

Family Values and the Regulation of Labor

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Abstract

The efficiency of flexible labor markets requires mobile workers. Otherwise, firms can take advantage of the immobility of workers and extract monopsony rents. In cultures with strong family ties, moving away from home has utility costs. Thus, individuals with strong family ties rationally choose regulated labor markets to reduce the mobility of labor and the monopsony power of firms, even though they produce lower employment. Empirically, we do find that individuals who inherit stronger family ties are less mobile, have lower wages, are less often employed and support more stringent labor market regulations. There are also positive cross-country correlations between the strength of family ties and labor market rigidities. Finally, we find positive correlations between labor market rigidities at the beginning of the twenty first century and family values prevailing before World War II, which suggest that labor market regulations have deep cultural roots.

1 Introduction

In many countries in Continental Europe reformers have been frustrated by a widespread opposition to what economists would consider efficient labor market reforms. High firing costs, binding minimum wages and various other employment protection rules abound. Most economists, although with varying emphasis, would argue that those regulations are at least in part responsible for the high European unemployment from the eighties onward. But these regulations survive. Why? The most common explanations are based upon various versions of the insider-outsider model, in which unionized "inside" workers

want to preserve their benefits and oppose opening up the market to competition from the outsiders.¹ However, this interpretation does not explain why insiders are more powerful in some countries than in others.

In the present paper we provide such an explanation which relies on the complementarity between the strength of family ties and the stringency of labor market regulation. Labor market flexibility implies that individuals in order to maximize their opportunities and find the best paid job may need to move geographically. However in certain cultures, staying close to the family is important and the mobility required by a free labor market implies utility losses arising from the distance from the family. With unregulated labor markets, local firms would have a monopsonistic power over immobile workers. The latter would demand labor regulation to limit this power. Under certain conditions there can be two equilibria. One is the standard *laissez faire* one with unregulated market and mobility; this occurs when family ties are weak. In the other equilibrium with strong family ties, it is optimal to impose forms of labor market rigidity like minimum wage and firing restrictions. Given the cultural value placed on these family ties, labor market regulation is preferable to a *laissez faire* equilibrium. Even though the latter produces higher income per capita it implies a loss of family ties which reduces utility. In fact with *laissez faire* in order not to be "exploited" by monopsonistic forms on the local markets workers might have to move. Under certain conditions the loss of family ties is so large that average utility is higher with a regulated labor market. An innovative feature of our model is that individual can choose the degree of family ties, or to be more realistic, they can educate their children in a certain way. This implies a two way effects between culture and labor market regulation. An inherited culture of family ties lead to a preference for labor market rigidities, but the latter in turn makes it optimal to teach and adopt close family ties. Thus economic incentives explain the evolution of cultural values

¹One of the most recent version of this argument which also incorporates the issue of goods market deregulation is Blanchard and Giavazzi (2003).

and the other way around. This argument may explain two things. On the positive side, why certain countries have more regulated labor markets than others, as function of different values placed on family ties. Moreover, the transmission of cultural values across generations implies that the strength of family ties can persist over time and can have a persistent impact on labor market regulation. On the normative side, it explains why it has proved so difficult to reform labor markets in many especially Southern and Central European countries. Note that Scandinavian countries, despite their higher level of social protection, have flexible labor markets, the so called "flexsecurity" system. Indeed, these countries have the lowest level of family ties in the OECD.

Our analysis does not stop at these impressionistic observations, but does test more directly the role of family ties in explaining labor market institutions and outcomes. We measure family ties as in Alesina and Giuliano (2007, 2009) based upon answers from the World Values Survey. We first show that countries with strong family ties tend to implement much more stringent labor market regulations. Besides, individuals with strong family ties are much more likely to think that job security is the key characteristics of the job and to call for government regulation. To document the long run impact of family ties on labor market regulation and labor market outcomes, we then focus on second generation U.S. immigrants.² We show that immigrants who inherited strong family ties values are much less mobile and face a wage and employment penalty. Consistently they also ask for more government regulation of wages and job security. Moreover, we show that the strength of family values inherited from the countries of origin before World War II is positively correlated with the stringency of labor market regulation in the countries of origin at the beginning of the 21st century.

²Family values are relatively slow to evolve, as a vast literature on the behavior of immigrants to other countries, mainly the US, shows. See for instance Alesina and Giuliano (2008), Algan and Cahuc (2005), Fernandez and Fogli (2006, 2009), Giuliano (2008), Luttmer and Singhal (2009) amongst many others. This literature shows that family values and the organization of the family remain different for a few generation even when individuals with different country of origins, and different family values at home move to the US,

The present paper links two strands of the literature. One is the vast area of research on labor market institutions and labor market performance.³ The second strand of the literature is the one often referred to as cultural economics. This literature has investigated the importance of cultural traits in the determination of economic outcomes,⁴ the transmission of cultural values,⁵ and only recently the interaction between cultural values and economic institutions.⁶

We contribute to this literature by looking at the interplay and coevolution of labor market institutions and a specific cultural trait of a society, the strength of family ties. Regarding the role of family ties, Alesina and Giuliano (2007) offer a broad set of results. Amongst many other results they find that strong family ties are related to low geographical mobility, an essential building bloc of the model in the present paper.⁷ This is fairly obvious: strong family ties bring benefits only if family members live close to each other. They also show that participation in the labor market (especially of women and youngsters) is lower with strong family ties, a result also consistent with the implication of

³See the recent surveys of Eichhorst et al. (2008) and Freeman (2008).

⁴See Guiso et al., (2006), Tabellini (2008a), Algan and Cahuc (2009b), Fernandez and Fogli (2007), Alesina and Giuliano (2008) among many others.

⁵Bisin and Verdier (2000, 2001). The Bisin Verdier model has been applied to the transmission of religious beliefs (Bisin and Verdier, 2000, and Bisin et al., 2004), of education (Patacchini and Zenou, 2006), of ethnic identity (Bisin et al. 2006), of moral values (Tabellini, 2008b) and the transmission of priors about the trustworthiness of others (Guiso et al. 2008).

⁶Related to the influences of culture on regulation, Algan and Cahuc (2009a) investigate the role of civic virtue on labor market institutions. They show that unemployment benefits are higher in countries displaying higher level of civicness since the degree of moral hazard associated with the use of government benefits is dampened in those countries. On the opposite link, from regulation and institutions to culture, Alesina and Angeletos (2005), Alesina, Cozzi and Manotovan (2009), Alesina and Fuchs-Schündeln (2007), Aghion et al. (2008) and Aghion et al. (2009) show that regulation can shape beliefs like the demand for redistribution or beliefs in cooperation. On the link from regulation and institutions to culture, Alesina and Angeletos (2005), Alesina, Cozzi and Manotovan (2009), Alesina and Fuchs-Schündeln (2007), Aghion et al. (2008) and Aghion et al. (2009) show that regulation can shape beliefs like the demand for redistribution or beliefs in cooperation. Tabellini extends the cultural transmission framework of Bisin and Verdier (2001), allowing the interaction of cultural norm with institutions. In Tabellini's model, cultural norms are crucial in perpetuating the effect of any institutional characteristic (such as the quality of law enforcement). If initial conditions are favorable, individuals will vote for legal enforcement and will transmit values of generalized cooperation to their children. On the contrary, when initial conditions are not so favorable, individuals will transmit values of lower cooperation and vote for limited law enforcement.

⁷See also Belot and Ermisch (2006), Spilimbergo and Ubeda (2004), Zorlu (2009).

the model of the present paper. Algan and Cahuc (2005), Giuliano (2007) and Fernandez and Fogli (2006, 2009) also show how family features can shape fertility and employment patterns.

The paper is organized as follows. The next section presents the model. Section 3 documents the empirical relationship between family ties and the demand for labor market regulation. Section 4 examines the persistent effect of family ties on attitudes and labor market regulation. Section 5 concludes.

2 The model

2.1 The setup

There are two goods: labor and a numeraire good produced with labor and a continuum of individuals of mass one. Individuals are uniformly located on the $[0, 1]$ line. They are identical, risk neutral and have no preference for leisure: their utility is equal to the sum of their consumption and a term that represents the valuation of family ties to be defined below. The timing is as follows:

1. At birth, each individual is located on the $[0, 1]$ line, on a point where his parents live. Then, individuals choose family values which can be either with strong family ties or with low family ties. The choice of family values is irreversible. This assumption is made for simplicity to capture parents' own interest in the transmission of family values. The share of individuals with strong family ties is $\sigma \in [0, 1]$. Strong family ties yield an utility $\Delta(\sigma)$, $\Delta > 0, \Delta'(\sigma) \geq 0$ if an individual lives in the same location as his parents, and a disutility $-\Delta(\sigma)$ if he lives elsewhere. An individual with weak family ties is indifferent between living in his location of birth or elsewhere, implying $\Delta = 0$. Two reasons may explain why the utility gains $\Delta(\sigma)$ associated with strong family times are non-decreasing with respect to the share of individuals with strong family ties. First, social norms are generally more influential when they are more spread around. Second, when the share

of the population with strong family ties is larger, individuals with weak family ties and those who do not live in the neighborhood of their parents have less opportunities to have social interactions. This may imply that the relative value of strong family ties compared to weak family ties (which is normalized to zero) increases with the share of individuals sharing strong family ties. Note the difference between the mobility costs associated with family ties and those associated with simple transaction costs of moving. The latter costs are not a choice variable and depend on the technology of transportation. Besides they are in general not decreasing with the number of people who move; and can even increase in case of congestion.

2. People vote to choose to regulate or not labor market according to the majority rule. There are two possible types of labor market policy: either labor market flexibility (i.e. laissez-faire on the labor market), or regulation of wages and employment. Regulation is based on two instruments, a minimum wage and job protection. These two instruments are necessary and sufficient to ensure that the market equilibrium is Pareto efficient when there are mobility costs. Regulation entails deadweight losses which reduce the production of every worker.

3. Firms offer labor contracts. When a worker is hired in his initial location, his productivity y is drawn from the uniform distribution on the interval $[0, 1]$. Every worker can find a job with productivity 1 in a place different from his initial location. Job protection constrains firms to keep all employees whose productivity is above a threshold value denoted by $R \in [0, 1]$. Job protection entails deadweight losses $c \in [0, 1/2)$. In the presence of job protection, the production of a worker who draws the productivity y is equal to $y - c$, instead of y when the labor market is flexible. In each location, there is a single firm that offers labor contracts. In this setup, workers are paid at their reservation wage, which can be lower than their productivity if there are mobility costs.⁸ When there

⁸The important assumption here is that mobility costs decrease wages. This property could be obtained in a search and matching model à la Mortensen and Pissarides, see e.g. Pissarides (2000).

is a minimum wage, workers can be either employed and paid the minimum wage, denoted by w , or unemployed. They are unemployed if their productivity y is below the reservation productivity R of the firm.

The nature of these assumptions should be clear. A worker with weak family ties would always manage to find a job with productivity $y = 1$ since he is perfectly mobile. A worker with strong family ties has a moving cost of $2\Delta(\sigma)$. Without labor market regulation, workers with strong family face the monopsony power of firms. Labor market regulation protects these workers against those firms. The purpose of the model is to investigate whether in equilibrium the society will choose laissez-faire or regulation. We will show that under certain conditions we may have multiple equilibria.

2.2 Solution

The model is solved by backward induction.

i) In stage 3, the labor market is either regulated or flexible, and the share of individuals with strong family ties is given.

Flexible labor market

If the labor market is flexible, individuals with weak family ties get a wage equal to 1 because they are perfectly mobile. Their utility level is

$$U_F^W = 1. \tag{1}$$

Individuals with strong family ties get a wage equal to 1 if they decide to leave their initial location, because in that case they become perfectly mobile across the locations where they can produce one unit of good. But leaving the initial location costs them $2\Delta(\sigma)$. Therefore, their reservation wage, which is necessarily non negative, is equal to $\max[0, 1 - 2\Delta(\sigma)]$.

This expression of the reservation wage implies that individuals with strong family ties get a wage equal to 0 and stay in their initial location if $\Delta(\sigma)$ is larger than $1/2$. In that case, their utility is equal to the valuation of family ties, $\Delta(\sigma)$. If $\Delta(\sigma)$ is smaller than $1/2$, two possibilities can arise.

1. If their productivity in their initial location is larger than their reservation wage, equal to $1 - 2\Delta(\sigma)$, they keep their job in their initial location. In that case, they are paid their reservation wage and they are *immobile*. Their utility is equal to their reservation wage plus the valuation of family ties, i.e. $1 - \Delta(\sigma)$.
2. If their productivity in their initial location is smaller than their reservation wage, individuals with strong family ties are fired. Since $\Delta(\sigma) < 1/2$, individuals with strong family ties prefer to move rather than staying on the dole in their initial location. They become *mobile* and get a utility equal to $1 - \Delta(\sigma)$ (which is the same as in the previous case where individuals are immobile).

In conclusion, when the labor market is flexible, the utility of individuals with strong family ties is

$$U_F^S = \max[\Delta(\sigma), 1 - \Delta(\sigma)]. \quad (2)$$

Rigid labor market

When the labor market is regulated, the government sets a minimum wage and job protection. For every worker, the probability to get a job offer in the firm located in his initial birth place is equal to the probability to draw a productivity y larger than the reservation productivity R . With the uniform distribution, this probability is equal to $1 - R$. If the productivity is higher than R , individuals can get the minimum wage w in their birth place, or leave the firm and obtain a wage equal to $1 - c$ elsewhere, where

c denotes deadweight loss associated with job protection.⁹ When the productivity is lower than R , individuals get either zero income if they do not move, or a wage equal to $1 - c$ if they move.

Individuals with weak family ties get the expected utility

$$U_R^W = (1 - R) \max(1 - c, w) + R(1 - c). \quad (3)$$

The expected utility of individuals with strong family ties is

$$U_R^S = (1 - R) \max[w + \Delta(\sigma), 1 - c - \Delta(\sigma)] + R \max[\Delta(\sigma), 1 - c - \Delta(\sigma)] \quad (4)$$

ii) In stage 2, people vote to choose the labor market policy according to the majority rule. The share of individuals with strong family ties, chosen in stage one, is given. There are only two types of voters, so that the median voter can have either strong family ties or weak family ties. The platform is between two policies: either regulation or flexibility.

- Individuals with weak family ties obtain $U_F^W = 1$ under labor market flexibility, and $U_R^W < 1$ under labor market regulation.¹⁰ Therefore, individuals with weak family ties always prefer labor market flexibility. This implies that the outcome of the vote is labor market flexibility if the share of people with strong family ties, σ , is smaller than $1/2$.

- Now, consider the case where $\sigma > 1/2$, so that the median voter has strong family ties. For the sake of simplicity, assume that all individuals with strong family ties are immobile if the majority of the population has strong family ties under flexible labor market. According to Equation (2), this requires that:

Assumption 1:

$$\Delta(1/2) > \frac{1}{2}.$$

⁹ Assuming that firms can make counter offers so that only weak family ties workers with productivity $y < 1 - c$ and strong family ties workers with productivity $y < 1 - c - 2\Delta(\sigma)$ move, would not change the qualitative results of the model.

¹⁰ When the labor market is rigid, the expected utility of workers with weak family ties is smaller than 1 because $R \in [0, 1]$ and the wage cannot be larger than $1 - c$. Otherwise firms would get negative profits.

Assumption 1 entails the existence of equilibria with strong family ties. An analysis of the case where this assumption is not fulfilled is provided in appendix where we give sufficient and necessary conditions for the existence of every equilibrium.

Indeed, strong family ties have to be sufficiently valuable to be sustained in equilibrium. Assumption 1 also implies that the expected utility of individuals with strong family ties is

$$U_F^S = \Delta(\sigma) \tag{5}$$

when the labor market is flexible and when $\sigma > 1/2$. When the labor market is rigid, assumption 1 implies that workers with strong family ties are immobile. We can write their expected utility, defined equation (4), as

$$U_R^S = (1 - R)w + \Delta(\sigma). \tag{6}$$

Comparison of equations (5) and (6) implies that a median voter with strong family ties prefers a regulated labor market rather than a flexible labor market. The optimal labor market regulation is the couple of values of the minimum wage w and of the reservation productivity R that maximizes the expected utility of workers with strong family ties, defined by equation (6), subject to the zero profit condition¹¹

$$\int_R^1 (y - c - w)dy = 0. \tag{7}$$

It is easily checked that the solution is

$$R = c \text{ and } w = \frac{1 - c}{2} \tag{8}$$

The solution shows that labor market regulation comprises a binding minimum wage $w > 0$ and job protection which forces firms to keep employees whose productivity is lower than their labor cost. In this equilibrium, every worker with strong family ties

¹¹Remark that firms make zero profits with mobile workers.

can be either employed (with probability $1 - c$) or unemployed (with probability c) and remains in his initial location. Profits are equal to zero. The wage is smaller than 1 and than the wage under flexible labor market. Employment, equal to $1 - \sigma c$,¹² is also lower when the labor market is regulated, since employment is equal to 1 when the labor market is flexible. Workers with strong family ties get the expected utility (see equations (6) and (8)):

$$U_R^S = \frac{(1 - c)^2}{2} + \Delta(\sigma). \quad (9)$$

which is larger than $\Delta(\sigma)$, the utility they would get if the labor market was flexible.

In conclusion, the outcome of the vote is for market regulation if $\sigma > 1/2$; and for labor market flexibility otherwise.

iii) In stage 1, individuals choose their family values with perfect foresights. If they anticipate that the share of individuals with strong family ties is smaller than $1/2$, they know that labor market flexibility will prevail in the vote in stage 2. Otherwise, the outcome of the vote will be labor market regulation. Obviously the "choice" of a cultural variable can be rationalized with what is thought to the next generation. Here for simplicity we keep the model static and we do not look at intergenerational transfers of values. More on this below.

Therefore, the payoff of individuals with strong family ties is

$$\begin{cases} \max[\Delta(\sigma), 1 - \Delta(\sigma)] & \text{if } \sigma \leq 1/2 \\ \Delta(\sigma) + \frac{(1-c)^2}{2} & \text{if } \sigma > 1/2, \end{cases}$$

and the payoff of individuals with weak family ties is¹³

$$\begin{cases} 1 & \text{if } \sigma \leq 1/2 \\ 1 - c & \text{if } \sigma > 1/2. \end{cases}$$

¹²Note that all individuals with weak family ties are employed. The share of individuals with strong family ties is equal to σ , and a share c of individuals with strong family ties are unemployed.

¹³When the labor market is rigid, the minimum wage, $w = (1 - c)/2$, obtained by immobile workers, is smaller than $1 - c$, the wage of mobile workers. This implies that individuals with weak family ties are always mobile.

Thus, the utility gains of choosing strong family ties rather than weak family ties are

$$\Gamma(\sigma) = \begin{cases} \max[\Delta(\sigma), 1 - \Delta(\sigma)] - 1 & \text{if } \sigma \leq 1/2 \\ \Delta(\sigma) - \frac{1-c^2}{2} & \text{if } \sigma > 1/2. \end{cases}$$

In a Nash equilibrium, every individual takes σ as given and chooses strong family ties if the gains of doing so are positive and weak family ties otherwise. At this stage, it turns out that there exists an equilibrium with weak family ties only if we assume:

Assumption 2: when the share of population with strong family ties goes to 0, the utility gains induced by strong family ties are smaller than the maximum wage gains obtained by changing of location:

$$\Delta(0) < 1.$$

2.3 Equilibria

Let us suppose that assumptions 1 and 2 are fulfilled. Then, function $\Gamma(\sigma)$ is displayed on Figure 1. It appears that there are two stable Nash equilibria. On one hand, there is an equilibrium (point A on Figure 1) where everybody chooses weak family ties and then vote for labor market flexibility. In that case, the labor market is competitive: everyone is paid his marginal productivity. Labor mobility is high since everyone changes his location in this equilibrium. On the other hand, there is another equilibrium (point B on Figure 1) where everyone chooses strong family ties and then vote for stringent labor market regulation. The labor market is monopsonistic because workers are immobile. This is the reason why people vote for stringent labor market regulation.

Production, employment and wages are lower with rigid labor market than with flexible labor market. However, it is important to remark that the equilibrium with flexible labor market does not necessarily Pareto-dominate the equilibrium with rigid labor market. Actually, the equilibrium with rigid labor market and strong family ties dominates if $\Delta(1) > 1 - \frac{(1-c)^2}{2}$, since expected utility is $\Delta(1) + \frac{(1-c)^2}{2}$ in the equilibrium with strong family ties and 1 in the equilibrium with weak family ties. Otherwise, the equilibrium

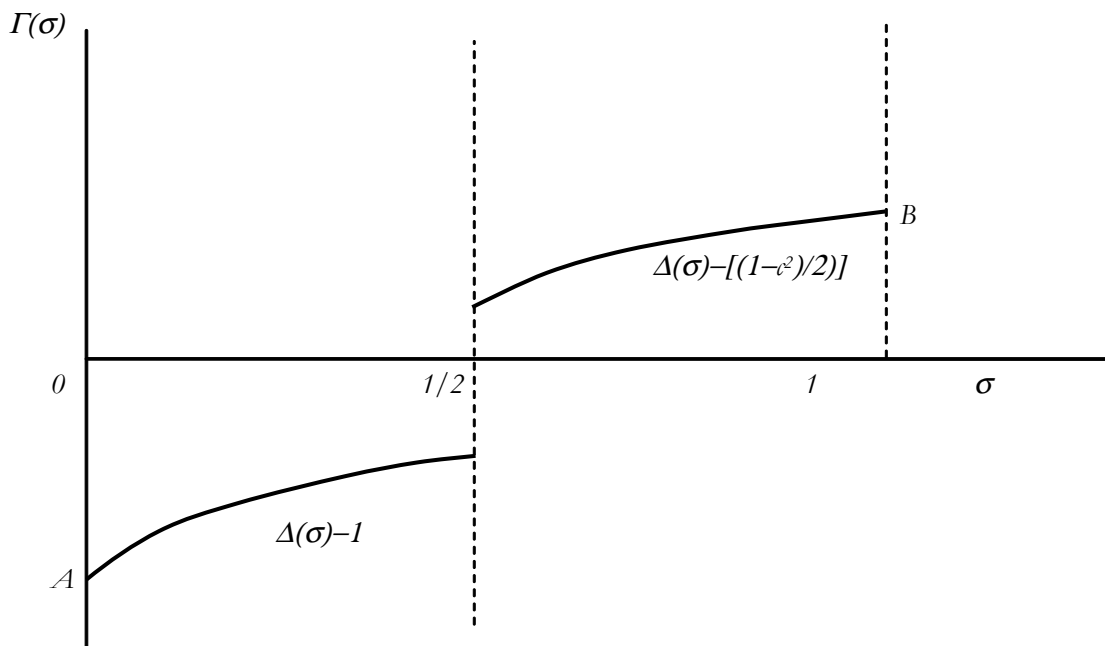


Figure 1: The relation between the gains $\Gamma(\sigma)$ to choose strong family ties rather than weak family ties and the share σ of individuals with strong family ties.

with weak family ties yields higher welfare. Accordingly, the economy can be coordinated on an equilibrium with too rigid labor market, when $\Delta(1) < 1 - \frac{(1-c)^2}{2}$, but also on an equilibrium with too flexible labor market, when $\Delta(1) > 1 - \frac{(1-c)^2}{2}$. As shown in Figure 2, it turns out that labor market regulation is the preferred equilibrium if the valuation of strong family ties when everyone has strong family ties, $\Delta(1)$, is high relative to c , the cost of labor market regulation.

A slightly different way of rephrasing this result is that in countries or historical periods when family ties can bring about great gains then the benefits of the latter may compensate for the loss of efficiency caused by labor market regulations.

2.4 The dynamics of family values

Let us introduce some dynamics into the model. Following the seminal papers of Bisin and Verdier (2000, 2001), we assume that paternalistic parents wish to transmit their own

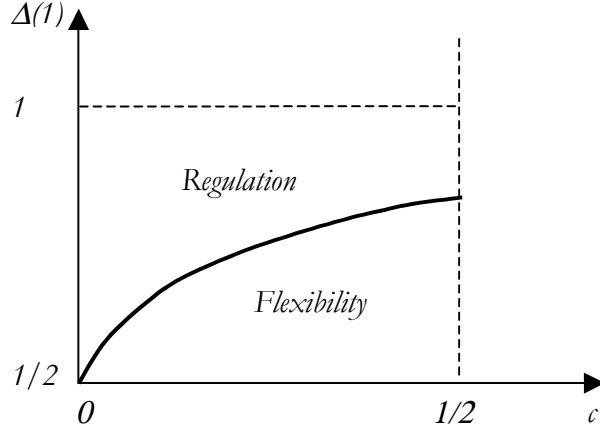


Figure 2: Preferred equilibrium in the $(\Delta(1), c)$ plane: regulation is preferred in the area above the thick curve.

values to their children. Suppose that each individual lives for one period, and has payoffs as before. Her child inherits her family value with probability¹⁴ $p > 1/2$ and is free to choose her family values with probability $1 - p$. The events outlined above are repeated each period t , on an infinite horizon, with the only change being that only fraction $1 - p$ of the population chooses family values; fraction $p\sigma_{t-1}$ is constrained to have strong family ties and $p(1 - \sigma_{t-1})$ to have weak family ties. In other words we add some stickiness to the transmission of family ties. Not everyone can freely choose a set of family ties every generation.

- If $\sigma_0 > 1/2p$, the share of individuals with strong family ties is necessarily larger than $1/2$ in period 1. Then, the median voter chooses to regulate the labor market and every individual is better off with strong family ties. Since there are at least $p(1 - \sigma_0)$ individuals with weak family ties in period 1 (i.e. those who inherit from strong family ties), the share of individuals with strong family ties in period 1 is

$$\sigma_1 = 1 - p(1 - \sigma_0) > 1/2.$$

¹⁴As it will be clear below, $p > 1/2$ ensures that the transmission of family ties influences the dynamics of labor market regulation. When $p \leq 1/2$, the stickiness in the transmission of family ties is not sufficient to influence the choice of labor market regulation.

Then, in periods $t \geq 1$, the labor market is regulated and the share of individuals with strong family ties

$$\sigma_t = 1 - p^t(1 - \sigma_0).$$

converges to one when t goes to infinite.

- If $\sigma_0 < 1 - (1/2p)$, the same type of reasoning shows that the economy has a flexible labor market in period $t > 0$ and that

$$\sigma_t = \sigma_0 p^t,$$

converges to zero when t goes to infinite.

- If $\sigma_0 \in [1/2p, 1 - (1/2p)]$, there are two possible equilibria in periods $t > 0$ as far as σ_{t-1} remains in the interval $[1/2p, 1 - (1/2p)]$. If σ_{t-1} does not belong to this interval, the dynamics of σ after date t is described by one of the two cases described above.

This simple analysis shows how family ties and labor market institutions can depend on history. Societies starting with a large share of individuals with strong family ties have strong labor market regulations, whereas societies starting with weak family ties have flexible labor markets. This analysis shows a two way interaction between culture and institutions.

Finally, the model yields two important predictions. First, individuals with stronger family ties prefer more stringent labor market regulation, because they want to stay geographically immobile and they need to be protected from the monopsony power of firms. Second, the strength of family ties can persist over time and can have persistent effects on labor market regulation if family values are transmitted across generations. The two following sections show the empirical relevancy of these two predictions.

3 Family ties and the demand for labor market regulation

In this section we seek to establish the first implication of the model according to which family ties drive the demand for labor market regulation. We document two points related to this implication: i) countries where a larger share of individuals have strong family ties have more stringent labor market regulation, ii) strong family ties predict strong demand for job security and wage regulation, and not just high level of actual regulation. We thus hope to identify a causal link impact of family ties on labor market regulation working through popular demand.

3.1 Data

We use two main databases to measure family ties and the demand for regulation. The database on family ties comes from the *World Values Survey* (WVS), an international social survey consisting of four main waves 1981-84, 1990-93, 1995 and 1999-2003, denoted henceforth 1980, 1990, 1995 and 2000. This survey provides a wide range of indicators on the importance of the family in an individual life. The first question assesses how important is the family in one person's life and can take values from 1 to 4 (with 1 being very important and 4 not important at all). The second question asks whether the respondent agrees with one of the two statements (taking the values of 1 and 2 respectively): 1) Regardless of what the qualities and faults of one's parents are, one must always love and respect them, 2) One does not have the duty to respect and love parents who have not earned it. The third question asks respondents to agree with one of the following statements (again taking the values of 1 or 2 respectively): 1) It is the parents' duty to do their best for their children even at the expense of their own well-being; 2) Parents have a life of their own. Following Alesina and Giuliano (2007), we combine these measures by extracting the first principal component from the four waves.

A higher coefficient of the principal component indicates stronger family ties

The demand for job security is measured by the following question in the WVS: “*Here are some more aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job?: Good Job Security?*”¹⁵ The answers take on the value 1 if job security is mentioned and zero otherwise. We measure this indicator on the 4 waves of the WVS. The WVS does not provide a direct question on labor market regulation, but reports the preference for private versus state ownership of business. The question reads: “Do you think that private ownership of business should be increased or government ownership of business should be increased?”. The answer takes on values from 1 to 10, a lower score indicating a preference for private ownership. The demand for wage regulation is measured by using the *International Social Survey Program*. The ISSP is a compilation of surveys devoted each year to different specific topics such as religion, social networks or the role of government, covering all OECD and Eastern European countries. A specific ISSP survey on “*The role of government*” was carried out in 1996, providing a specific question on regulation of wages: “*Here is a list of potential government action for the economy: Control wages by law?*”. The answer can take on values from 1 to 4, with 1 meaning strongly agree and 4 strongly disagree. To ease the interpretation of the result, we group together households who strongly agree or agree with government regulation of wages.

We measure regulation of job protection with the firing cost index of the World Bank for the year 2004 (see Botero et al., 2004). This index measures firing costs in terms of weeks of salary based on three components: *i*) the notice period for redundancy dismissal after 20 years of continuous employment, *ii*) the severance pay for redundancy dismissal

¹⁵The other aspects included in the survey are: not too much pressure, a job respected by people in general, good hours, generous holidays, an opportunity to use initiative, a job in which you feel you can achieve something, a responsible job, a job that is interesting, a job that meets one’s abilities, pleasant people to work with, good chances for promotion, a useful job for society, meeting people, working conditions, to have time off at the weekends.

after 20 years of employment and *iii*) the legally mandated penalty for redundancy dismissal. We focus on this indicator because it covers much more countries than the OECD employment protection index, and it displays more heterogeneity than the World Bank indicator of the difficulty of firing. State regulation of minimum wages is measured through a composite index from the ILO report 2006-2007. We combine the indicators on the level and the legislation of the minimum wage for the year 2006. The level of the wage floor is measured as the monthly minimum wage expressed in US dollars. To make this measure comparable across country, we calculate the ratio of the monthly minimum wage over the income per capita in 2006. Income per capita is taken for the World Bank. The second component of this index measures the stringency of the minimum wage legislation, that is the extent to which the state directly regulates the labor market instead of letting the social partners negotiate. This index is equal to 1 if there is a legal statutory minimum wage and if the minimum wage is set at the national level without any derogation. The index is equal to 0.5 if there is a legal statutory minimum wage but with derogations over ages, qualifications, regions, sectors or occupations; or if the wage floor is set by collective bargaining but extended to all workers. The index is equal to zero if the wage is set by collective bargaining and only applies to the unionized workers.

Figure 3 and 4 show the positive cross-country correlation between family ties and the regulation of labor market through firing cost and minimum wages. The x-axis reports the country-level indicator of the strength of family ties. Northern European countries display the weakest ties, while African, Asian and Latin American countries have the strongest family ties. Southern European countries and Eastern European countries fall in the middle range. Countries with higher family ties tend to implement both higher firing costs and more stringent minimum wages. Consistently with the model, Figure 5 shows that countries with stronger family ties are also associated with lower GDP per capita. GDP per capita is taken from the World Bank and averaged out for the period

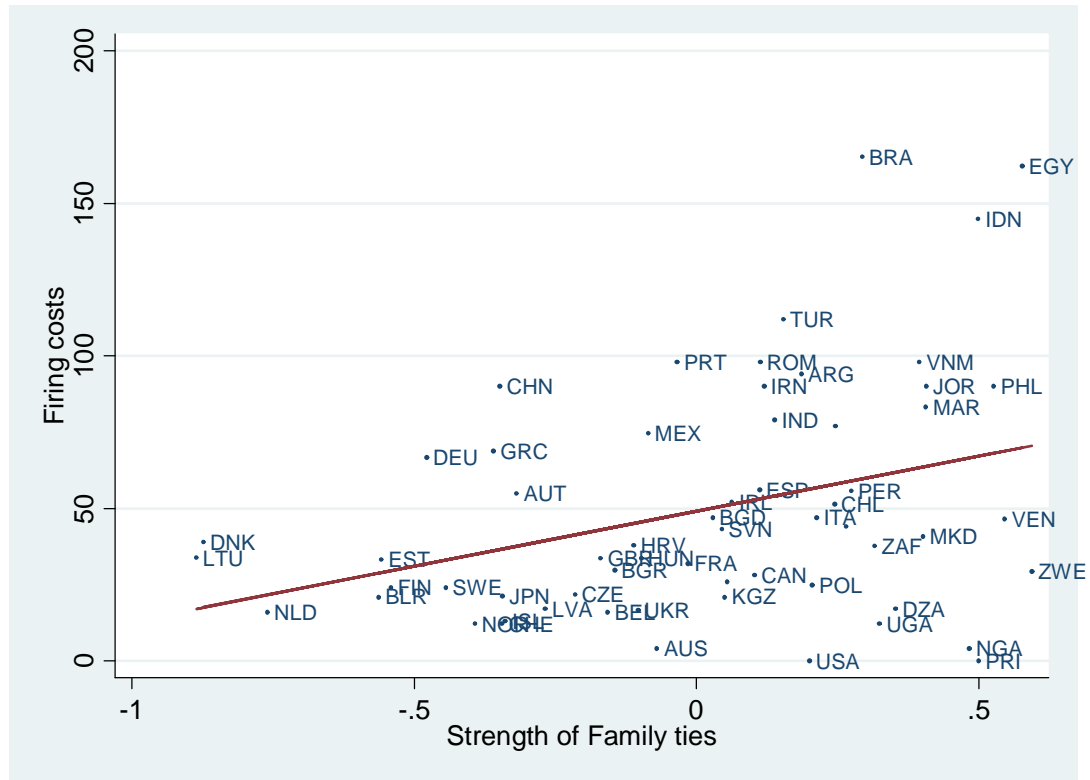


Figure 3: Correlation between firing costs and family ties. Source: Firing costs: World Bank 2004; Family ties: WVS 1980-2000.

1980-2000. In low income countries, people rely much more on family than in high income countries and labor market are more regulated.

We then show that these cross-country correlations between labor market regulation and family ties work through popular demand. Figure 6 shows the basic cross-country correlation between the strength of family ties and the preference for job security in a job. We measure on the y-axis the country-share of individuals who indicate that good job security is important in a job by averaging the answers over the waves 1980-2000 of the WVS. African, Asian, Latin American and Southern European countries display both the greatest concern for job security and the strongest family ties. This yields a positive relation between the strength of family ties and support for job security. Figure 7 shows that the same picture holds between family ties and the demand for wage regulation.



Figure 4: Correlation between stringency of minimum wage regulation and family ties. Source : Aghion et al. (2009) and WVS 1980-2000.

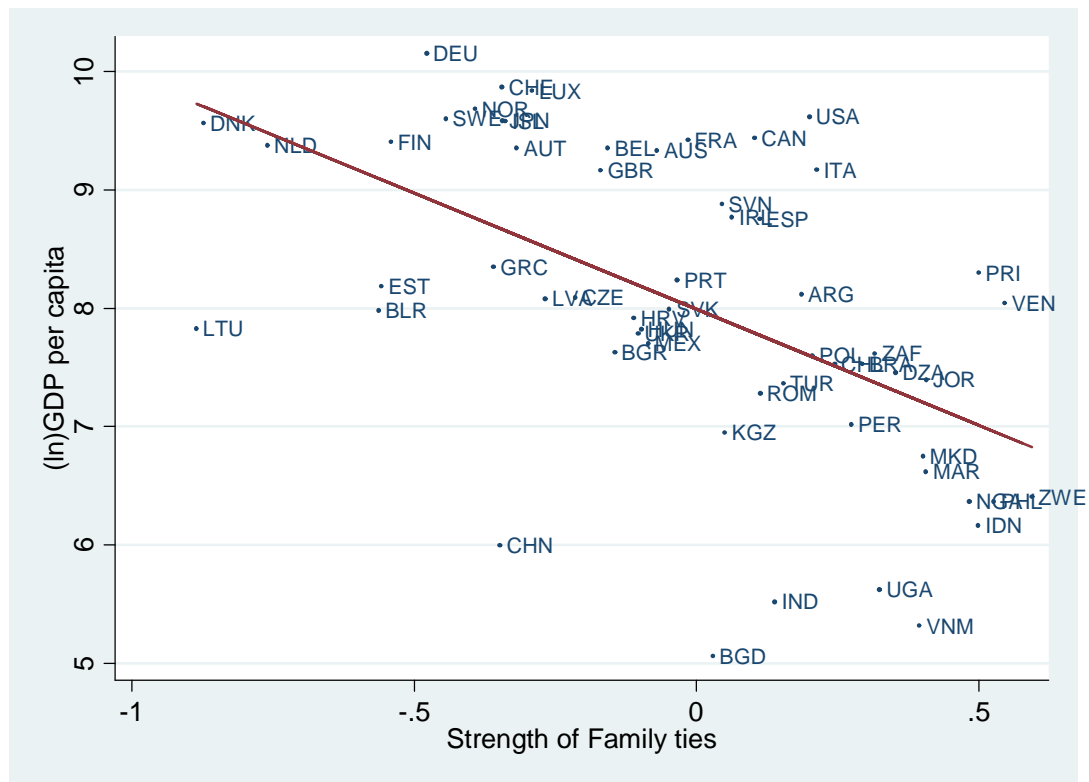


Figure 5: Correlation between the log of GDP per capita and family ties. Source : World Bank: Average GDP per capita 1980-2000; WVS 1980-2000: family ties.



Figure 6: Correlation between the preference for job security in a job and the strength of family ties. Source: WVS 1980-2000.

Countries with strong family ties display a higher support for wage regulation by the government.

Table 1 reports the correlations in regressions controlling for legal origin, which is the traditional alternative theory to explain regulation and its economic consequences (see Botero et al. , 2004; or Laporta et al., 2008). The correlation between the strength of family ties and firing cost is positive and statistically significant at the 5 percent level. The relationship between the stridency of stage regulation of minimum wage and family ties is also positive and statistically significant at 5 percent. Income per capita is negatively correlated with the strength of family ties, the relationship being statistically significant at the 1 percent level.

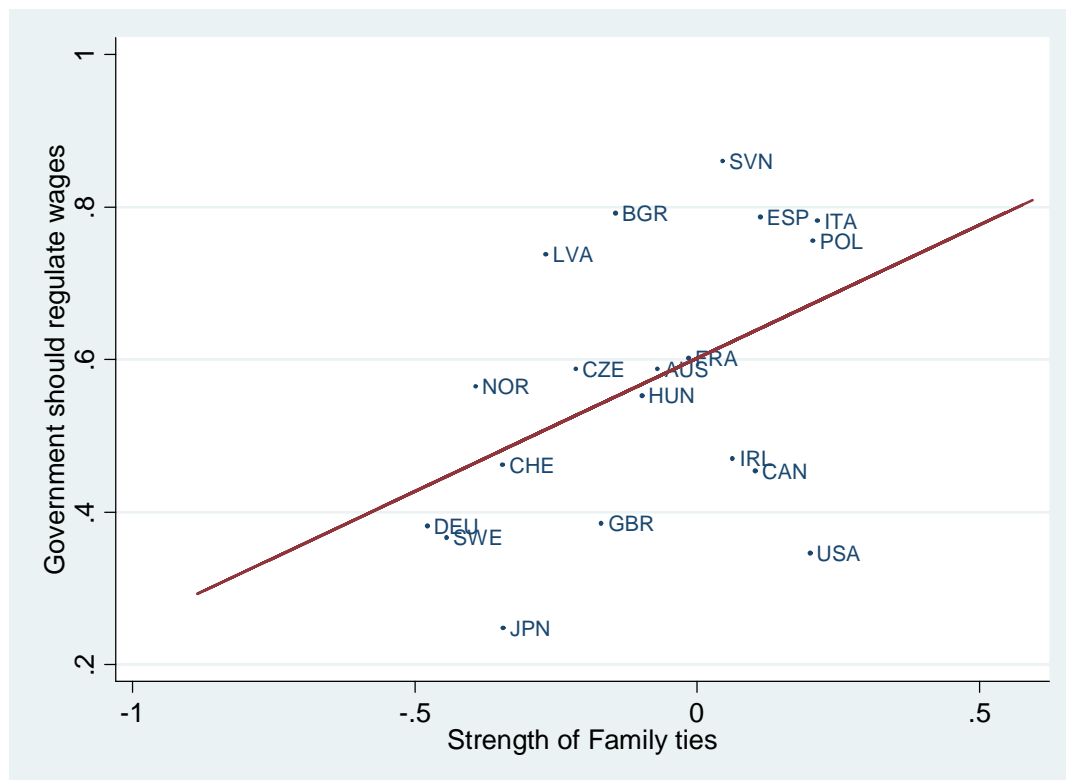


Figure 7: Correlation between the demand for wage regulation and family ties. Source ISSP 1996 and WVS 1980-2000.

Table 2 reports the corresponding microevidence based on individual answers from the WVS. We regress the indicators on demand for regulation and employment prospects on the index of family ties. We also control for age, gender, income, religion, political affiliation, time effects and country fixed effects interacted with time effects..

Table 2 - Column (1) shows the relationship between family ties and the preference for job security when we do not control for country fixed effects. The correlation is positive and statistically significant at the 1 percent level. Column (2) reports the result controlling for country fixed effects. The correlation is still statistically significant at the 1 percent level, but the coefficient is economically less sizeable. This suggests the importance of national characteristics in shaping preference for job security. Next, we document the relationship between the strength of family ties and the demand for an increase in government control over businesses. Table 2 - Columns (3) and (4) show the results with and without country fixed effects. The correlation between the strength of family ties and the demand for government ownership of businesses is positive and statistically significant at the 1 and 10 percent level respectively.

Finally we estimate the relationship between family ties and the probability of being employed rather than non-employed. The depend variable is equal to 1 if the respondent is employed, and 0 if the respondent is unemployed, retired, a student, or a housewife. Table 2 - Columns (5) shows that the probability to be employed is negatively correlated with the strength of family ties. The relationship is statistically significant at the 5 percent level. However the relationship is no longer significant when one controls for country-fixed effects.

4 Persistent effects of family ties

Our model shows that family values can have a persistent impact on labor market regulation and on economic outcomes if individuals inherit the values of their parents inde-

pendently of the environment. In this section, we provide evidence on this phenomenon. First, we show that second generation U.S. immigrants inherit the family values and the behaviors of their country of origin.¹⁶ It turns out that immigrants who inherited stronger family ties are less mobile and face a wage and employment penalty. Consistently, they also ask for more government regulation of wages and job security. Second, we compute the strength of family ties inherited from countries of origin before 1940 (using second, but also third and fourth generation U.S. immigrants). Then, we show that the strength of family ties inherited before 1940 is correlated with the stringency of labor market regulation in the countries of origin at the beginning of the 21st century.

4.1 The intergenerational transmission of family ties

We associate to each immigrant born in the U.S. the measure of family ties defined as the average set of beliefs toward the family in the country of origin. If values are inherited from previous generations, those beliefs should be significant for immigrants; if values are not transmitted across generations, then this variable should not be important in the determination of economic outcomes among immigrants, as they are now in a different country with the same institutions and economic environment.

4.1.1 Data and empirical specification

We use two main datasets, the General Social Survey to study the impact of family values on attitudes towards labor market regulation, and the March Supplement of the Current Population Survey of the U.S. to study labor market outcomes of immigrants. The General Social Survey covers the period 1972-2004 and provides information on the birth place

¹⁶The use of immigrants (first or second generation) to study the importance of culture on economic behavior is becoming relatively standard in the analysis of culture. See Alesina and Giuliano (2007), Algan and Cahuc (2005, 2009), Antecol (2000), Carroll, Rhee and Rhee (1994), Fernandez and Fogli (2006,2009) and Giuliano (2007) among others. Alesina and Giuliano (2007) have shown that second generation U.S. immigrants inherit the family values of their country of origin. In this paper, we extent this analysis by focusing on the relation between family values in the country of origin, the wage and the demand for labor market regulation of U.S. second generations immigrants.

and the country of origin of the respondent's forbearers since 1977. The GSS variable for the country of origin reads as follows: "From what countries or part of the world did your ancestors come?". The individual can report up to three countries of origin by order of preference. Two respondents out of three report only one country of origin. We select the GSS ethnic variable that captures the country of origin to which the respondent feels the closest to make the comparison between country of origin interpretable. Respondents are asked if they were born in the United States and how many of their parents and grandparents were born in the country. The answers to the question of parents' birthplace are scaled 0 if both parents are born in the US, 1 if only the mother was born in the US, and 2 if only the respondent's father was born in the country. The answers to the grand-parents' birthplace are scaled from 0 to 4 indicating the number of grandparents born in the US. We have a large number of observations for at least 24 countries or continents. The country of origins cover almost all European countries: Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, United Kingdom and Yugoslavia. The GSS database also reports information for Mexico and India and the category African origins. We only present the country of origins displaying at least more than 20 observations in our estimations.

The GSS provides specific questions related to attitudes towards job security and regulation, alongside with attitudes toward the family. Preference for job security is given by the question: "Would you please look at this card and tell me which one thing on this list you would most prefer in a job? No danger of being fired". The answer is ranked from 1, for the most important characteristic, to 4 for the last important. Attitudes toward regulation of jobs and wages are given by the following questions: "Here are some things the government might do for the economy: Supporting declining industries to protect jobs.? Regulate wage?". The answers range from 1 for strongly agree, 2 for agree, 3 for

neither, 4 for disagree to 5 for strongly disagree.

We measure family ties with two main questions. The first question is related to the subindex of obedience to parents used to measure family ties in the WVS: “All of the qualities may be desirable for a child to have, but could you tell me whether the quality is extremely important, very important, fairly important, not too important, or not at all important: That he obeys his parents well”. The answer ranges from 1 for extremely important to 5 for not all important. The second question measures social relationships within the family: “How often you do the following things: Spend a social evening with relatives?”. The answers are: 1) Almost daily, 2) Several times a week, 3) Several times a month, 4) Once a month, 5) Several times a year, 6) Once a year, 7) Never.

The March Supplement of the Current Population Survey (CPS) is the only recent available dataset in which individuals were asked (starting from 1994) about their parents country of origin¹⁷. We define second generations by looking at the country of origin of fathers’ respondent in order to maximize the number of observations¹⁸. We pool fifteen years of data to have a higher number of observations. We use the CPS to study the following outcomes predicted by the model: geographic mobility, labor force participation and wages. In the CPS we do have data on almost all countries covered in the World Values Survey.¹⁹

For both attitudes and labor market outcomes, we run the following OLS or probit (depending on the nature of the left hand side variable) regressions:

$$Y_{ic} = \alpha_0 + \alpha_1 family_ties_c + \alpha_2 X_i + \delta_s + \varepsilon_{ic}$$

¹⁷The Census report the information about the father’s country of origing until 1970.

¹⁸The CPS also reports the country of origin of the mother, but the sample size would be smaller due to a much higher number of missing observations.

¹⁹The CPS has data on second generation individuals from the following countries of origin: Puerto Rico, Canada, Mexico, El Salvador, Dominican Republic, Argentina, Brazil, Chile, Colombia, Peru, Uruguay, Venezuela, Finland, Norway, Sweden, England, Ireland, Northn Ireland, Belgium, France, Netherlands, Switzerland, Greece, Italy, Portugal, Spain, Austria, Slovakia, Czech Republic, Germany, Hungary, Poland, Yugoslavia, Latvia, Lithuania, Tussia, Ukraine, China, Taiwan, Japan, South Korea, Indonesia, Philippines, Singapore, Vietnam, India, Bangladesh, Pakistan,Iran, Jordan, Turkey, Egypt, Morocco, Nigeria, South Africa, Australia and New Zealand.

where Y_{ic} is our variable of interest for an immigrant i whose forbearer was born in country c . X_i are individual controls, which vary according to the nature of the left hand side variable, and $family_ties_c$ is the measure of strong family ties calculated from the WVS in the country of origin. We also control for a full set of state or county dummies whenever possible. All standard errors are clustered at the country of origin level.

4.1.2 Results

Table 3 reports the corresponding micro evidence based on individual answers from the GSS. We regress the US immigrants' attitudes towards job security and job regulation on the strength of family ties in the home country. We control for age, gender, education, income, political affiliation. Standard errors are clustered at the country of origin level. The results are highly consistent with the previous cross-country estimates. US immigrants coming from strong family ties countries tend to consider job security as a more important characteristic for a job. They are also more prone to consider that the government should save jobs or directly intervene to regulate wages. The effects are statistically significant at the 1 percent level.

Tables 4 to 7 report the evidence for the following labor market outcomes of US immigrants: mobility, log real hourly wages and unemployment. Mobility is defined as a dummy equal to 1 if the individual moved from/in a different state, or abroad in the last five years. Log hourly wage is defined as total wage income divided by the number of hours worked in a year,²⁰ and corrected for inflation. Unemployed is a dummy equal to 1 if the person is unemployed.²¹

We regress each outcome on our measure of family ties (column 1) and each subcomponent (columns 2 through 4). The mobility regression (Table 5, column 1) controls for

²⁰The CPS has information on both the number of weeks worked in a year and the number of usually worked in a week

²¹We run the unemployment regression for young adults (between 15 and 29 years of age).

education, marital and employment status, real family income, in addition to gender and a quadratic for age. The standard errors are clustered at the country of origin level. Our specification also includes state dummies to take into account local labor market characteristics of the area where immigrants live that could drive the results. All the controls have the expected sign: unemployed people are more likely to move (most likely to find a better job). Higher income and higher education tend to discourage mobility. Married people tend to move less, similarly to women (although the gender effect is not significant). Higher level of ethnic human capital encourage mobility, but its effect is barely significant. Immigrants belonging to weak family ties have a higher tendency to move. The results are significant at the 1% level for our combined index and at 5% or 1% for each one of the subcomponents. As a robustness check, in column 5, we include county dummies, to better control for the possibility that immigrants coming from different countries select in different areas.

Table 5 reports the results for the probability of being unemployed. People with strong family ties, who want to stay close to their families, should have a higher unemployment rate, as they are less willing to migrate and have a higher reservation wage. We find that the probability of being unemployed is indeed substantially higher for people belonging to strong family ties.²²

Table 6 reports a standard Mincer wage regression where log hourly wages are regressed on education, a quadratic in potential experience (defined as age minus number of years of education minus six). We also control for marital status and gender. Higher experience increases wages, as expected, together with education. Single people and women tend to have lower wages. Our measure of family ties and all the sub-components (with the exception of the variable on the importance of respect for parents) have a significant effect

²²This result is also in line with Bentolila and Ichino (2008), who find that the losses associated with unemployment are much lower in Mediterranean societies with strong family ties, as the family helps to insurance against risk.

on wages: people with strong family ties tend to have lower wages as predicted by our theoretical model. In column 4 and 5 we report the wage regression, by splitting the sample between low educated and highly educated workers. We expect the impact of family ties being stronger for highly educated people as they are more inclined to move and find a better match in the labor market, whereas for people with a lower level of human capital there is little to gain in moving to another location. The results confirm this prediction: weak family ties are more relevant in the determination of wages for highly educated workers but their impact is negligible for people with a lower level of human capital.

Our analysis is based on evidence from the Current Population Survey, since this dataset is the closest in time to the data on family ties taken from the World Values Survey. As a robustness check, we report in the Appendix results for our outcomes of interest, drawn from the Censuses 1940, 1960 and 1970.²³ We run the regressions under the assumption that values about family ties that we observe today have been fairly stable over time, so we assume that they did not change in the last 50 years or so. Our results are remarkably consistent with what found in the World Values Survey: today as well as 70 years ago, immigrants coming from strong family ties societies tend to have lower mobility rates, lower wages and a higher level of unemployment.

4.2 The persistent impact of family values

It has just been shown that family values are transmitted across generations. But we still do not know whether this transmission process is sufficiently strong to entail a persistence of family values and a persistent impact of family values on labor market regulations. We are going to show that this is indeed the case to the extent that countries with stronger family ties before 1940 have more rigid labor markets in the beginning of the twenty first

²³The Census 1950 does not contain the variable on migration.

century. We focus on family values before World War II since the main labor market institutions have been implemented in the post-war period.

4.2.1 Data and empirical specification

The strength of family ties before World War II cannot be observed directly, since there is no survey available on this period. However, we can detect family ties on this period by looking at the family values inherited from their country of origin by U.S. immigrants whose forebears arrived in the U.S. before 1940. We run the following OLS regression:

$$Y_{ic} = \beta_0 + \beta_1 X_i + \Phi_c + \varepsilon_{ic}$$

where Y_{ik} is the strength of family ties for an immigrant i whose forebear was born in country c . X_i is a vector of individual controls which includes gender, age, education and income. Φ_c is a country of origin fixed effect, which measures the influence of inherited values on contemporaneous values. Φ_c can be interpreted as a proxy for the family values in the before 1940 in the country of origin. ε_{ic} is an error term. All standard errors are clustered at the country of origin level. The reference country is Mexico.

We still use the GSS which yields information on the country of origin since 1977. In order to get enough observations, we run the regression for all the following individuals born in the U.S.: i) second generation immigrants born before 1940, since their parents immigrated in the U.S. before 1940; ii) third generation immigrants born before 1965, since their grand parents arrived in the U.S. before 1940 (assuming a gap of 25 years between generations); iii) fourth generation immigrants born before 1990.

The GSS variable used to measure the strength of family ties reads as follows: “Do you spend social event with relatives?”. The respondent can answer: almost daily, several times a week, several times a month, once a month, several time a year, once a year, never. The answers have been coded from 1 to 7 so that a higher frequency of meetings with relatives corresponds to stronger family ties.

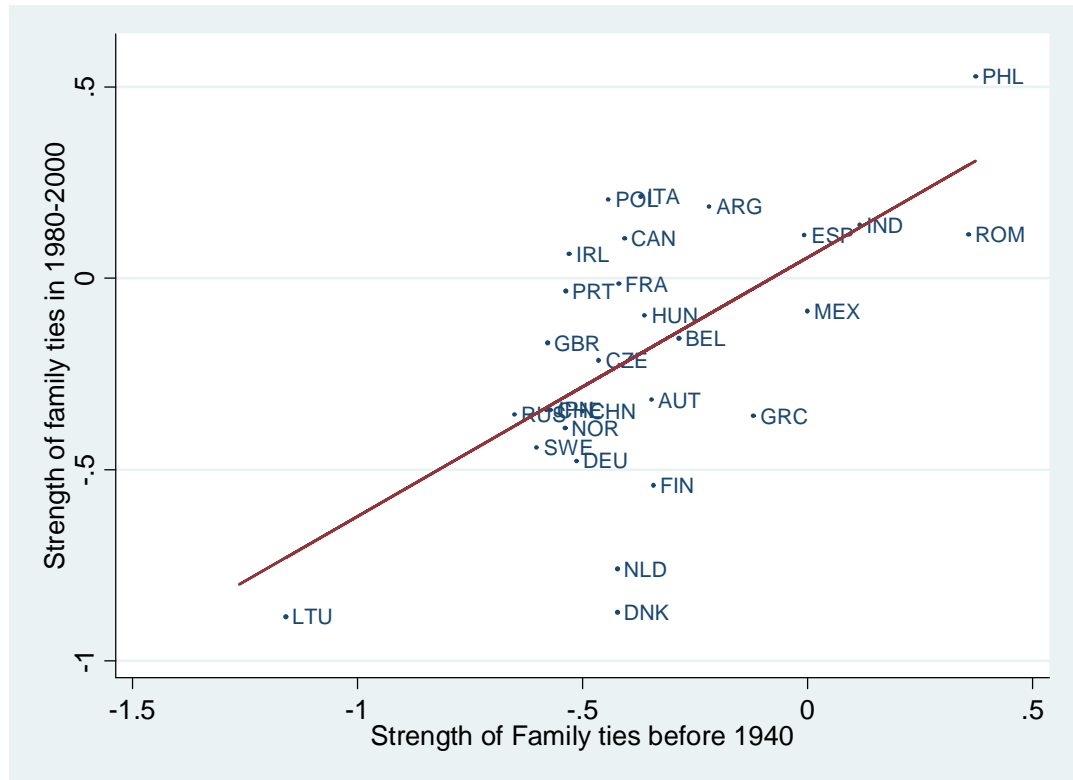


Figure 8: Strength of family ties before 1940 and strength of family ties in 1980-2000. Source: GSS and WVS.

4.2.2 Results

Figure 8 shows that there is a strong correlation between our measure of the strength of family ties before 1940, corresponding to the country of origin fixed effects in the micro regression on family ties in the GSS, and the family ties measured with the WVS over the period 1980-2000. The correlation coefficient is equal to 0.62. This result confirms that there is a strong inertia in family values in most countries. Figure 8 also suggests that there has been a drop in the strength of family ties in Nordic countries such as Denmark, the Netherlands and Finland.

Figure 9 shows that there is a strong positive correlation between the strength of family ties before 1940 and the stringency of employment protection in 2004. The correlation

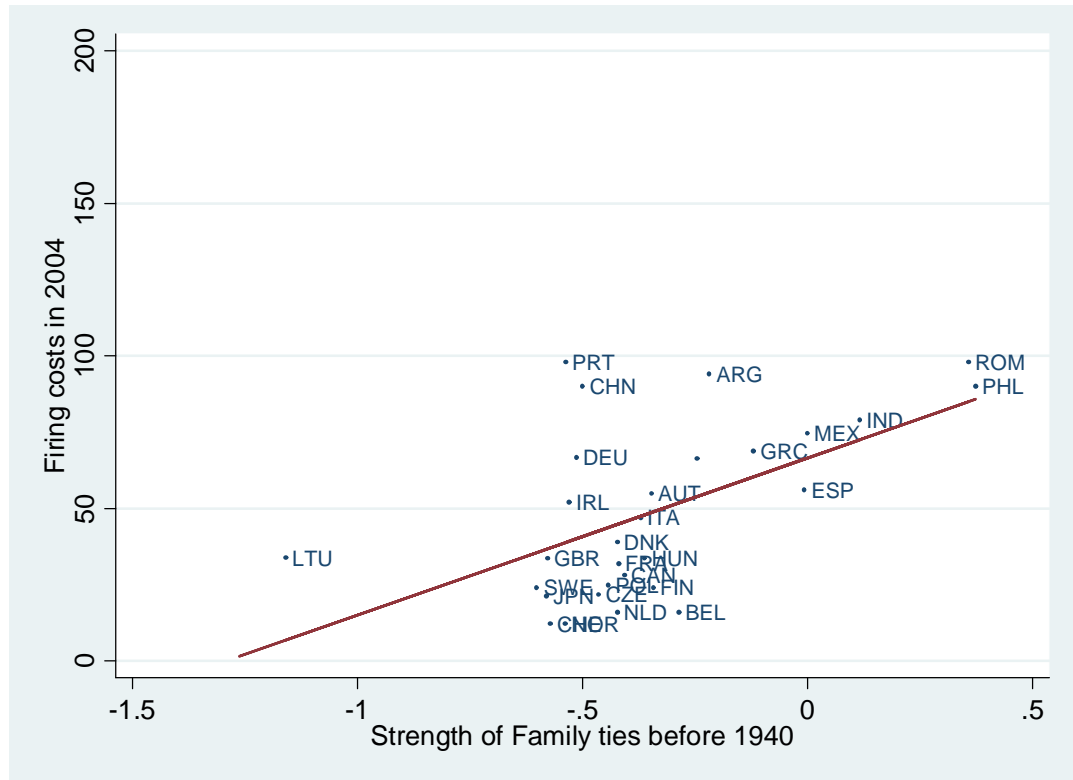


Figure 9: Strength of family ties before 1940 and firing costs in 2004. Source: GSS and World Bank.

coefficient is equal to 0.55. This correlation is very robust. Figure 10 shows that the same strong positive correlation shows up between the strength of family ties before 1940 and the stringency of minimum wage regulation by the state in 2006. The correlation coefficient is equal to 0.47. Table 7 shows the OLS estimations controlling for the legal origins. The correlation between labor market institutions in the 2000s and family values prior to 1940 is still statistically significant at the 5 percent level.

Finally, the results obtained in this section are in line with the prediction of the model according to which family values have persistent effects on labor market regulation if the intergenerational transmission of family values is sufficiently strong. Empirical evidence does show the existence of transmission of family values over one, two and even three

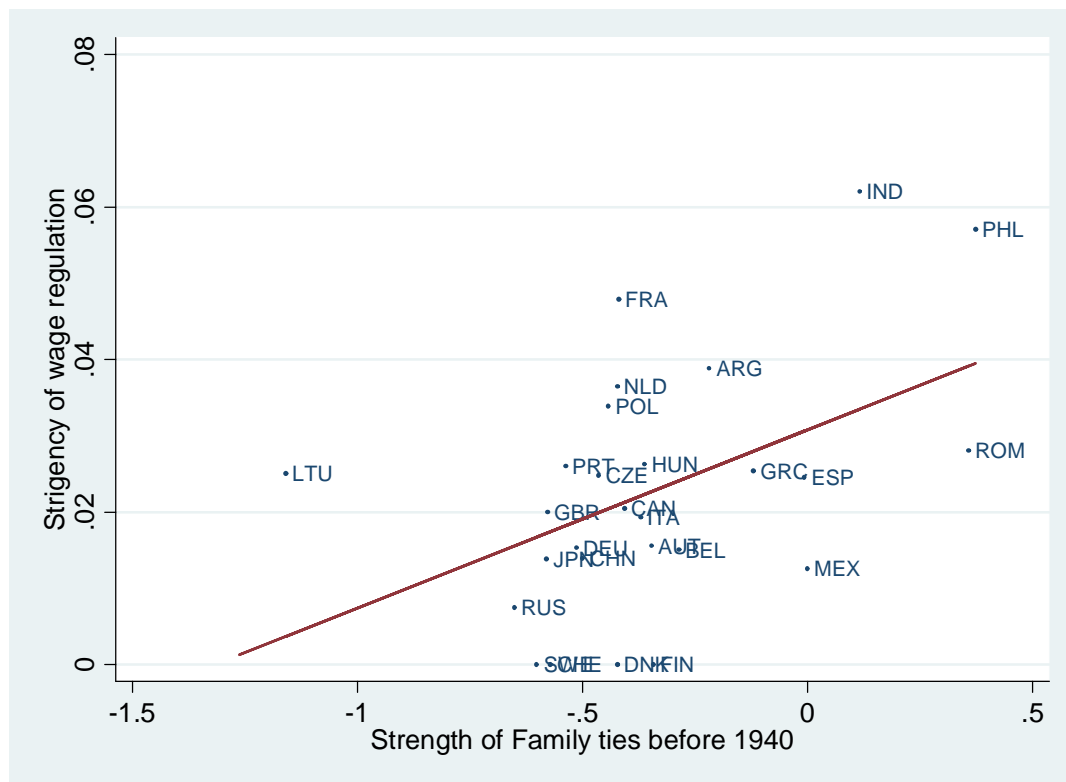


Figure 10: Strength of family ties before 1940 and stringency of minimum wage regulation in 2006-2007. Source : ILO 2007, Aghion et al. (2008) and WVS 1980-2000.

generations. Moreover, labor market regulations seem to have deep cultural roots since labor market rigidities in the beginning of the twenty first century are correlated with family values prevailing before WWII.

5 Conclusions

Labor market deregulation requires geographical mobility, otherwise firms can take advantage of the immobility of workers and extract monopsony rents. However, geographical mobility requires relatively weak family ties. That is, individuals should not experience a too high utility loss if they need to move away from their family of origin. Such costs may, instead, be high in cultures that value family ties, and therefore family closeness. As a result in countries with these family values in order to restrict monopsony power of firms, rationally favor a host of labor market regulations. Family values may evolve over time although slowly. In places with laissez-faire labor markets, parents have an incentive to teach children the benefits of mobility. In countries with regulated labor markets the benefit of mobility are much lower an parents can, if they choose so, teach the value of family ties, since they come at lower or no costs. Thus we can have two equilibria with a two way causality between family ties and labor market regulation.

We investigate this correlation between family values and attitudes toward labor market regulation and preferences for job security versus free labor market both with cross country evidence and evidence drawn from immigrants in the US. In both cases we found rather strong confirmation of this correlation. The correlation between labor market regulation and relatively slow moving cultural traits regarding the family and the fact that labor market regulation is complementary to certain family, values explains the difficulty in liberalizing labor markets. In a sense the relatively low employment and inefficiency associated with labor market regulation is the price that certain countries choose to pay in order to enjoy the benefits of family ties and closeness.

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6 APPENDIX

The aim of this appendix is to analyze the model when assumption 1 is not fulfilled in order to provide necessary and sufficient conditions for the existence of every equilibrium.

Stage 3 is described in the main text. Let us describe stages 2 and 1.

Stage 2:

In stage 2, people vote to choose labor market institutions. The share of individuals with strong family ties, σ , chosen in stage 1 is given.

- First, let us analyze the situation where $\Delta(\sigma) > (1 - c)/2$. Then, if the labor market is rigid, workers with strong family ties are immobile, since $\Delta(\sigma) > 1 - c - \Delta(\sigma)$ and we can write their expected utility, defined equation (4), in the simple following form:

$$U_R^S = (1 - R)w + \Delta(\sigma). \quad (10)$$

We can compute the maximum expected utility that an individual with strong family ties gets with a regulated labor market and compare it with what he gets when labor market are flexible to know when regulation is chosen rather than flexibility. The optimal labor market regulation is the couple of values of the minimum wage w and of the reservation productivity R that maximizes the expected utility of workers with strong family ties, defined by equation (10), subject to the zero profit condition:

$$\int_R^1 (y - c - w)dy = 0. \quad (11)$$

It is easily checked that the solution is

$$R = c \text{ and } w = \frac{1 - c}{2} \quad (12)$$

Then, in case of stringent labor market regulation, workers with strong family ties get the expected utility (see equations (6) and (8)):

$$U_R^S = \frac{(1-c)^2}{2} + \Delta(\sigma). \quad (13)$$

Comparison of equations (2) and (6) implies that a median voter with strong family ties prefers a regulated labor market rather than a flexible labor market when $\Delta(\sigma) > (1-c)/2$. If $\Delta(\sigma) > 1/2$, $U_F^S = \Delta(\sigma)$ and it is obvious that $U_R^S > U_F^S$. If $(1-c)^2/2 < \Delta(\sigma) < 1/2$, $U_F^S = 1 - \Delta(\sigma)$ which is smaller than $U_R^S = \frac{(1-c)^2}{2} + \Delta(\sigma)$ when $c < 1/2$.

- Now, let us analyze the situation where $\sigma > 1/2$ and $\Delta(\sigma) \leq (1-c)/2$. In this case, individuals with strong family ties move if they do not get a job in their birth place. The optimal labor regulation is the solution to

$$\max_{(R,w)} U_R^S = (1-R)[w + \Delta(\sigma)] + R[1-c - \Delta(\sigma)] \quad (14)$$

subject to

$$\int_R^1 (y - c - w) dy = 0. \quad (15)$$

$$w + \Delta(\sigma) \geq 1 - c - \Delta(\sigma) \quad (16)$$

Let us denote by λ and μ the Kuhn and Tucker multipliers associated with constraints (14) and (16). The first order conditions are

$$1 - c - w - 2\Delta(\sigma) - \lambda(R - c - w) = 0 \quad (17)$$

$$(1 - R) - \lambda(1 - R) - \mu = 0 \quad (18)$$

Suppose that constraint (16) is not binding so that $\mu = 0$. From equation (17), $\mu = 0$ implies that $\lambda = 1$. Then, equations (15) and (18) imply that

$$R = 1 - 2\Delta(\sigma) \text{ and } w = 1 - c - \Delta(\sigma) \quad (19)$$

It turns out that constraint (16) is never binding. Therefore, in the case where $\sigma > 1/2$ and $\Delta(\sigma) \leq (1 - c)/2$, equations (14) and (19) imply that the expected utility obtained by individuals with strong family ties if the labor market is regulated is

$$U_R^S = 1 - c - \Delta(\sigma) [1 - 2\Delta(\sigma)],$$

whereas individuals with strong family ties get

$$U_F^S = 1 - \Delta(\sigma)$$

if the labor market is flexible. Individuals with strong family ties prefer labor market rigidity if and only if

$$1 - c - \Delta(\sigma) [1 - 2\Delta(\sigma)] > 1 - \Delta(\sigma)$$

which is equivalent to

$$c < 2[\Delta(\sigma)]^2.$$

Finally, the situation which arises in stage 2, where individuals vote to choose the type of labor market institution, can be summarized as follows:

- if $\sigma \leq 1/2$, the median voter, who has weak family ties, chooses labor market flexibility.
- if $\sigma > 1/2$, the median voter, who has strong family ties, chooses to regulate the labor market if either $\Delta(\sigma) > (1 - c)/2$, or $\Delta(\sigma) \leq (1 - c)/2$ and $c < 2[\Delta(\sigma)]^2$. Otherwise, the median voter chooses labor market flexibility. Figure 11 depicts the choice of voters when $\sigma \geq 1/2$ in the (c, Δ) plane. It turns out that labor market rigidity is always chosen if $\Delta \geq 1/2$. This condition is satisfied if $\Delta(\sigma) \geq 1/2$ since $\Delta'(\sigma) \geq 0$.

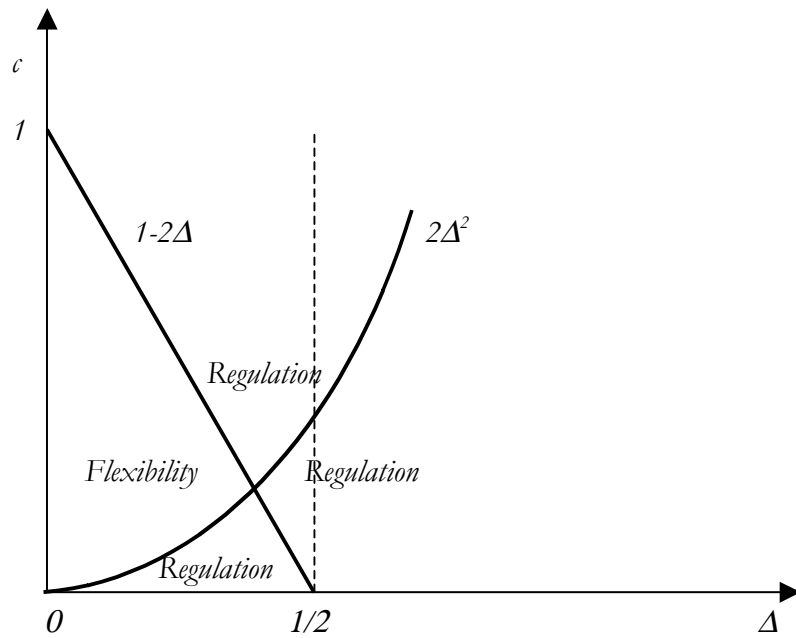


Figure 11: The choice of labor market regulation in stage 2 when the share of individuals with strong family ties, σ , is larger than $1/2$.

Let us denote by F the set of values of σ such that flexibility is chosen in stage 2.

Stage 1

In stage one, individuals choose their family values. They have perfect foresights. If they anticipate that the share of individuals with strong family ties belongs to F , they also anticipate that labor market flexibility will be the outcome of the vote in stage 2. Otherwise, the outcome of the vote will be labor market regulation. Therefore, the expected utility of individuals with strong family ties is

$$\begin{cases} \max[\Delta(\sigma), 1 - \Delta(\sigma)] & \text{if } \sigma \in F \\ \Delta(\sigma) + \frac{(1-c)^2}{2} & \text{if } \sigma \notin F \text{ and } \Delta(\sigma) > \frac{1-c}{2} \\ 1 - c - \Delta(\sigma) [1 - 2\Delta(\sigma)] & \text{if } \sigma \notin F \text{ and } \Delta(\sigma) \leq \frac{1-c}{2} \end{cases}$$

and the expected utility of individuals with weak family ties is²⁴

$$\begin{cases} 1 & \text{if } \sigma \in F \\ 1 - c & \text{if } \sigma \notin F. \end{cases}$$

Thus, the utility gains of choosing strong family ties rather than weak family ties are

$$\Gamma(\sigma) = \begin{cases} \max[\Delta(\sigma), 1 - \Delta(\sigma)] - 1 & \text{if } \sigma \in F \\ \Delta(\sigma) - \frac{1-c^2}{2} & \text{if } \sigma \notin F \text{ and } \Delta(\sigma) > \frac{1-c}{2} \\ \Delta(\sigma) [2\Delta(\sigma) - 1] & \text{if } \sigma \notin F \text{ and } \Delta(\sigma) \leq \frac{1-c}{2} \end{cases}$$

In a Nash equilibrium, every individual takes σ as given and chooses strong family ties if the gains of doing so are positive and weak family ties otherwise.

It turns out that there exists a stable Nash equilibrium with $\sigma = 0$ only if assumption 2 is satisfied, i.e. if $\Delta(0) < 1$. If assumption 2 is not fulfilled, it is easily checked that $\Gamma(\sigma) > 0$ for all σ , which implies that there is a single equilibrium with $\sigma = 1$.

If assumption 2 is fulfilled, there is a stable equilibrium with $\sigma = 0$. Then the definition of $\Gamma(\sigma)$ implies that there is either no other stable equilibrium if $\Delta(1) \leq \frac{1-c^2}{2}$ or another stable equilibrium with $\sigma = 1$ if $\Delta(1) > \frac{1-c^2}{2}$.

²⁴When the labor market is flexible, the minimum wage, $w = (1 - c)/2$, obtained by immobile workers, is smaller than $1 - c$, the wage of mobile workers.

Table 1: Family ties and Labor regulation

Dependent variable	Firing Cost	State regulation of minimum wage	Ln(Gdp per capita)
	(1)	(2)	(3)
Strong family ties	.306** (.134)	.018** (.007)	-1.77*** (.492)
Legal origins		Reference	
Common Law origin			
Civil Law origin	.363*** (.113)	-.000 (.007)	-.036 (.422)
Scandinavian origin	.092 (.222)	-.021* (.010)	1.042 (.824)
German origin	.242 (.148)	-.008 (.006)	.116 (.541)
Observations	60	46	63
R ²	.25	.40	.32

Source: World Values Survey, Alesina et Guliano (2007), ILO (2007) and Botero et al. (2004)

Table 2: Family ties, Employment and Preference for Job security: Microestimates

	Important thing in a job: Job security		Government should own the businesses		Employed	
	(1)	(2)	(3)	(4)	(5)	(6)
Strong family ties	.021 ^{***} (.004)	.012 ^{***} (.002)	.100 ^{***} (.029)	.042 [*] (.024)	-.019 ^{**} (.007)	-.003 (.003)
Men	.022 [*] (.011)	.022 [*] (.012)	-.319 ^{***} (.058)	-.295 ^{***} (.062)	.216 ^{***} (.020)	.213 ^{***} (.020)
Age	-.000 (.000)	-.000 (.000)	-.011 ^{***} (.002)	-.005 ^{**} (.002)	-.006 ^{***} (.001)	-.007 ^{***} (.001)
Education	-.006 ^{***} (.001)	-.004 ^{***} (.001)	-.029 ^{***} (.006)	-.037 ^{***} (.006)	.004 ^{***} (.001)	.006 ^{***} (.001)
Low income	.010 (.018)	.027 ^{**} (.012)	.562 ^{***} (.167)	.519 ^{***} (.138)	-.207 ^{***} (.022)	-.215 ^{***} (.021)
Mid income	.004 (.015)	.013 (.010)	.306 ^{***} (.087)	.222 ^{***} (.069)	-.075 ^{***} (.015)	-.077 ^{***} (.012)
Left	.000 (.011)	-.008 (.008)	.418 ^{***} (.073)	.432 ^{**} (.063)	-.021 (.012)	-.008 (.009)
Right	-.017 ^{**} (.007)	-.011 (.007)	-.120 (.088)	-.177 ^{***} (.073)	-.033 ^{***} (.009)	-.026 ^{***} (.008)
Protestant	.005 (.034)	-.024 ^{**} (.014)	-.903 ^{**} (.201)	-.257 ^{**} (.115)	.062 ^{***} (.036)	.007 (.020)
Orthodox	.009 (.037)	.029 (.019)	.190 (.393)	.097 (.175)	.042 ^{***} (.024)	.037 [*] (.020)
Muslim	.219 ^{***} (.037)	-.014 (.017)	-.020 (.282)	.160 (.175)	-.120 ^{**} (.024)	-.054 ^{**} (.022)
Hinduist-Buddhist	.176 ^{***} (.035)	-.009 (.023)	.014 (.272)	-.157 (.150)	-.073 [*] (.042)	-.066 (.047)
Time effects	Yes	Yes	Yes	Yes	Yes	Yes
Country-fixed effects x Time effects	No	Yes	No	Yes	No	Yes
R ²	.055	.125	.052	.124	.163	.205
N	63992		58412		57928	

Source: WVS - Reference: catholic, political orientation: center, high income.

Robust standard error clustered at the country level: : ***:1%, **: 5%, *: 10.

Table 3: Family values and demand for Labor regulation: Micro estimates on US-immigrants

	Important thing in a job: security	Government should save job	Government should regulate wage
Strong family ties in home country	.486 ^{***} (.093)	.705 ^{***} (.023)	.856 ^{***} (.042)
N	8063	2583	2583

Source: GSS - Controls: gender, age, education, income, political affiliation
Robust standard error clustered at the country of origin level. ***:1%, **: 5%, *: 10.

Table 4: Family ties and mobility. Second generation immigrants, CPS 1994-2008. Microestimates

	Mobility				
	(1)	(2)	(3)	(4)	(5)
Strong family ties	-.026 ^{***} (.007)				-.019 ^{***} (.006)
Family important		-.089 ^{**} (.036)			
Parents responsib			-.061 ^{***} (.016)		
Respect parents				-.072 ^{***} (0.028)	
Age	-.003 (.126)	-.015 (.128)	-.003 (.126)	-.015 (.128)	.006 (.115)
Age squared	-.050 (.140)	-.022 (.143)	-.049 (.138)	-.031 (.143)	-.088 (.130)
≤ 12 years of schooling	-.016 ^{***} (.005)	-.014 ^{***} (.005)	-.017 ^{***} (.005)	-.018 ^{***} (.005)	-.019 ^{***} (.005)
Some college	-.013 ^{***} (.005)	-.014 ^{***} (.005)	-.013 ^{***} (.005)	-.015 ^{***} (.005)	-.016 ^{***} (.005)
Married	-.008 ^{**} (.004)	-.008 ^{**} (.004)	-.008 ^{**} (.004)	-.008 ^{**} (.004)	.009 ^{***} (.003)
Single	.024 ^{***} (.006)	.025 ^{***} (.006)	.025 ^{***} (.006)	.024 ^{***} (.006)	.022 ^{***} (.005)
Female	-.001 (.002)	-.001 (.002)	-.001 (.002)	-.001 (.002)	-.000 (.002)
Unemployed	.046 ^{***} (0.006)	.046 ^{***} (0.006)	.046 ^{***} (0.006)	.045 ^{***} (0.006)	.040 ^{***} (0.006)
Real income	-.033 ^{***} (.004)	-.033 ^{***} (.004)	-.033 ^{***} (.004)	-.033 ^{***} (.004)	-.031 ^{***} (.004)
N	80210	80592	80414	80388	79459

Mobility is defined as a dummy equal to 1 if the individual moved from/in a different state, or abroad in the last five years

Robust standard errors are clustered at the country of origin level.

*** significant at 1%, ** significant at 5%, * significant at 10%

Columns 1 through 4 control for state fixed effects. Column 5 controls for county fixed effects

Table 5: Family ties and unemployment. Second generation immigrants, CPS 1994-2008.
Microestimates

	Unemployed				
	(1)	(2)	(3)	(4)	(5)
Strong family ties	.014 ^{***} (.005)				.012 ^{***} (.005)
Family important		.060 ^{**} (.020)			
Parents responsib			.038 ^{***} (011)		
Respect parents				.031 ^{***} (.018)	
Age	-.691 ^{***} (.115)	-.679 ^{***} (.114)	-.687 ^{***} (.117)	-.685 ^{***} (.117)	-.700 ^{***} (.111)
Age squared	.758 ^{***} (.136)	.737 ^{***} (.135)	.754 ^{***} (.138)	.745 ^{***} (.138)	.769 ^{***} (.132)
≤ 12 years of schooling	0.053 ^{***} (.003)	0.053 ^{***} (.003)	0.053 ^{***} (.003)	0.055 ^{***} (.003)	.051 ^{***} (.003)
Some college	.019 ^{***} (.004)	.019 ^{***} (.004)	.019 ^{***} (.004)	.020 ^{***} (.004)	.017 ^{***} (.004)
Married	-.029 ^{**} (.003)	-.029 ^{**} (.003)	-.029 ^{**} (.003)	-.029 ^{**} (.003)	-.029 ^{**} (.003)
Single	.002 (.004)	.002 (.004)	.002 (.004)	.002 (.004)	.001 (.004)
Female	-.009 ^{**} (.002)	-.009 ^{**} (.002)	-.009 ^{**} (.002)	-.009 ^{**} (.002)	-.009 ^{**} (.002)
N	53938	54209	54092	54055	52344

Unemployed is a dummy equal to 1 if the person is unemployed

Robust standard errors are clustered at the country of origin level.

*** significant at 1%, ** significant at 5%, * significant at 10%

Columns 1 through 4 control for state fixed effects. Column 5 controls for county fixed effects

Table 6: Family ties and log hourly wage. Second generation immigrants, CPS 1994-2008.
Microestimates

	Log Hourly Wage						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Strong family ties	-.053 ^{***} (.0018)				-.063 ^{**} (.024)	-.142 ^{**} (.037)	-.047 ^{**} (.017)
Family important		-.209 ^{***} (.074)					
Parents responsib			-.120 ^{**} (.046)				
Respect parents				-.139 ^{**} (.060)			
Age							
Age ²							
≤ 12 years of schooling	-.655 ^{***} (.018)	-.656 ^{***} (.016)	-.657 ^{***} (.018)	-.660 ^{***} (.019)			-.640 ^{**} (.018)
Some college	-.420 ^{***} (.016)	-.422 ^{***} (.015)	-.422 ^{***} (.016)	-.424 ^{***} (.017)			-.409 ^{**} (.015)
Experience	.037 ^{***} (.001)	.037 ^{***} (.001)	.037 ^{***} (.001)	.036 ^{***} (.001)	.039 ^{***} (.002)	.042 ^{***} (.002)	.037 ^{***} (.001)
Experience ²	-.001 ^{***} (.000)	-.001 ^{***} (.000)	-.001 ^{***} (.000)	-.001 ^{***} (.000)	-.001 ^{***} (.000)	-.001 ^{***} (.000)	-.001 ^{***} (.000)
Married	.095 ^{***} (.009)	.095 ^{***} (.009)	.094 ^{***} (.009)	.095 ^{***} (.009)	.105 ^{***} (.016)	.120 ^{***} (.016)	.094 ^{***} (.009)
Single	-.120 ^{***} (.016)	-.121 ^{***} (.016)	-.121 ^{***} (.016)	-.120 ^{***} (.016)	-.112 ^{***} (.024)	-.140 ^{***} (.020)	-.125 ^{**} (.017)
Female	-.221 ^{***} (.014)	-.222 ^{***} (.014)	-.222 ^{***} (.014)	-.221 ^{***} (.014)	-.206 ^{***} (.015)	-.246 ^{***} (.016)	-.220 ^{**} (.014)
N	51192	51439	51341	51290	22208	28984	51192

Robust standard errors are clustered at the country of origin level.

*** significant at 1%, ** significant at 5%, * significant at 10%

Columns 1 through 6 control for state fixed effects. Column 7 controls for county fixed effects

Table 7: Inherited Family ties before 1940 and Labor regulation

Dependent variable	Firing Cost (1)	State regulation of minimum wage (2)
Inherited Family ties before 1940	.429** (.162)	.018** (.007)
Legal origins		Reference
Common Law origin		
Civil Law origin	.072 (.143)	-.006 (.008)
Scandinavian origin	-.179 (.174)	-.031* (.010)
German origin	.004 (.155)	-.013 (.009)
Observations	27	26
R ²	.25	.48
Source: GSS, ILO (2007) and Botero et al. (2004)		