*** (0.040)	0.010*** (0.002)
R sq.	0.05	0.05	0.05	0.05	0.05	0.05
N	46869	46869	46869	46869	46869	46869

**Notes:** Sample includes all native, first and second generation migrant respondents to the ESS between 2004 and 2012. The main regressor is the coefficient on the culture of origin preference for working as in Table 4, rows (b)-(e). The set of controls reported in each column refer to the country of residence of respondents (i.e. destination of immigrants) (sources: OECD; Lehmann et al. [34]). Retention rates are computed as  $\text{ret}j = 1 - \frac{T(j \times AW)}{j \times AW_{it}} = 1 - \text{ATR}j$  for  $j \in \{67\%, 100\%, 167\%\}$  with respect to the average wage ( $AW$ ). All specifications include only country of residence and time fixed effects because we include some variables that vary only by country of residence and year. All specification include individual and father characteristics. In the last column, the explanatory variables are subtracted of their means and divided by their standard deviation. Robust standard errors, two-way clustered by host and origin country are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.



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