Family Values and the Regulation of Labor[*]

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Abstract

Flexible labor markets require geographically mobile workers to be efficient. Otherwise, firms can take advantage of the immobility of workers and extract monopsony rents. In cultures with strong family ties, moving away from home is costly. Thus, individuals with strong family ties rationally choose regulated labor markets to avoid moving and limiting the monopsony power of firms, even though regulation generates lower employment and income. 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 suggests that labor market regulations have deep cultural roots.

1 Introduction

Reformers have been routinely frustrated by a widespread opposition to what economists would consider efficient labor market reforms in Continental Europe where high firing costs, binding minimum wages and various other employment protection rules abound. Most economists, although with varying emphasis, would argue that these regulations are at least in part responsible for the high European unemployment from the eighties onward.[1] But these regulations survive. Why? The most common explanations rely

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[1]For instance, for a balanced view see Blanchard and Wolfers (2000).

upon various versions of the insider-outsider model, in which unionized "inside" workers want to preserve their rents and want to avoid competition from the outsiders.[2] However, this interpretation does not explain why insiders are more powerful in some countries than in others. In addition, the logic of this model implies that the "outsiders" should oppose labor regulations, but in reality this is not the case. In Continental Europe labor regulations are broadly supported. In fact those that could be considered outsiders favor extending the coverage to themselves as well rather than liberalizing the labor market.

In the present paper we provide a different explanation, based upon the complementarity between the strength of family ties and the stringency of labor market regulation. Flexible labor markets require that individuals move geographically in order to maximize their opportunities, find the best match with a firm and get the best paid job. This is efficient when mobility is painless. However, in certain cultures, staying close to the extended family (from now on "family" in short) is important and the mobility required by a free labor market can be painful. With unregulated labor markets, local firms would have a monopsonistic power over immobile workers, who would demand labor regulation to counteract this power. This can lead to two different equilibria. One is *laissez-faire*, with high mobility and unregulated labor markets; this occurs when family ties are weak. When family ties are strong, there is another equilibrium with labor market rigidity comprising minimum wage and firing restrictions. Given the cultural value placed on family ties, labor market regulation is preferable to *laissez-faire*. Even though *laissez-faire* produces higher income per capita it rarefies family relations. If family ties are sufficiently strong this relaxation of family relationships can reduce individual utility so much that welfare can be higher with a regulated labor market.[3]

An innovative feature of our model is that individuals 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 effect between family ties and labor market regulation. An inherited culture of strong family ties leads to a preference for labor market rigidities, but the latter in turn

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[2]The original formulation of the insider outsider model is in Lindbeck and Snower (1989). One of the most recent version of this argument which also incorporates product market (de)regulation is Blanchard and Giavazzi (2003). Saint-Paul (2000) analyzes how the oppostion of insiders to reforms shapes labor market institutions.

[3]Our model does not have home production, but with strong family ties hours not spent at work can be devoted to work at home. Thus adding home production would reinforce the result of the model because lower work in the market would be less costly in strong family ties societies.

makes it optimal to teach and adopt strong family ties. Thus economic incentives explain the evolution of cultural values 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. Note that Scandinavian countries, despite their stronger social protection, have flexible labor markets, the so called "flexisecurity" system. Indeed, these countries have the weakest family ties in the OECD. Second, our argument is consistent with the broad support for labor market regulation in Continental Europe that goes beyond the insider outsider cleavage. Moreover, the transmission of cultural values across generations implies that the strength of family ties can persist over time and can have a long lasting impact on labor market regulation. On the normative side, it explains why it has proved so difficult to reform labor markets in many Southern and Central European countries.

In our empirical analysis we document the interactions between family ties, labor market institutions and outcomes. We measure family ties as in Alesina and Giuliano (2010, 2011) using answers from the World Values Survey and we show that countries with strong family ties implement more stringent labor market regulations. We motivate our story using cross country data, but our main empirical contribution relies upon micro evidence. We show that individuals with strong family ties are more likely to believe that job security is a critical feature of a job and would like government regulation to insure it. In order to document the transmission of family values across generations, which drives the long run relations between family ties, labor market regulation and labor market outcomes in our model, we then focus on U.S. immigrants.[4] We show that second generation immigrants from countries with strong family ties are less mobile and face a wage and employment penalty. 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.

The present paper is at the intersection of three strands of the literature. One is the

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[4]Cultural 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 (2010), Algan and Cahuc (2005), Fernandez and Fogli (2006, 2009), Giuliano (2007), Guiso et al. (2006), Luttmer and Singhal (2009) amongst many others. This literature shows that cultural values, including the organization of the family, persist among generations even when individuals move to other countries.

vast area of research on labor market institutions and labor market performance.[5] The second is the one referred to as cultural economics. This literature has investigated the importance of cultural traits in the determination of economic outcomes,[6] the transmission of cultural values,[7] and only recently the interaction between cultural values and economic institutions.[8] In particular several papers have investigated the role of the family in this context.[9] The third strand of literature stresses the complementarity between investment in local social ties, including friends and family, and geographical immobility.[10]

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.[11]

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[5]See the recent surveys of Eichhorst et al. (2008) and Freeman (2008).

[6]See Carroll et al. (1994), Guiso et al., (2006, 2009), Tabellini (2008a), Algan and Cahuc (2009b), Fernandez and Fogli (2007), Alesina and Giuliano (2010, 2011), Giavazzi et al. (2009).

[7]See Bisin and Verdier (2000, 2001). Their 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).

[8]Related to the influence 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 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 norms 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.

[9]See for instance Guttman and Yacouel (2007), Guttman (2001a,b) Tabellini (2008), Bisin and Verdier (2000) amongst others.

[10]Glaeser, Laibson and Sacerdote (2002) argue that individuals who perceive themselves as being strongly attached to a village, a township or a region, may invest in local social capital, because the returns from these local ties are high while, on the other hand, strong local social capital raises the cost of mobility and in turn reduces incentives to move. Spilimbergo and Ubeda (2004a) show that interactions between social ties and moving decisions can explain the different behaviors of workers in different groups, regions, or countries in an endogenous way by showing the existence of multiple equilibria. Glaeser and Redlick (2008) show that it is possible that an area can get caught in a bad equilibrium where the prospect of out-migration reduces social capital investment and a lack of social capital investment makes out-migration more appealing. David, Janiak and Wasmer (2009) build a model that can include two different equilibria: strong local social capital and low mobility vs. low social capital and high propensity to move.

[11]We focus on family rather friends because individuals who have many friends somewhere are also those who may have many others elsewhere. This problem does not arise with family ties since one does not choose one's parents.

Regarding the role of family ties, Alesina and Giuliano (2010, 2011) offer a broad set of results including the fact that strong family ties are related to low geographical mobility, an essential building bloc of the model in the present paper.[12] This is reasonable: strong family ties bring more benefits 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 the model of the present paper. Alesina and Giuliano (2010), Algan and Cahuc (2005) and Giuliano (2007) 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 effects 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, every individual is located on the $[0,1]$ line, on a point where her 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. In reality family values are "chosen" by parents and transmitted to children. However for the sake of simplicity we collapse the model to a static case without intergenerational transmission of values. Below we also make some progress toward extending our model in a dynamic direction.

The share of individuals with strong family ties is $\sigma \in [0,1]$. Strong family ties yield an utility $\Delta(\sigma) > 0$, if an individual lives in the same location as her parents, and a disutility $-\Delta(\sigma)$ if he/she lives elsewhere. An individual with weak family ties is indifferent between

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[12]See also Belot and Ermisch (2006), Spilimbergo and Ubeda (2004b), Zorlu (2009).

living in his location of birth or elsewhere, thus $\Delta = 0$. We assume $\Delta'(\sigma) \geq 0$ for two reasons. First, social norms are generally more influential when they are more spread around. Living in a community where most people have strong family ties create a strong social norm to which one feels an incentive to conform. 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 with 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 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. With majority rule individuals vote on labor market regulation. By assumption 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 based upon two instruments, a minimum wage and job protection. These two instruments (described in more detail below) are necessary and sufficient to ensure that the market equilibrium is Pareto efficient when there are mobility costs.

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 $c \in [0, 1/2)$, that is the production of a worker who draws the productivity y is equal to $y - c$, instead of y.[13] 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.[14] When there is a minimum wage, workers can be either employed and

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[13] The latter can take a variety of forms, including the distortionary cost of taxation needed to provide unemployment subsides for those not employed in distorted labor market. We do not explicitly model this channel.

[14] The 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).

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 bears no costs of mobility. A worker with strong family ties has a moving cost of $2\Delta(\sigma)$. Without labor market regulation, workers with strong family ties face the monopsony power of firms. Labor market regulation protects these workers against those firms.

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 obtain a wage equal to 1 by moving at no cost. 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, but the move costs them $2\Delta(\sigma)$. Therefore, their reservation wage, which is necessarily non negative, is equal to $\max[0, 1 - 2\Delta(\sigma)]$. Thus 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. $1 - 2\Delta(\sigma) + \Delta(\sigma) = 1 - \Delta(\sigma)$

2. If their productivity in their initial location is smaller than their reservation wage, individuals with strong family ties are not hired. Since $\Delta(\sigma) < 1/2$, individuals with strong family ties prefer to move and get a utility equal to $1 - \Delta(\sigma)$. In conclusion, when

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

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

Rigid labor market

If 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/her 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 losses associated with job protection.[15] R and w are determined endogenously below in equilibrium. 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

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

The expected utility of individuals with strong family ties is

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

ii) In stage 2, people vote on the labor market policy: either regulation or flexibility. 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. We assume that the owners of the firms do not vote. If they did they would always prefer labor market flexibility regardless of the level of family ties therefore they have a dominant strategy to vote for flexibility. Their share of votes should be simply added to those who vote for *laissez-faire*.[16]

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[15] 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.

[16] In case workers own stocks of firms then some of them would face a trade off between their interest as stock holders and those as workers. We do not explore this extension here. In most countries the percentage of individuals who hold stocks of individual firms is very small.

- Individuals with weak family ties obtain $U_F^W = 1$ under labor market flexibility, and $U_R^W < 1$ under labor market regulation.[17] 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. 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: $\Delta(1/2) > \frac{1}{2}$.

This assumption implies that when the labor market is regulated, workers with strong family ties do not move. This case is easier to illustrate and we do so in the text. The general case without that assumption is in the appendix.

Assumption 1 implies that the expected utility of individuals with strong family ties when the labor market is flexible and when $\sigma > 1/2$ is:

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

On the other hand, the expected utility in the regulated scenario is given by:

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

Comparison of equations (5) and (6) shows that those with strong family ties prefer a regulated labor market rather than a flexible one.

The optimal labor market regulation is the set of values of the minimum wage w and of the reservation productivity R that maximizes the expected utility of workers with strong family ties, as defined by equation (6) and subject to the zero profit condition

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

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[17]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.

It is easily checked that the solution is

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

The solution shows that labor market regulation comprises a binding minimum wage 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 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 also smaller than the wage under flexible labor markets. Employment is equal to $1-\sigma c$, since 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). Thus employment is 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)):

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

which is larger than $\Delta(\sigma)$, the utility they would get if the labor market were 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. Otherwise, the outcome of the vote will be labor market regulation. 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 is[18]

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

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

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

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[18]When 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.

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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 make the relatively innocuous:[19]

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

Under assumptions 1 and 2, Figure 1 shows the function $\Gamma(\sigma)$ which implies two stable Nash equilibria. 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 markets than with flexible labor markets. However, it is important to remark that the equilibrium with flexible labor markets does not necessarily Pareto-dominate the equilibrium with rigid labor markets. Actually, the equilibrium with rigid labor markets and strong family ties dominates if $\Delta(1) > 1 - \frac{(1-c)^2}{2}$, since the 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 with weak family ties yields higher welfare. Accordingly, the economy can be coordinated on an equilibrium with too rigid labor markets, when $\Delta(1) < 1 - \frac{(1-c)^2}{2}$, but also on an equilibrium with too flexible labor markets, 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.

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[19]If this assumption were not satisfied then the value of family ties in a society where nobody else values them is larger that the maximum salary that one can obtain in the market.

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 family ties may compensate for the loss of efficiency caused by labor market regulations.

2.4   The dynamics of family values

Following the seminal papers of Bisin and Verdier (2000, 2001), we assume that paternalistic parents wish to transmit their own values to their children. Suppose that each individual lives for one period, has one child, and has payoffs as before. Her child inherits her family values with probability $p > 1/2$ and is free to choose her family values with probability $1-p$. As 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.

The sequence of events outlined above is now repeated in each period with an infinite horizon, with the only change being that only a fraction $1-p$ of the population chooses family values; a fraction $p\sigma_{t-1}$ is constrained to have strong family ties and a fraction $p(1 - \sigma_{t-1})$ 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, the share of individuals with strong family ties in period 1 is

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

  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 infinity.

- 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 infinity.

- 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 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.

3 Family ties and the demand for labor market regulation

Our model yields two important predictions. First, individuals with stronger family ties prefer a 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. 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 a more stringent labor market regulation, ii) strong family ties predict strong demand for job security and wage regulation, and not just a high level of actual regulation. The second implication is tested in the next section.

3.1 Data

We use two main databases to measure family ties and the demand for regulation. The data on family ties comes from the *World Values Survey* (WVS), an international social survey of four waves 1981-84, 1990-93, 1995 and 1999-2003, denoted henceforth 1980, 1990, 1995 and 2000. This survey provides, among other things, a wide range of indicators on the importance of the family in an individual life. The first question asks directly 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 probes 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 investigates whether the respondents 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 (2010), we combine these measures by extracting the first principal component from the four waves. We coded the questions so that a higher number corresponds to stronger family ties, therefore a higher coefficient of the principal component indicates stronger family ties.[20]

We measure the demand for job security using the following question in the four waves of 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*".[21] The answers take on the value 1 if job security is mentioned and zero otherwise. The WVS does not provide a direct question on labor market regulation, but reports a question on the responsibility of the state to protect individuals. The question reads: "*Do you think people should take more responsibility to provide for themselves or*

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[20]The index of family ties is unbalanced for the wave 1980, the first sub-index on the importance of family being not reported for this wave.

[21]The 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.

The government should take more responsibility?". The answer takes on values from 1 to 10, a higher score indicating a preference for government responsibility. The WVS also provides a question on state supervision over firms: *"Do you think that the state should give freedom to the firms or should control firms?".* This question is available for a smaller set of countries and only in the fourth wave.

The demand for wage regulation is measured by using the *International Social Survey Program.* The ISSP is a compilation of surveys, covering all OECD and Eastern European countries, devoted each year to different specific topics such as religion, social networks or the role of government. A specific ISSP survey on *"The role of government"* was carried out in 1996, providing a specific question on the regulation of wages: *"Here is a list of potential government actions for the economy: Control wages by law?"*. The answer can take on values from 1, strongly agree, to 4, strongly disagree. We recode the question so that a higher number implies more regulation, in addition, to ease the interpretation of the results, we recode the variable as a dummy taking the value of 1 if the respondent agrees and 0 if he/she disagrees. The results remain unchanged with the original coding.

We measure regulation in the labor market using two different indicators, one on firing costs and one on the stringency of the minimum wage regulation. Firing costs are measured using the 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 and it is based on three components: *i)* the notice period for redundancy dismissal after 20 years of continuous employment, *ii)* the severance pay for redundancy dismissal 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. The index can take values from 0 to 200.

The stringency of the minimum wages regulation is measured through a composite index constructed by the ILO.[22] The index combines information on *i)* the level of the minimum wage and *ii)* on the existence of legal minimum wages and the extent of potential derogation. The index refers to the year 2006. The first component of the index, the level of the wage floor, is measured as the monthly minimum wage expressed in US dollars.

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[22]This index is described more precisely in Aghion, Algan and Cahuc (2008).

To make this measure comparable across countries, we calculate the share of the monthly minimum wage as a function of per capita income in 2006. Income per capita is taken from the World Bank. The second component of the index measures the stringency of the minimum wage legislation, that is the extent to which the state directly regulates by law the labor market instead of letting the civil society negotiates. This component can take the following values:

- **1** if there is a legal statutory minimum wage and if the minimum wage is set at the national level without any derogation.

- **0.5** if there is a legal statutory minimum wage but with derogations by age, qualification, region, sector or occupation; or if the wage floor is set by collective bargaining but extended to all workers.

- **0** if the wage is set by collective bargaining and only applies to the unionized workers. The overall index is the product of these two components.

3.2   Cross country correlations

Figures 3 and 4 show the positive cross-country correlation between family ties and the regulation of labor market through firing cost and the minimum wage regulation. 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.[23] Countries with stronger family ties tend to have a more regulated labor market (as measured by both higher firing costs and a more stringent regulation of the minimum wage). 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 1980-2000. In low income countries, people rely much more on the family than in high income countries and labor markets are more regulated.

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

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[23]For a detailed description of the index of family ties see also Alesina and Giuliano (2010, 2011)

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

Table 1 reports the correlations with additional controls. In particular, we include 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). We also include the (ln)-country average population over the period 1980-2000 (taken from the World Bank). As stressed by Mulligan and Shleifer (1995), the population density might be crucial to explain the supply of regulation. 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 stringency of state regulation of minimum wage and family ties is also positive and statistically significant at the 1 percent level. Income per capita is negatively correlated with the strength of family ties, the relationship being statistically significant at the 1 percent level.

The economic impact of family ties is sizeable. In terms of labor regulation, an increase in the strength of family ties by one standard deviation (across countries) is associated with a 10.3 percent increase in firing costs and a 21.1 percent increase over the average of firing costs. A one standard deviation increase in the strength of family ties would be associated with a 7.3 percent decrease in the average of (ln) income per capita.

3.3   Micro evidence: country fixed effects

Obviously cross-country correlations have to be taken only as illustrative because many omitted variables may influence the relationship we are interested in. Many of these concerns can be addressed by turning to micro evidence controlling for country fixed effects. In addition, we also interact country fixed effects with time effects in order to control for specific trends in each country such as the evolution of the unemployment rate. We regress the indicators of demand for regulation and employment prospects on

the index of family ties. Our set of controls include a quadratic for age, a gender dummy, years of education, income, employment and marital status and the number of children. In addition, the demand for regulation may be linked to risk aversion. We control for this using two questions from the WVS. The first one reads: "Now I would like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between. One should be cautious about making major changes in life versus You will never achieve much unless you act boldly". The second question reads: "Now I want to ask you some questions about your outlook on life. Each card I show you has two contrasting statements on it. Using the scale listed, could you tell me where you would place your own view? 1 means you agree completely with the statement on the left, 10 means you agree completely with the statement on the right, or you can choose any number in between. I worry about difficulties changes may cause. I welcome possibilities that something new is beginning". The second question is only available for the wave 2000 and has been used as a robustness check but without any difference. We run the microestimates on a maximum of 56 countries. The descriptive statistics are reported in the Appendix (Table B1).

Table 2 reports the results. Column (1) shows the relationship between family ties and the preference for job security. The correlation is statistically significant at the 1 percent level, but the coefficient is smaller then in cross country regressions. An increase in the strength of family ties by one standard error (across countries) is associated with an increase of 2% in the probability to mention job security as a key aspect of a good job. This effect is of the same order of magnitude as the one associated with a one standard error increase in years of education. Column (2) shows the relationship between the strength of family ties and the demand for more job protection legislation. The correlation is positive and statistically significant at the 1 percent level. Column (3) shows that individuals with strong family ties are also more likely to prefer government's control of firms.

Strong family ties are not associated with a demand for all types of regulation. In particular, we should expect individuals with strong family ties to be more in favor of competition on the goods market to offset the monopsony power of firms. This is actu-

ally true in the WVS. We can measure attitudes towards competition with the following question: "Do you think that competition is good or that competition is harmful". The answers range from 1 to 10, with a higher score indicating attitudes more hostile towards competition. We estimate the relationships with family ties by controlling for the same set of individual characteristics as in Table 2 and by including country-fixed effects interacted with time dummies. The correlation between family ties and hostility towards competition turns out to be negative and statistically significant at the 1 percent level.[24] An interpretation of this result is that people with stronger family ties want more competition on the product market, which increases the mobility of capital and reduces the monopsony power of firms.

4   Persistence

Our model shows that culturally transmitted family values can have a persistent impact on labor market regulation and on economic outcomes. In this section, we provide evidence on this phenomenon. First, we show that immigrants coming from stronger family ties societies are less mobile, face a wage and employment penalty and also ask for more government regulation of wages and job security even when they live in a country different than their country of origin, the United States.[25] Second, we show that the strength of family ties inherited from countries of origin 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

To perform our analysis, we associate to second-generation immigrants born in the U.S. the measure of family ties of their country of origin, defined as the average set of beliefs toward the family from their parents country of origin. If values are inherited from previous

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[24]Results available from the authors.

[25]The 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 (2010), Algan and Cahuc (2005, 2009), Antecol (2000), Carroll, Rhee and Rhee (1994), Fernandez and Fogli (2006,2009), Giuliano (2007) and Guiso, Sapienza and Zingales (2006) 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.

generations, those beliefs should be significant for second-generation immigrants; if values are not transmitted across generations, then this variable should not be important in the determination of economic behavior amongst immigrants, as they are now in a different country.

4.1.1 Data and empirical specification

We use two main datasets: the General Social Survey (GSS) and the March Supplement of the Current Population Survey. We use the GSS to study the impact of family values on attitudes towards labor market regulation and to analyze the correlation between attitudes inherited before 1940 and the regulation in the countries of origin at the beginning of the 21st century. We use 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 place of birth 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 countries of origin interpretable. Respondents are asked if they were born in the United States and how many of their parents and grand-parents 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 26 countries: Austria, Belgium, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Ireland, Italy, Lithuania, Mexico, Netherlands, Norway, Philippines, Poland, Portugal, Russia, Spain, Sweden, Switzerland and United Kingdom. We drop from the analysis immigrants who generically state they are coming from a certain geographical region (such as people of African origin) and limit our analysis to immigrants coming from a well defined country. The descriptive statistics are reported

in Table B1 in the Appendix. To maximize the number of observations we combine second, third and fourth generation immigrants, therefore we define an immigrant as a person born in the US but with at least one of his/her ancestors (parents or grand-fathers) born abroad.

The GSS provides specific questions related to attitudes towards job security and regulation. Preferences for job security are measured 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 wages". The answers range from 1 for strongly agree, 2 for agree, 3 for neither, 4 for disagree to 5 for strongly disagree. We recode these questions so that a higher number is associated with a higher desire for regulation.

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 origin.[26] We define second generation immigrants by looking at the country of origin of fathers' respondent in order to maximize the number of observations.[27] 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: geographical mobility, unemployment and wages. In the CPS we do have data on almost all countries covered in the World Values Survey.[28]

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:

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

[26] The Census reports the information about the father's country of origin until 1970.

[27] The 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.

[28] The 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

Tables 3 to 5 report the evidence for the following labor market outcomes of US immigrants: mobility, unemployment and log real hourly wages. The estimates are based on the Current Population Survey. 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. Unemployed is a dummy equal to 1 if the person is unemployed. Log hourly wage is defined as total wage income divided by the number of hours worked in a year,[29] and corrected for inflation.

We regress each outcome on our measure of family ties (column 1) and each subcomponent (columns 2 through 4). The mobility regression (Table 3, column 1) controls for education, marital and employment status, real family income, number of children in the household, in addition to gender and a quadratic term 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). Less educated people are less mobile and higher income tends to discourage mobility. Married people tend to move less, similarly to women (although the gender effect is not significant). 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 columns 5 and 6, we include two other country of origin characteristics that could be relevant for our results: the GDP in the country of origin and the level of human capital[30]. In column 7, we include county dummies, to better control for the possibility that immigrants coming from different countries select in different areas.

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[29]The CPS has information on both the number of weeks worked in a year and the number of hours usually worked in a week.

[30]The data for years of schooling are obtained by Barro-Lee (2001).

Table 4 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.[31]

Table 5 reports a standard Mincer wage regression where log hourly wages are regressed on education and 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 have a significant effect on wages: people with strong family ties have lower wages as predicted by our model. In columns 5 and 6 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 smaller for people with a lower level of human capital. Following the specification for the other outcomes, column 7 and 8 control for GDP and human capital in the country of origin and column 9 for county dummies. Our indicator of strong family ties is still a significant determinant of wages for second generation immigrants.

In terms of magnitude of the results, we can easily compute the impact of a one standard deviation increase in the measure of family ties: it leads to a 1 percent increase in the probability of moving and being unemployed, which is equivalent to 14 percent and 10 percent of the average of these two variables respectively. The impact is smaller for wages, where an increase in standard deviation in the measure of family ties, implies a decrease in log wages of 0.02 which is 1 percent of the sample average. As for comparison with other variables: an increase in one standard deviation in the variable measuring the

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[31]This 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 provides insurance.

lowest level of education (up to 12 years of schooling) implies an increase in probability of being unemployed and moving to a different place of 2.5 percent and 1 percent, respectively. The impact of education on wages is, as expected, much higher than the measure of family ties (lower education implies a reduction in log wages of the order of 32 percent). One possibility to explain the higher impact of family ties on mobility and less on unemployment and wages could be due to the fact that since individuals do not move to stay close to their families they might decide to invest less in education to start with.

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 (Tables B2 to B4) results for our outcomes of interest, drawn from the Censuses 1940, 1960 and 1970.[32] 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 70 years or so. Our results are remarkably consistent with those found using the Current Population 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.

Finally, we look at the implication of inherited family values on the demand for regulation. As shown above, individuals who have inherited strong family values are less mobile and suffer from employment and wage penalty. According to our model, this should lead them to ask for more regulation of jobs and wages. We test this implication by looking at the attitudes towards labor market regulation of US immigrants in the GSS.

Table 6 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, age squared, years of education, gender, income, employment and marital status, and number of children. We also include state fixed effects to control for local labor market conditions. 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

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[32]The Census 1950 does not contain the variable on geographical mobility.

regulate wages. The effects are statistically significant at the 1 or 5 percent level. They are also economically sizeable. An increase in the strength of family ties by one standard error is associated with an increase of 5.5 percent in the probability to think that job security is key for a good job. This effect is of the same order of magnitude as that associated with an increase by one standard error in income categories.

4.2 The persistent impact of family values

In this section, we investigate the persistence of family values and their long lasting impact on labor market regulations. We show that attitudes toward the family of immigrants arrived in the US before 1940 are correlated with attitudes toward the family today. We also show that attitudes toward the family of immigrants arrived in the US before 1940 are related to the labor market regulations at the beginning of the twenty first 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 for 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 still use the GSS which yields information on the country of origin of immigrants since 1977. In order to get enough observations, we use information on: 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 does not contain the same variables on family ties of the World Value survey. To measure the strength of family ties we use the following variable: "How often do you spend a social evening with relatives?". The respondent can answer: almost every day, once or twice a week, several times a month, about once a month, several times a year, about 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.

We run the following OLS regression:

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

where Y_{ic} 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 the immigrants had 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.

4.2.2 Results

Figure 8 shows that there is a strong correlation between the measure of the strength of family ties for immigrants arrived 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 0.59. When we drop potential outliers like Philippines, the correlation is still strongly positive with a coefficient of correlation equal to .45. 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.

We then look at the correlation between family ties before 1940 and the stringency of employment protection in 2004. Table 7 shows the OLS estimations controlling for legal origin and population density. The correlation between firing costs in the 2000s and family values prior to 1940 is statistically significant at the 5 percent level. The correlation between the minimum wage legislation and past family values is also statistically significant at the 5 percent level. In contrast, neither legal origins nor population density are statistically significantly correlated with the regulation of labor when we include inherited family values. Moreover, the coefficients associated with past family values are of the same order of magnitude as the ones found with contemporaneous family values in Table 1, suggesting the long lasting effect of family ties on the design of labor market regulation.

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 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 countries with strong family ties rationally favor a host of labor market regulations, in order to restrict the monopsony power of firms. 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 and parents can, if they choose to do 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 explain 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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Figure 1
The relation between the gains Γ(σ) to choose strong family ties rather than weak family ties and the share σ of individuals with strong family ties
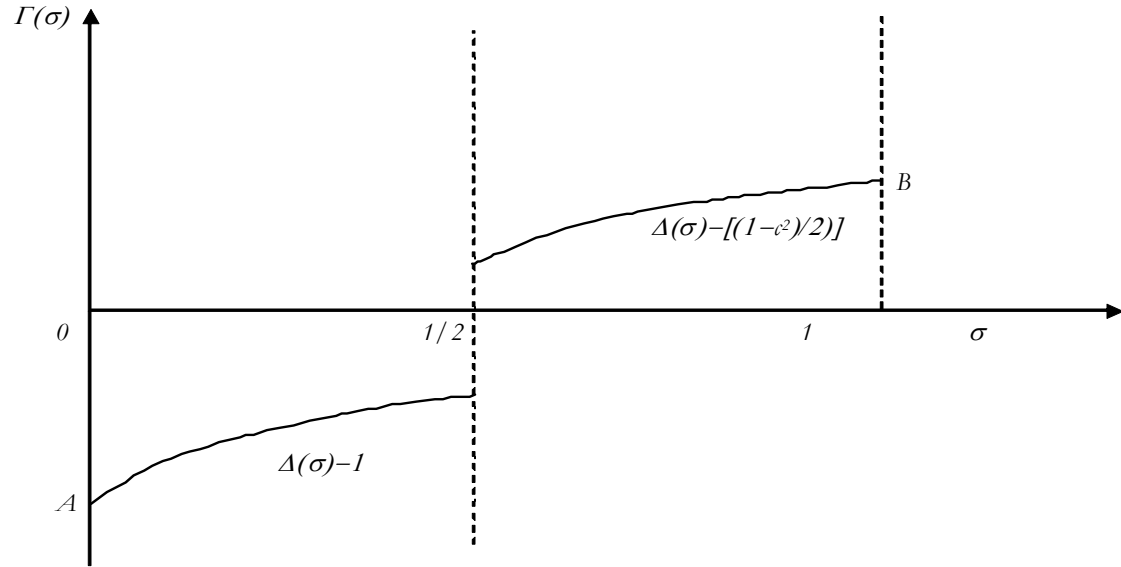
Figure2
Preferred equilibrium in the (Δ(1),c) plane: regulation is preferred in the area above the thick curve

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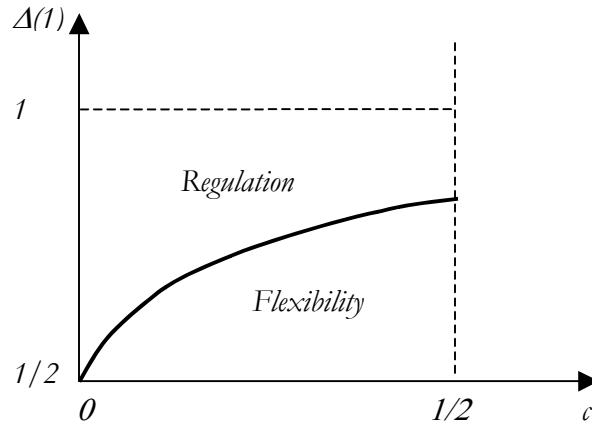
Figure3
Firing costs and family ties.
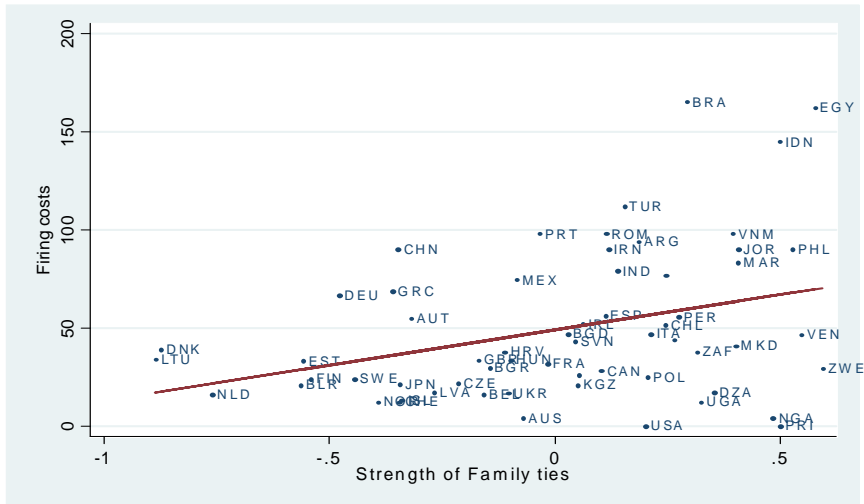
Figure 4
Stringency of minimum wage regulations and family ties
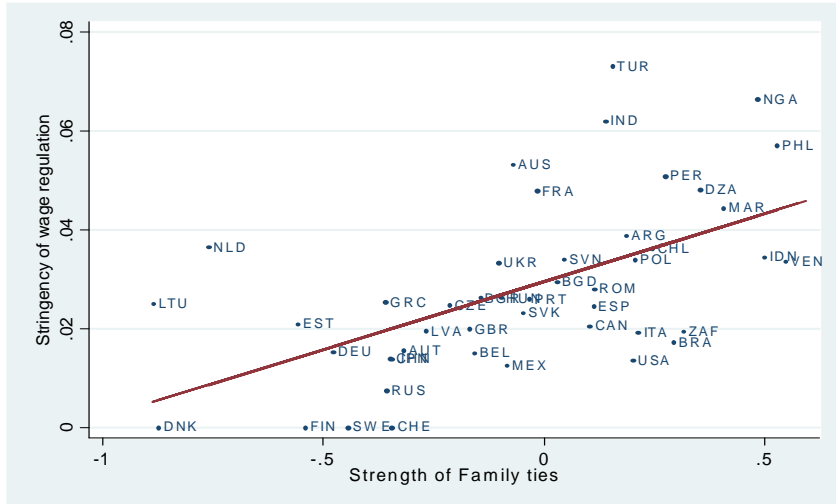
Figure 5
Log of GDP per capita and family ties
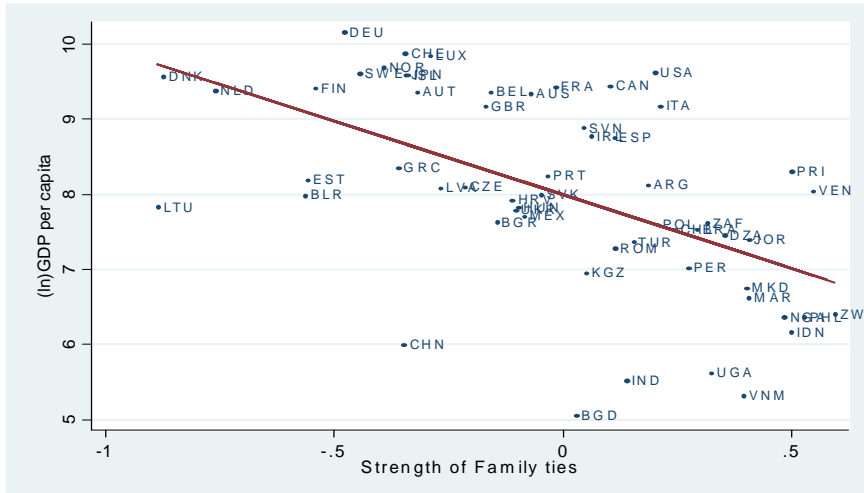
Figure 6
Preference for job security and family ties
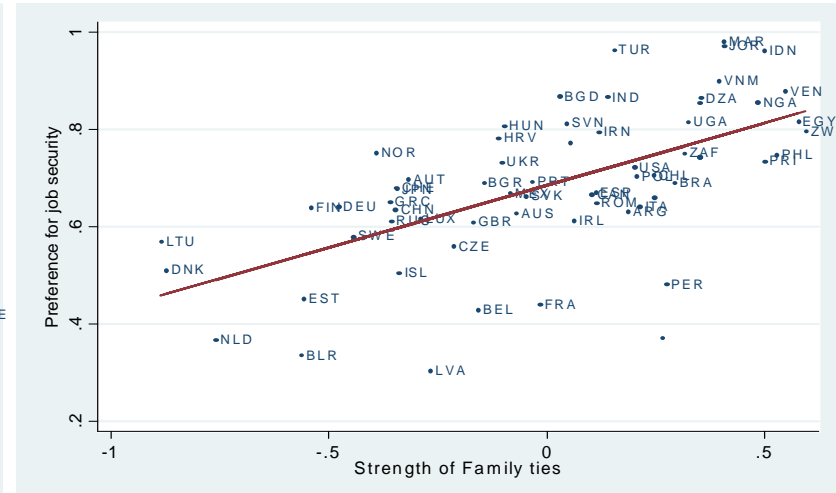
Sources: World Bank: Average GDP per capita 1980-2000; WVS 1980-2000: family ties; Firing costs: World Bank 2004; Minimum wage: Aghion et al. (2009) and WVS 1980-2000

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Figure 7
Demand for wage regulation and family ties
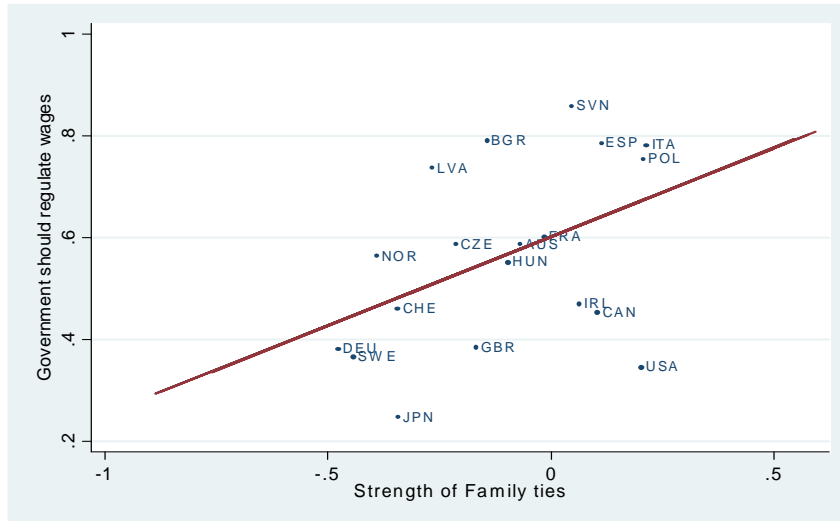
Source ISSP 1996 and WVS 1980-2000

Figure 8
Family ties before 1940 and Family ties in 1980-2000
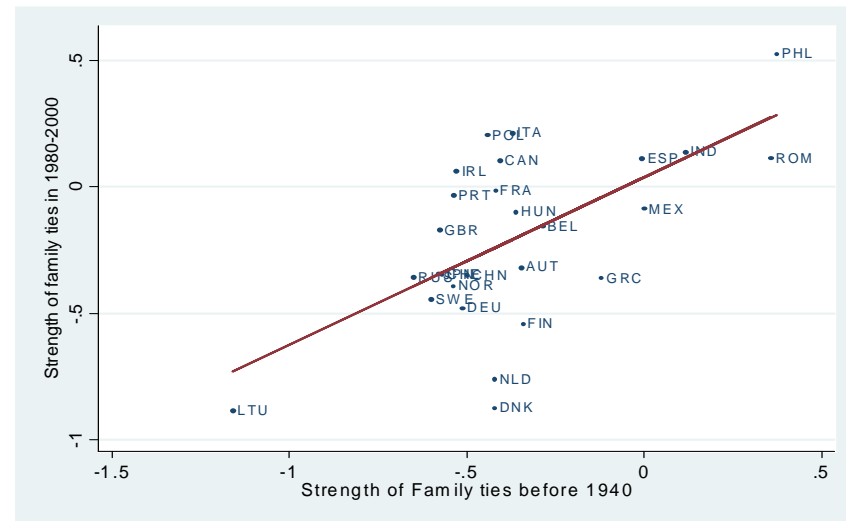
Source: GSS and WVS

Table 1
Family Ties and Labor Regulation

Dependent Variable	Firing Costs	State Regulation of Minimum Wage	Log (GDP per capita)
	(1)	(2)	(3)
Strong family ties	.276**	.019***	-1.56***
	(.133)	(.006)	(.48)
Civil Law	.462***	-.001	-.055
	(.116)	(.008)	(.505)
Scandinavian Law	.401**	-.023**	.481
	(.116)	(.008)	(.641)
German Law	.312**	-.010	-.003
	(.123)	(.007)	(.593)
Ln(population)	.103**	-.001	-.167
	(.030)	(.001)	(.116)
Observations	58	46	58
R-squared	.415	.41	.36

Source: WVS: WB (2004) and ILO (2007): *** significant at 1%, ** significant at 5%; significant at 10%.
Reference group for Legal Origins: Common Law.

Table 2
Family Ties, Employment and Preference for Job Security: Microestimates

	(1) Important thing in a job: Job Security	(2) Government Should Protect Individuals	(3) Government Should Control Firms
Strong family ties	.018***	.039***	.076*
	(0.002)	(.013)	(.036)
Age	.003***	.008	.011
	(.001)	(.008)	(.019)
Age squared	-.000	-.000*	.000
	(.000)	(.000)	(.000)
Years of education	-.005***	-.023***	-.022***
	(.001)	(.005)	(.006)
Married	.016***	-.088**	.145
	(.004)	(.037)	(.098)
Number of children	.000	.009	.005
	(.001)	(.017)	(.028)
Female	-.013**	-.195***	-.337***
	(.006)	(.042)	(.042)
Employed	.015*	-.123	-.004
	(.008)	(.040)	(.087)
Unemployed	-0.004	-0.004	-0.004
	(0.003)	(0.003)	(0.003)
Income (1-12)	-.008***	-.114***	-.123***
	(.001)	(.018)	(.025)
Risk Aversion	-.004***	-.012	.014
	(.001)	(.012)	(.013)
Time f.e.	Yes	yes	yes
Country f.e.	Yes	yes	yes
Country f.e.x time f.e.	Yes	yes	yes
Observations	52629	53629	8588
R-squared	.093	.096	.123

Source: WVS. Robust standard errors are clustered at the country level. *** Significant at 1%, ** significant at 5%; significant at 10%.

Table 3
Family Ties and Mobility
Second Generation Immigrants, CPS 1994-2008. Microestimates

	(1) Mobility	(2) Mobility	(3) Mobility	(4) Mobility	(5) Mobility	(6) Mobility	(7) Mobility
Strong family ties	-0.025				-0.020	-0.017	-0.018
	(0.007)***				(0.010)*	(0.008)**	(0.006)***
Family important		-0.085					
		(0.036)**					
Parents responsib.			-0.059				
			(0.016)***				
Respect parents				-0.069			
				(0.027)**			
Age	0.109	0.098	0.110	0.099	0.185	0.181	0.102
	(0.128)	(0.130)	(0.129)	(0.129)	(0.088)**	(0.090)**	(0.117)
Age squared	-0.205	-0.177	-0.204	-0.188	-0.281	-0.284	-0.221
	(0.142)	(0.146)	(0.142)	(0.144)	(0.110)**	(0.111)**	(0.134)*
Up to 12 years of schooling	-0.014	-0.015	-0.015	-0.016	-0.013	-0.010	-0.018
	(0.005)***	(0.005)***	(0.005)***	(0.005)***	(0.005)**	(0.005)*	(0.005)***
Some college	-0.012	-0.013	-0.013	-0.014	-0.013	-0.012	-0.015
	(0.005)***	(0.005)***	(0.005)***	(0.005)***	(0.005)**	(0.005)**	(0.004)***
Married	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.005
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)*
Single	-0.030	-0.030	-0.030	-0.030	-0.026	-0.026	-0.027
	(0.006)***	(0.006)***	(0.006)***	(0.006)***	(0.005)***	(0.005)***	(0.005)***
Female	0.000	0.000	0.001	0.000	0.000	0.000	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Unemployed	0.046	0.046	0.046	0.045	0.041	0.041	0.040
	(0.006)***	(0.006)***	(0.006)***	(0.006)***	(0.006)***	(0.006)***	(0.006)***
Numb. of children	-0.009	-0.009	-0.009	-0.009	-0.010	-0.010	-0.008
	(0.002)***	(0.002)***	(0.002)***	(0.002)***	(0.002)***	(0.002)***	(0.002)***
Real income	-0.033	-0.033	-0.033	-0.033	-0.033	-0.033	-0.031
	(0.004)***	(0.004)***	(0.004)***	(0.004)***	(0.004)***	(0.004)***	(0.004)***
GDP country origin					0.010		
					(0.004)*		
Human capital country origin						0.005	
						(0.001)***	
Observations	80210	80592	80414	80388	70958	69979	79459

Robust standard errors are clustered at the country of origin level. *** significant at 1%, ** significant at 5%, * significant at 10%. Mobility is defined as a dummy equal to 1 is the individual moved from/in a different state, or abroad in the last five years. Columns 1 through 6 control for state fixed effects. Column 7 controls for county fixed effects.

Table 4
Family Ties and Unemployment.
Second Generation Immigrants, CPS 1994-2008. Microestimates

	(1) Unempl.	(2) Unempl.	(3) Unempl.	(4) Unempl.	(5) Unempl.	(6) Unempl.	(7) Unempl.
Strong family ties	0.014				0.010	0.007	0.012
	(0.005)***				(0.005)*	(0.003)*	(0.005)***
Family important		0.059					
		(0.019)***					
Parents responsib.			0.037				
			(0.011)***				
Respect parents				0.030			
				(0.018)*			
Age	-0.730	-0.719	-0.725	-0.727	-0.710	-0.702	-0.737
	(0.129)***	(0.127)***	(0.131)***	(0.130)***	(0.145)***	(0.148)***	(0.121)***
Age squared	0.810	0.792	0.806	0.801	0.783	0.772	0.820
	(0.153)***	(0.152)***	(0.155)***	(0.155)***	(0.172)***	(0.176)***	(0.145)***
Up to 12 years of schooling	0.052	0.052	0.052	0.054	0.049	0.050	0.050
	(0.003)***	(0.003)***	(0.003)***	(0.003)***	(0.003)***	(0.003)***	(0.003)***
Some college	0.018	0.018	0.018	0.019	0.018	0.019	0.017
	(0.004)***	(0.004)***	(0.004)***	(0.004)***	(0.005)***	(0.005)***	(0.004)***
Married	-0.031	-0.031	-0.031	-0.031	-0.027	-0.027	-0.031
	(0.003)***	(0.003)***	(0.003)***	(0.003)***	(0.003)***	(0.003)***	(0.003)***
Single	-0.000	0.000	0.000	-0.000	-0.001	-0.002	0.001
	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)
Numb. of children	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)**	(0.001)*	(0.001)***
Female	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009
	(0.002)***	(0.002)***	(0.002)***	(0.002)***	(0.002)***	(0.002)***	(0.002)***
GDP country origin					0.003		
					(0.003)		
Human capital country origin						0.000	
						(0.000)	
Observations	53938	54209	54092	54055	47806	47133	52344

Robust standard errors are clustered at the country of origin level. *** significant at 1%, ** significant at 5%, * significant at 10%.
Unemployed is a dummy equal to 1 if the person is unemployed. Columns 1 through 6 control for state fixed effects. Column 7 controls for county fixed effects.

Table 5
Family Ties and Log Hourly Wages,
Second Generation Immigrant, CPS 1994-2008. Microestimates

	(1) Log wage	(2) Log wage	(3) Log wage	(4) Log wage	(5) Log wage Low ed.	(6) Log wage Highly ed.	(7) Low wage	(8) Log wage	(9) Log wage
Strong family ties	-0.053 (0.018)***				-0.062 (0.024)**	-0.141 (0.036)***	-0.026 (0.012)**	-0.034 (0.019)*	-0.047 (0.017)***
Family important		-0.209 (0.073)***							
Parents responsib.			-0.120 (0.046)**						
Respect parents				-0.139 (0.060)**					
Up to 12 years of schooling	-0.655 (0.017)***	-0.656 (0.016)***	-0.657 (0.018)***	-0.660 (0.018)***			-0.649 (0.020)***	-0.647 (0.020)***	-0.641 (0.017)***
Some college	-0.420 (0.016)***	-0.422 (0.015)***	-0.422 (0.016)***	-0.424 (0.017)***			-0.416 (0.017)***	-0.415 (0.018)***	-0.409 (0.015)***
Experience	0.036 (0.001)***	0.037 (0.001)***	0.037 (0.001)***	0.036 (0.001)***	0.039 (0.001)***	0.043 (0.002)***	0.036 (0.001)***	0.036 (0.001)***	0.037 (0.001)***
Experience squar.	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***	-0.001 (0.000)***
Married	0.095 (0.009)***	0.095 (0.009)***	0.094 (0.009)***	0.095 (0.009)***	0.110 (0.017)***	0.126 (0.016)***	0.097 (0.010)***	0.096 (0.010)***	0.093 (0.009)***
Single	-0.120 (0.015)***	-0.121 (0.015)***	-0.121 (0.015)***	-0.120 (0.016)***	-0.118 (0.021)***	-0.146 (0.020)***	-0.121 (0.018)***	-0.122 (0.018)***	-0.124 (0.016)***
Numb. of children	0.001 (0.004)	0.000 (0.004)	0.000 (0.004)	0.000 (0.004)	-0.009 (0.006)	-0.011 (0.005)**	0.000 (0.004)	-0.000 (0.004)	0.002 (0.004)
Female	-0.221 (0.014)***	-0.222 (0.014)***	-0.222 (0.014)***	-0.221 (0.014)***	-0.204 (0.015)***	-0.245 (0.017)***	-0.225 (0.016)***	-0.226 (0.160)***	-0.220 (0.014)***
GDP country origin							0.013 (0.012)		
Human capital country orig.								0.003 (0.005)	
Observations	51192	51439	51341	51290	22208	28984	45261	44621	51192
R-squared	0.27	0.27	0.27	0.27	0.17	0.16	0.27	0.27	0.28

Robust standard errors are clustered at the country of origin level. *** significant at 1%, ** significant at 5%, * significant at 10%. Columns 1 through 8 control for state fixed effects. Column 9 controls for county fixed effects.

Table 6
Family Ties and Demand for Labor Regulation:
Micro estimates on US-immigrants – GSS 1977-2004

	(1) Important thing in a job: security	(2) Government should save jobs	(3) Government should regulate wages
Strong family ties	.374***	.406**	.491**
in home country	(.093)	(.170)	(.199)
Age	-.009**	.021**	-.009
	(.003)	(.010)	(.010)
Age squared	.001***	-.000*	.000
	(.000)	(.000)	(.000)
Years of education	-.083***	-.022***	-.051***
	(.004)	(.007)	(.010)
Married	-.047**	-.084*	-.058
	(.022)	(.041)	(.085)
Female	-.142***	-.026	.129***
	(.027)	(.039)	(.045)
Children	.008	.012	-.029
	(.006)	(.021)	(.024)
Unemployed	.146**	.135	.026
	(.056)	(.318)	(.018)
Employed	.067**	.050	-.038
	(.030)	(.075)	(.047)
Income	-.023***	.005	-.056***
	(.004)	(.013)	(.010)
State fixed effects	yes	yes	yes
Observations	7202	1159	1771
R-squared	.080	.054	.093

Robust standard errors are clustered at the country of origin level. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 7
Inherited Family Ties Before 1940 and Labor Regulation

Dependent variable	(1) Firing costs	(2) State regulation of minimum wage
Inherited family ties before 1940	.554**	.024**
	(.206)	(.010)
Civil law origin	.001	-.005
	(.142)	(.009)
Scandinavian origin	-.158	-.021
	(.179)	(.013)
German origin	-.058	-.007
	(.146)	(.010)
Ln(population)	.002	.003
	(.043)	(.002)
Observations	24	23
R-squared	.48	.55

Source: GSS, ILO (2007) and Botero et al. (2004). The reference group for legal origin is common law. Robust standard errors in parentheses. *** significant at 1%, ** significant at 5%, * significant at 10%.

APPENDIX A

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 main text, in the simple following form:

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

  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 (1), subject to the zero profit condition:

$$\int_R^1 (y - c - w)\mathrm{d}y = 0. \tag{2}$$

  It is easily checked that the solution is

$$R = c \text{ and } w = \frac{1 - c}{2} \tag{3}$$

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

$$U_R^S = \frac{(1 - c)^2}{2} + \Delta(\sigma). \tag{4}$$

  Comparison of equations (2) and (6) in the main text 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

$$\max_{(R,w)} U_R^S = (1 - R)[w + \Delta(\sigma)] + R[1 - c - \Delta(\sigma)] \tag{5}$$

1

subject to

$$\int_R^1 (y - c - w)\mathrm{d}y = 0. \tag{6}$$

$$w + \Delta(\sigma) \geq 1 - c - \Delta(\sigma) \tag{7}$$

Let us denote by λ and μ the Kuhn and Tucker multipliers associated with constraints (5) and (7). The first order conditions are

$$1 - c - w - 2\Delta(\sigma) - \lambda(R - c - w) = 0 \tag{8}$$
$$(1 - R) - \lambda(1 - R) - \mu = 0 \tag{9}$$

Suppose that constraint (7) is not binding so that $\mu = 0$. From equation (8), $\mu = 0$ implies that $\lambda = 1$. Then, equations (6) and (9) imply that

$$R = 1 - 2\Delta(\sigma) \text{ and } w = 1 - c - \Delta(\sigma) \tag{10}$$

It turns out that constraint (7) is never binding. Therefore, in the case where $\sigma > 1/2$ and $\Delta(\sigma) \leq (1-c)/2$, equations (5) and (10) imply that the expected utility obtained by individuals with strong family ties if the labor market is regulated is

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

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

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

which is equivalent to
$$c < 2\left[\Delta(\sigma)\right]^2.$$

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 $c < 2\left[\Delta(\sigma)\right]^2$. Otherwise, the median voter chooses labor market flexibility. Figure 9 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 $\Delta'(\sigma) \geq 0$.

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

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

and the expected utility of individuals with weak family ties is[1]

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

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

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

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 $\Delta(1) > \frac{1-c^2}{2}$.

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[1]When 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.

APPENDIX B

Table B1
Descriptive Statistics

| | WVS 1980-2000 | | GSS 1977-2004 | | CPS 1994-2008 | |
	Mean	St. dev.	Mean	St. dev.	Mean	St. dev.
Age	41.12	16.50	46.13	17.62	34.95	15.32
Female	.53	.49	.55	.49	.51	.49
Education	18.2	5.41	13.26	2.85		
<=12 years of schooling					.52	.49
Some college					.27	.44
Income	4.60	2.42	10.47	2.44	55380	51896
Married	.62	.48	.55	.49	.44	.49
Single					.44	.49
Children	1.82	1.66	1.83	1.70	.70	1.08
Unemployed	.08	.28	.02	.16	.06	.24
Employed	.52	.49	.63	.48		
Inactive	.38	.48	.34	.47		
Mobility					.11	.31
Logwage					2.34	0.80
Experience					16.88	13.23

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Table B2
Family Ties and Mobility
Second Generation Immigrants, Census 1940, 1960 and 1970

	Census 1940	Census 1960	Census 1970
	(1)	(2)	(3)
	Mobility	Mobility	Mobility
Strong family ties	-0.027	-0.028	-0.021
	(0.009)***	(0.011)***	(0.011)*
Age	0.004	-0.008	-0.008
	(0.002)**	(0.001)***	(0.001)***
Age squared	-0.000	0.000	0.000
	(0.000)***	(0.000)***	(0.000)***
Up to 12 years of schooling	-0.116	-0.132	-0.117
	(0.014)***	(0.008)***	(0.009)***
Some college	-0.033	-0.040	-0.032
	(0.006)***	(0.004)***	(0.003)***
Married	-0.018	-0.021	-0.026
	(0.005)***	(0.004)***	(0.003)***
Single	-0.008	-0.067	-0.066
	(0.007)	(0.004)***	(0.003)***
Female	-0.007	-0.009	-0.010
	(0.003)*	(0.003)***	(0.002)***
Unemployed	-0.004	0.006	0.026
	(0.010)	(0.007)	(0.007)***
Wage and salary income	-0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)
Observations	38396	147193	121436

Robust standard errors are clustered at the country of origin level. *** significant at 1%, ** significant at 5%, * significant at 10%. Each regression controls for state fixed effects.

Table B3
Family Ties and Unemployment
Second Generation Immigrants, Census 1940, 1960 and 1970

	Census 1940	Census 1960	Census 1970
	(1)	(2)	(3)
	Unemployment	Unemployment	Unemployment
Strong family ties	0.043	0.015	0.007
	(0.009)***	(0.004)***	(0.003)***
Age	-0.014	-0.002	-0.003
	(0.002)***	(0.000)***	(0.000)***
Age 2	0.000	0.000	0.000
	(0.000)***	(0.000)***	(0.000)***
Up to 12	0.067	0.038	0.023
	(0.010)***	(0.002)***	(0.002)***
Some college	0.065	0.036	0.017
	(0.022)***	(0.005)***	(0.003)***
Married	-0.071	-0.023	-0.014
	(0.006)***	(0.003)***	(0.002)***
Single	0.001	0.003	-0.000
	(0.008)	(0.003)	(0.002)
Female	-0.041	0.002	0.007
	(0.004)***	(0.002)	(0.002)***
Observations	24159	96755	82246

Robust standard errors are clustered at the country of origin level. *** significant at 1%, ** significant at 5%, * significant at 10%. Each regression controls for state fixed effects.

	Census 1940			Census 1960			Census 1970		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	Log wage	Log wage Low ed.	Log wage Highly ed.	Log wage	Log wage Low ed.	Log wage Highly ed.	Log wage	Log wage Low ed.	Log wage Highly ed.
Strong family ties	-0.048	-0.035	-0.117	-0.037	-0.033	-0.056	-0.064	-0.066	-0.074
	(0.048)	(0.045)	(0.095)	(0.032)	(0.035)	(0.028)*	(0.033)*	(0.035)*	(0.039)*
Up to 12 years of schooling	-0.513			-0.414			-0.527		
	(0.041)***			(0.015)***			(0.019)***		
Some college	-0.122			-0.203			-0.301		
	(0.048)**			(0.012)***			(0.014)***		
Experience	0.038	0.035	0.052	0.020	0.017	0.029	0.022	0.021	0.026
	(0.003)***	(0.003)***	(0.006)***	(0.001)***	(0.001)***	(0.003)***	(0.001)***	(0.002)***	(0.002)***
Experience squar.	-0.001	-0.001	-0.001	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Married	0.299	0.282	0.406	0.120	0.115	0.149	0.077	0.074	0.104
	(0.027)***	(0.026)***	(0.066)***	(0.007)***	(0.007)***	(0.022)***	(0.009)***	(0.010)***	(0.022)***
Single	0.046	0.014	0.213	-0.007	-0.008	-0.021	-0.070	-0.048	-0.116
	(0.030)	(0.030)	(0.087)**	(0.009)	(0.012)	(0.030)	(0.014)***	(0.016)***	(0.043)***
Female	-0.250	-0.275	-0.138	-0.354	-0.381	-0.249	-0.403	-0.430	-0.321
	(0.021)***	(0.020)***	(0.046)***	(0.011)***	(0.011)***	(0.018)***	(0.014)***	(0.014)***	(0.013)***
Observations	15789	13724	2065	75584	60886	14698	69126	51838	17288
R-squared	0.20	0.20	0.17	0.18	0.16	0.11	0.21	0.16	0.13

Robust standard errors are clustered at the country of origin level. *** significant at 1%, ** significant at 5%, * significant at 10%. Each regression controls for state fixed effects

Figure 9
The choice of labor market regulation in stage 2 when the share of individuals with strong family ties, σ, is larger than 1/2