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ABSTRACT

Civic Attitudes and the Design of Labor Market Institutions: Which Countries Can Implement the Danish Flexicurity Model?*

We argue that the efficiency of the Danish flexicurity Model, which combines high unemployment benefits with low job protection and high participation rate, relies on strong public-spiritedness. We also argue that Continental and Mediterranean European countries are unlikely to be able to implement the Danish Model because the lack of public-spiritedness of their citizens raises moral hazard issues which hinder the implementation of efficient public unemployment insurance.

JEL Classification: J23, J65, J68

Keywords: job protection, unemployment benefits, civic attitudes

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1 Introduction

In June 2005, the Danish Minister of Employment Claus Hjort Frederiksen claimed at a conference on flexicurity that: "the Danish flexicurity model has been proclaimed to be the panacea that will solve all the problems on the French labour market (...) And there are many good reasons why the French are looking to Denmark for inspiration: 1) Denmark is among the European countries with the highest employment rates and the lowest unemployment rates. 2) Danish employees are in the forefront internationally when it comes to how they see their job security. 3) Denmark is also in the top class as regards job satisfaction".[1]

The Danes can be proud: the Danish flexicurity model does not look attractive only in France. It is attractive for many European countries because it has been able to combine high participation rates with generous safety nets. For a decade now, the European Commission advised European countries to adopt the main features of the flexicurity model in order to increase labor market efficiency. Yet, although many features of the Danish Model look ideal for the European Commission, the labor market institutions and labor market outcomes of European countries are still very different from those of Denmark. The most striking difference is to be found in the combination of unemployment benefits and job protection, which are the main devices to protect workers against the risk of unemployment. As shown in Figure 1,[2] a trade-off shows up between unemployment benefits and employment protection in European countries (see Boeri et al., 2004, and Clark and Postel-Vinay, 2005). Mediterranean countries and (to a lesser extent) Continental European countries have lower unemployment benefits but more stringent job protection compared to Denmark, which appears as a clear outlier on this issue.

As noted by Freeman (2000), the emergence of a set of labor market institutions heralded by policy analysts and economists is not new. And Freeman argues that diversity of labor market institutions among advanced countries stems from cross-country differences in values over distributional issues because labor market institutions have large effects on distribution, but modest hard-to-uncover effects on efficiency. This relativist conception, according to which the choice of labor market institutions is a matter of taste, unrelated to efficiency, is often advocated. For instance, some contributions have claimed that differences in labor market

[1] This speech is available at http://www.bm.dk/ministeren/taler/050616_uk.asp.

[2] The figures of the introduction are focused on European countries only. The trade-off between unemployment benefits and legislation protecting employment is less clear-cut in a two dimensional space when other countries are accounted for. In particular, Anglo-Saxon countries, in which there is less redistribution of income, have lower unemployment benefits than expected because unemployment benefits are influenced by insurance and redistributional purposes. Such effects are taken into account in the empirical section of the paper. Unemployment benefits are computed as the share of GDP per capita expenditure per unemployed worker provided by the OECD. Job protection is proxied by the OECD index on regular and temporary contracts (EPL1 indicator).

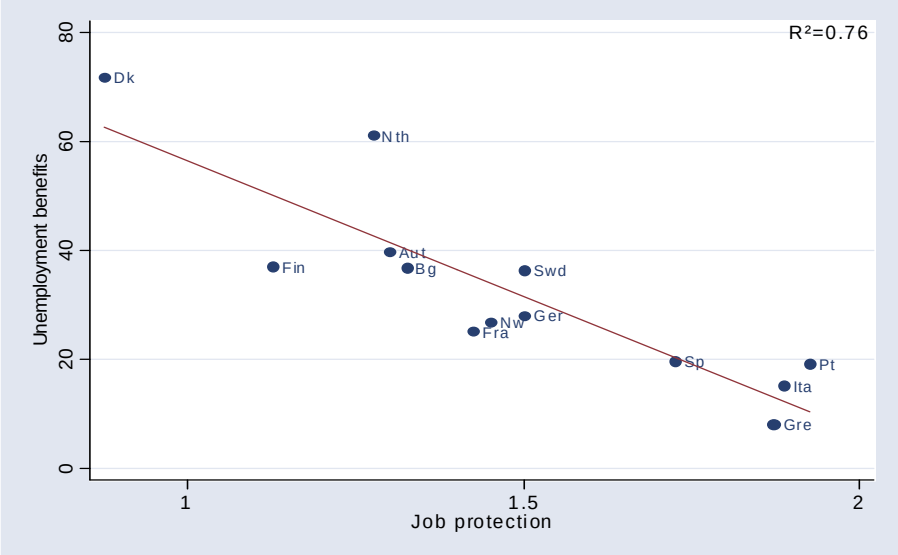

Figure 1: Unemployment benefits and Job protection in the end of the 1990s. Source: OECD.

institutions and outcomes are rooted in the higher weight put on home production in European countries (Rogerson, 2003, Freeman and Shettkat, 2005), or come from stronger preferences for leisure (Blanchard, 2004, Alesina et al., 2005) and from more traditional family values in Continental European countries and Mediterranean countries (Algan and Cahuc, 2005).

The efficiency of the Danish flexicurity Model seems to contradict this common relativist stand. Figure 2 shows that European countries with high unemployment benefits and weak job protection ratio are also those in which participation rates are high.[3] Moreover, studies based on individual subjective data suggest that individuals feel better protected by unemployment benefits rather than by employment protection (Clark and Postel-Vinay, 2005).

From this perspective, it becomes hard to understand why European countries do not implement the flexicurity model. The aim of our paper is to provide an explanation for this puzzle. We argue that the flexicurity model is hardly sustainable in countries displaying weak public-spiritedness because the unemployment insurance design raises moral hazard issues that are much more difficult to overcome in countries where individuals are more prone to cheat over government benefits. Besides, we are also able to document that civic attitudes cannot be systematically changed quickly just by changing institutions. This result has far-reaching consequences for the policy reforms agenda. It indicates that civic attitudes impose real constraints

[3]This Figure, which is provided for an illustrative purpose, should not be over interpreted. The econometric section of the paper provides much more rigorous empirical evidence on the link between unemployment benefits and job protection on one hand, and labor market performance on the other hand.

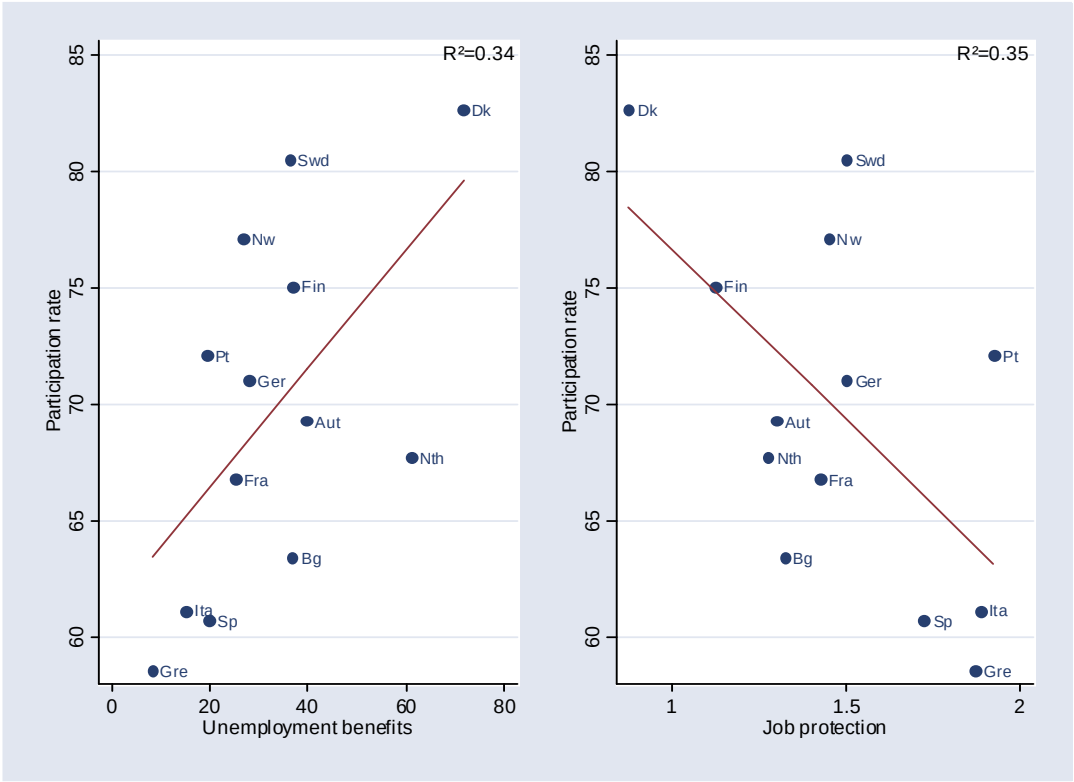

Figure 2: Unemployment benefits, job protection and participation rate in the end of the 1990s. Source: OECD.

on the choice of labor market institutions. From this point of view, it is unlikely that countries with weak public-spiritedness can implement the Danish Model without specific action aimed at changing the values of their citizens.[4]

It is worth noticing that our conclusions are in line with those of the literature focused on the interactions between culture, institutions and economic outcomes. This literature, which recently had a new start in economics thanks to the availability of new international surveys,[5] shows that individuals' preferences and priors are rooted in cultural orientations acquired through socialization within a society's historical heritage. Moreover, those priors and preferences have an impact on outcomes. For instance, cultural differences turn out to have an impact on savings across countries (Guiso et al., 2005), but also on fertility rates (Fernandez et al., 2004, Fernandez and Fogli., 2005), on employment rates (Algan and Cahuc, 2005, Fernandez and Fogli., 2005), on individuals' prior on social mobility (Alesina and Glaeser, 2004) and on trust shown towards a third party (Guiso et al., 2003). In the same spirit, the paper of Ichino and Maggi (2000), which documents the existence of north-south regional differences in regard to shirking of responsibility in a large Italian bank, suggests that the degree of 'civicness' is influenced by individuals' historical heritage.[6] This literature has also stressed that the degree of trust and of 'civicness' has an impact on economic outcome. For instance, Guiso et al. (2004) find that a country whose residents trust residents of another country more tend to exchange more goods and financial assets with it. Tabellini (2005) estimates that GDP per capita and growth are higher in European regions that exhibit higher degree of values such as trust, respect for others, and confidence in individual self-determination. Tabellini shows that those values are related to historical variables such as the literacy rate at the end of the 19^{th} century, and the political institutions in place over the past several centuries. From this point of view, the customary priors and preferences that ethnic and social groups transmit seem to remain fairly unchanged across generations. All these findings are in line with our results, which are obtained in two steps.

First (section 2), we provide a model in which unemployment insurance and job protection are shaped by a government[7] which implements a policy platform that has won an electoral

[4] Blanchard and Philippon (2004) follow a similar route by showing that the cross-country heterogeneity in the quality of labor relations between employers and employees is deeply ingrained in cultural features.

[5] See the survey of Guiso et al. (2005).

[6] This idea has been explored in sociology and political science by Banfield (1958) and Putnam (1993).

[7] In the seminal papers of the "implicit contract" (Baily, 1974, Azariadis, 1975), unemployment insurance is provided by employers. However, in the real world, unemployment insurance is always provided by government or public agencies and not by firms because selection and moral hazard problems prevent firms offering unemployment benefits (Kiander, 1993, Chui and Karni, 1998). When unemployment insurance is provided by public authorities, it is worth introducing employment protection, under the form of layoff taxes, to induce firms to take account of the fiscal externalities linked to their job destruction decisions (Feldstein, 1976, Burdett and Wright, 1989a,b, Blanchard and Tirole, 2004).

competition.[8] This model shows that the provision of unemployment insurance is more costly in economies in which civic attitudes make it more acceptable to cheat on unemployment benefits, leading the government to provide lower unemployment benefits. Conversely, employees are protected thanks to more stringent employment protection. But the lack of unemployment insurance due to moral hazard is detrimental to labor market participation. In this context, moral hazard hampers government's ability to implement efficient labor market institutions which undermines participation rates.

Secondly (section 3), we use international individual surveys to document how attitudes toward government benefits are shaped to a large extent by country specific effects. Additionally, we highlight the link between civic attitudes and behavior towards government benefits: we show that individuals who exhibit low concern for civic values are more often unemployed when they can benefit from generous government benefits and, conversely, less often unemployed if job offers are scarce due to stringent employment protection legislation. Aggregate panel data also show that countries in which a large fraction of the population considers that it is not justifiable to claim government benefits to which you are not entitled also have high unemployment benefits, low job protection and high participation rates. Obviously, the correlation between civic attitudes and the design of labor market institutions does not mean that the causal relation goes from social attitudes to the unemployment benefits/employment protection ratio. Yet we provide some evidence of such a causal relationship by showing that people who face the same economic environment by living in the same country, but who differ in the national origin of their ancestors, have significantly different attitudes towards government benefits. The influence of national backgrounds still holds when controlling for the individual socioeconomic characteristics.[9] Moreover, their civic attitudes are perfectly in line with those currently expressed in their country of origin. This suggests that civic attitudes towards government benefits are rooted in country specific features which have long lasting effects on individuals.

[8] Electoral competition is represented by the probabilistic voting model: see Persson and Tabelini (2000).

[9] This type of empirical strategy has been used by Reimers (1985), Blau (1992), Carroll et al. (1999), Antecol (2000), Guinnane et al. (2002), Giuliano (2004), Fernandez and Fogli (2005) and Algan and Cahuc (2005). Blau (1992) and Guinnane et al. (2002) examine whether the fertility of immigrants differs from that of the native born in the US. Reimers (1985) and Antecol (2000) study the effect of the country of origin on the labor force participation of immigrants. Using the same approach, Giuliano (2004) focuses on family leaving arrangements and Fernandez and Fogli (2005) analyse female labor participation and fertility. Caroll et al. (1999) use this approach for the analysis of saving behavior. Algan and Cahuc (2005) look at family values. All these studies find a significant influence of the country of origin on cultural values, behavior and economic outcomes.

2 The model

We consider an economy in which a numeraire good is produced thanks to labor. There is a continuum of mass 1 of individuals. Individuals differ in their taste for leisure whose continuous differentiable cumulative distribution function is denoted by $H(h) : \mathbb{R} \to [0,1]$. As regards consumption and leisure, the preferences of the type-h individuals are represented by the utility function $v(c) + \ell h$, where $c \geq 0$ stands for consumption, v is an increasing, concave and twice derivable function, and ℓ denotes leisure. Inactive individuals get $\ell = 1$ and $c = 0$. Active individuals can be either employed or unemployed. Employed workers get a wage, denoted by w, but do not benefit from any leisure: $\ell = 0$. Thus, the utility level of an employee amounts to $v(w)$. Unemployed workers get unemployment benefits, provided by the government, denoted by b. Unemployed workers choose a level of search effort that could be either low or high because the government cannot perfectly monitor search activity. The utility level of unemployed workers who produce the high level of search effort is worth $v(b)$ because the leisure cost of the high search effort is assumed to be the same as the leisure cost of waged work. The utility level of unemployed workers who produce the low level of search effort amounts to $v(b) + (1-\alpha)h - \gamma$. The term $(1-\alpha)h$ shows up because job search effort is not perfectly monitored by the government: the government can force job seekers to devote only a share $\alpha \in (0,1)$ to job search activities. $\gamma \geq 0$ stands for the utility loss induced by individuals' feeling of guilt about cheating on unemployment benefits. In the following, we focus on the consequences of such guilty feelings on the design of unemployment insurance and job protection.

There is potentially a large number of firms that can create jobs. Creating a job entails fixed costs denoted by $k > 0$. A job produces x units of the numeraire good, where $x \in \mathbb{R}$ is an idiosyncratic shock drawn in a distribution with a continuous differentiable cumulative distribution function denoted by G. The productivity shock, x, which is private information held by the firm, is not contractible. Firms enter into competition to offer wages to workers. As workers are assumed to be perfectly mobile, competition between firms entails zero profit.

There is a government which provides unemployment benefits, financed by payroll taxes, denoted by τ, and by layoff taxes, denoted by f. The policy of the government is determined by elections.

The time sequence of events runs as follows:

1) Individuals vote on the policy platforms (τ, f, b).

2) Individuals decide whether to be active or not.

3) Workers choose their level of search effort. Only workers who produce the high level of search effort are matched with firms. The others are unemployed and get the unemployment benefits

b.

4) Employers compete to hire workers.

5) The idiosyncratic productivity shocks x occur and employers decide whether they keep the workers or they cut the jobs. Then, employers pay wages and payroll taxes on every continuing job. Every job-cut gives rise to the payment of layoff taxes. Employed workers get the wage w, unemployed workers get unemployment benefits b.

This problem can be solved by backward induction. The market equilibrium is solved in the first stage. Then, the outcome of elections is determined.

Market equilibrium

Market equilibrium yields labor contracts that allow workers to achieve the maximum level of expected utility compatible with zero expected profits. Labor contracts only include wages since the reservation value of the productivity parameter x is not contractible and firms cannot commit ex-ante to this reservation value by keeping aside funds payable to a third party in case of layoff (see the discussion in Blanchard and Tirole, 2004). Accordingly, at step **5)** firms destroy jobs if - and only if - their profits, $x-w-\tau$, are lower than their destruction costs, $-f$. The job destruction decision boils down to the choice of a reservation value for the productivity parameter x, denoted by X, below which jobs are destroyed. The reservation productivity reads:

$$X = w + \tau - f. \tag{1}$$

The job destruction rate is equal to $G(X)$. Given the expression X of the reservation productivity, there is a single value[10] of the wage compatible with the zero profit condition

$$\int_X^{+\infty} (x - w - \tau)\, dG(x) - G(X)f = k. \tag{2}$$

Individuals whose utility in inactivity, $v(0) + h$, is lower than their expected utility when they are active decide to enter into the labor market. The expected utility of a type-h active individual is

$$V = \max\left\{[1 - G(X)]\, v(w) + G(X)v(b), v(b) + (1-\alpha)h - \gamma\right\}.$$

[10] As the expected profit decreases with respect to w, there is a single positive equilibrium value for the wage if - and only if - the two following conditions are fulfilled:

$$\int_{\tau-f}^{+\infty} (x - \tau)\, dG(x) - G(\tau - f)f - k > 0,$$

$$\lim_{w\to\infty} \int_{w+\tau-f}^{+\infty} (x - w - \tau)\, dG(x) - G(w + \tau - f)f - k < 0.$$

These conditions are assumed to be fulfilled.

Therefore, the threshold value $\bar{h}$ of the taste for leisure below which individuals enter into the labor market solves

$$v(0) + \bar{h} = \max\left\{[1 - G(X)]\, v(w) + G(X)v(b), v(b) + (1-\alpha)\bar{h} - \gamma\right\}, \tag{3}$$

and the participation rate amounts to $H(\bar{h})$.

Equations (1), (2) and (3) define the market equilibrium value of the wage w, the reservation productivity X and the participation rate $H(\bar{h})$. Let us now analyze the choice of the unemployment benefits, the payroll taxes and the layoff taxes.

Equilibrium policy

The elections are represented by the probabilistic voting model (see Persson and Tabelini, 2000, chapter 3) in which there are two candidates who announce their electoral platforms simultaneously and non-cooperatively. Then, individuals, who are influenced by ideological biases, vote. The candidate who gets the majority is elected and implements her announced policy platform. Under certain assumptions for simplification, which are adopted henceforth, the outcome of the vote maximizes the sum of expected utilities.[11] Accordingly, the optimal choice of the elected candidate maximizes

$$\int_0^{\bar{h}} \{[1 - G(X)]\, v(w) + G(X)v(b)\}\, dH(h) + \int_{\bar{h}}^{+\infty} [v(0) + h]\, dH(h),$$

subject to four constraints.[12]

1. The incentive compatibility constraint

$$[1 - G(X)]\, v(w) + G(X)v(b) \geq v(b) + (1-\alpha)h - \gamma, \forall h \leq \bar{h}. \tag{4}$$

2. The government balanced budget constraint:

$$[\tau\,[1 - G(X)] + (f-b)G(X)]\, H(\bar{h}) = 0. \tag{5}$$

3. The zero profit condition (2).

4. The participation constraint (3).

[11] This outcome can be derived from the simple case in which each group of individuals of type-h is heterogeneous with respect to ideological biases towards the two candidates. Then, following Persson and Tabelini (2000) it turns out that the outcome of the elections maximizes the utilitarian criterion if the ideological bias is represented by an additive term in the utility function and is distributed with a uniform distribution that is the same for all type-h individuals.

[12] We apply the revelation principle.

It is useful to rewrite this program as the maximization of the sum of expected utilities with respect to (w, X, b) subject to the incentive compatibility constraint (4), the participation constraint (3) and to the equation

$$\int_X^{+\infty} (x - w)\, dG(x) - G(X)b = k, \tag{6}$$

that is obtained by summing up the balanced budget constraint of the government (5) and the zero profit condition (2). Then, once the optimal value of (w, X, b) is determined, it is possible to use equations (1) and (2) to find out the optimal value of (τ, f, b).

The computation of the optimal values for (w, X, b), presented in appendix A, allows us to claim that:

Result 1: *Full insurance, with $w = b$, can be obtained only if utility losses induced by guilt feelings are sufficiently large.*

When the utility cost of cheating on unemployment benefits is high, the incentive compatibility condition (4) is not binding and the government can provide full insurance. It also turns out that the reservation productivity amounts to zero ($X = 0$) when individuals are perfectly insured. Otherwise, the optimal value of (w, X, b) is defined by equation (6) and by:

$$X = w - b - \frac{v(w) - v(b)}{v'(w)}, \tag{7}$$

$$v(w) - v(b) = \frac{(1 - \alpha)\,[v(b) - v(0)] - \gamma}{\alpha\,[1 - G(X)]}. \tag{8}$$

Equation (8) is merely the binding incentive compatibility condition, which shows that the wage is larger than the unemployment benefits if utility losses associated with guilt feelings are small enough.[13] Equation (7) shows that the government decides to keep jobs filled up to the point where the utility cost (in numeraire good units) of job destruction, $\frac{v(w)-v(b)}{v'(w)}$, is equal to the gains of job destruction, $w - b - x$.

These two equations allow us to claim the following result which is proved in appendix B:

Result 2: *The unemployment benefits and the reservation productivity increase with respect to feelings of guilt.*

Result 2 can be understood as follows. First, when feelings of guilt are lower, unemployment benefits are decreased to insure that workers devote sufficient effort to job search. Furthermore,

[13] A more rigourous presentation is provided in appendix A.

when guilt feelings are decreased, as $v(w) - v(b) = \frac{(1-\alpha)[v(b)-v(0)]-\gamma}{\alpha[1-G(X)]}$, the utility cost of job destruction is increased and the optimal reservation productivity drops.

The scheme (τ, f, b) that allows the government to implement the optimal value of (w, X, b) is defined by equation (7), by the definition of the reservation productivity (1) and by the zero profit condition (2) which reads, using (1):

$$f = \int_X^{+\infty} (x - X)\, dG(x) - k.$$

This last expression of the zero profit condition implies that layoff taxes decrease with the reservation productivity, which leads to the following result:

Result 3: *Layoff taxes decrease with respect to feelings of guilt.*

The following result is also proved in appendix C:

Result 4: *The expected utility of active workers and the participation rate are lower when there are less feelings of guilt.*

The participation rate $H(\bar{h})$ increases with γ since the optimal response of the government is to provide less insurance against productivity shocks when it becomes less costly to cheat on unemployment benefits: unemployment benefits are lower and employment protection more stringent. The lower degree of insurance, which decreases the expected utility of active individuals, implies that labor market participation falls. Thus, in equilibrium, any increase in the utility cost of guilty feelings allows individuals to reach better allocations according to the Pareto criterion. From this perspective, more public-spiritedness improves efficiency.

The next section provides empirical tests of the main predictions of the theoretical model, according to which better civic attitudes towards government benefits lead to lower job protection, higher unemployment benefits and higher participation rates.

3 Empirical results

In this section we document to what extent people living in different OECD countries differ in their civic attitudes towards government benefits. Then, we provide evidence showing that cross country differences in civic attitudes and economic behaviors are rooted in national cultural values that shape employment protection and unemployment benefits legislations. Our empirical strategy is organized in four steps.

Firstly, we show that civic attitudes are correlated with country specific features rather than with individual characteristics, providing a rationale for the observed cross-country heterogeneity in labor market institutions.

Secondly, we uncover the causal link between civic attitudes and institutions by documenting the inertia of civic attitudes with respect to changes in the economic and institutional environment. It might be the case that civic values are strongly influenced by the current features of the national institutions. For instance people might feel less guilty about cheating on taxes in countries plagued by administrative inefficiencies. Or people could feel guiltier if they live in an environment in which everybody checks the attitude of others. But the relationship could also go the other way around: civic attitudes might be difficult to change because they are deeply rooted in specific culture and people facing the same incentives could react differently depending on their cultural background. The scope for policy reforms largely depends on the answer to this issue. If civic attitudes are strongly influenced by current institutions, there is room for policy actions on the labor market which could quickly change individual behavior. If culture matters and has a long lasting effects on civic attitudes, then this cannot be changed quickly by alterations to labor market institutions. The Danish flexicurity model cannot be implemented without specific actions aimed at changing civic attitudes.

To tackle this issue, we analyze civic attitudes of people who come from different national origins but who face the same economic environment, living in the same country, namely the United States. It turns out that there is a strong inertia in civic attitudes and that it is culture which truly matters in this realm.

Third, we document the link between civic attitudes and individual behavior. We show that individuals who exhibit low concern for civic values are also more frequently unemployed. Furthermore, these individuals have an increased probability of being unemployed in order to take advantage of generous government benefits and, conversely, a lower probability of being unemployed if job offers are scarce due to stringent employment protection legislation. This step leads us to conclude that national cultural features have long lasting and consistent effects on both civic virtue and economic behavior.

Then, as a fourth and last step, we estimate the aggregate outcomes of such individual values and economic behavior in OECD countries over the period 1980-2003. We show a significant correlation between civic attitudes, on one hand, and job protection and unemployment benefits, on the other hand, which can be interpreted as a direct causal outcome of civic attitudes to institutions.

3.1 Cross countries heterogeneity in civic attitudes and economic behaviors

3.1.1 Database on civic attitudes

The measure of cross-country differences in civic attitudes is based on two international social surveys: the *World Value Survey* (WVS) and the *International Social Survey Programme* (ISSP). The key advantage of these surveys is that they provide harmonized questions on civic attitudes for an extensive set of countries, including OECD countries, Eastern European countries and Latin American countries. The *WVS* covers three main waves (1980, 1990, 1999-2001)[14] and the *ISSP* provides specific questions on civic attitudes in two surveys on religion in 1991 and 1998. These two different databases are complementary in as much as they report the same kind of questions on civic attitudes but provide different controls to estimate the determinants of public-spiritedness. The *WVS* covers a larger set of countries and a greater time-span than the *ISSP*. But the latter database provides information on the countries of origin for the ancestors of the respondent, allowing us to push further the analysis of the cultural foundations of civic attitudes.

In both surveys respondents were asked a question directly related to civic attitudes towards government benefits. The question reported in the *WVS* database reads as follows: "*Do you think it can always be justified, never be justified or something in between to claim government/state benefits to which you have no rights".* The answers are given on an ordered scale from 1 for "Never justifiable" to 10 for "Always justifiable". The wording in the *ISSP* database is somewhat similar: "*Do you feel it is wrong or not wrong if a person gives the government incorrect information about himself/herself to get government benefits that she/ he is not entitled to?".* The answer ranges from 1 to 4, which correspond to "Seriously wrong", "Wrong", "A bit wrong" and "Not wrong". To ease the interpretation of the results, we group the answer categories together to represent individuals with strong civic attitudes. Hence we create a dummy variable which takes on the value 1 if the respondent answered "Seriously wrong" in the *ISSP* and "Never justifiable" in the *WVS*, and 0 otherwise. As a robustness check, all the estimations have also been run on the original variables without any significant changes in the results (see Appendix E).

The analysis includes the main OECD countries: Australia, Austria, Belgium, Canada, Denmark, France, Germany, Ireland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, UK and USA. We also include Chile in order to get richer information on Latin American countries. Actually, Latin American countries provide a

[14] The World Value Survey also had a wave in 1995 but for a smaller set of countries and questions.

useful benchmark of comparison since they display even higher levels of employment protection and lower level of unemployment benefits than Mediterranean countries. Eventually, we also analyze the situation of formerly planned economies: Hungary, Czech Republic, Poland and Slovakia. To some extent these countries provide an insightful natural experiment since they have implemented from scratch different designs of labor market institutions following a common shock caused by the fall of Communism. By grouping the different countries and different waves together, this selection leaves us with 76221 working aged individuals in the *WVS* and 33027 working aged individuals in the ISSP database. The number of observations by country reaches at least 1031 individuals in the *WVS* database and 850 individuals in the *ISSP* database (see Appendix D for the summary statistics by country).

3.1.2 Cross-country heterogeneity in civic attitudes

Figure 3 reports the basic mean reply to our main question of interest concerning government benefits as an average over the three main waves of the *WVS*. This figure already highlights important facts. Firstly, a much larger share of individuals in Nordic countries, compared to other countries display strong civic attitudes. Denmark is a clear outlier with 88 percent of households who strongly blame the fact of cheating over government benefits. Such a civic stand is shared by almost 80 percent of individuals in other Nordic countries such as Norway, Sweden or Netherlands. Secondly the other European countries lag far behind their Nordic counterparts. They are on average no more than 65 percent to blame uncivil behavior in Continental European and Mediterranean countries. Thirdly the former planned economies in Eastern Europe and the Latin American countries resemble the Continental and Mediterranean European countries. The only outlier is Hungary, which is much closer to Nordic countries on this issue; this is consistent with the fact that this country is the only one to have implemented generous unemployment insurance in Eastern Europe. Fourthly, the Anglo-Saxon countries stand at an intermediate position between Nordic countries and the others with more than 70 percent of household blaming uncivil attitudes. At first sight this ordering of country closely resembles the heterogeneity in the design of labor market institutions displayed in Figure 1.

Figure 4 also shows that civic attitudes are rather stable over time. It turns out that there is a strong correlation, within each country,[15] between the share of people who think that it is never justifiable to cheat on government benefits in 1980 and in 2000. Accordingly, the ordering of countries as regards civic attitudes remains stable over time.

[15] The WVS provides information only for 15 countries among the 25 countries of our sample in 1980.

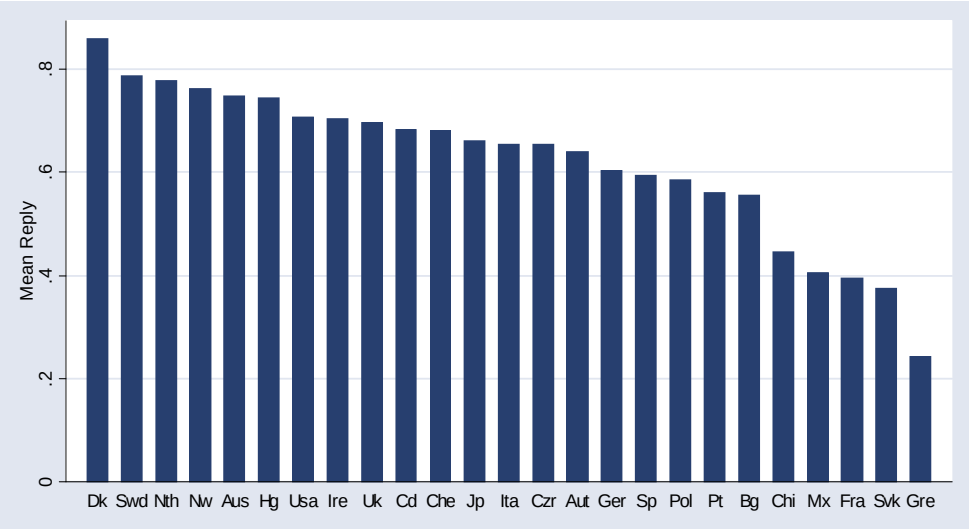

Figure 3: Mean reply to the question: "Do you think it can always be justified, never be justified or something in between to claim government/state benefits to which you have no rights". The score associated with the answer 'never' is 1, the score of other answers is zero. Source: WVS, 1980, 1990, 1999–2001.

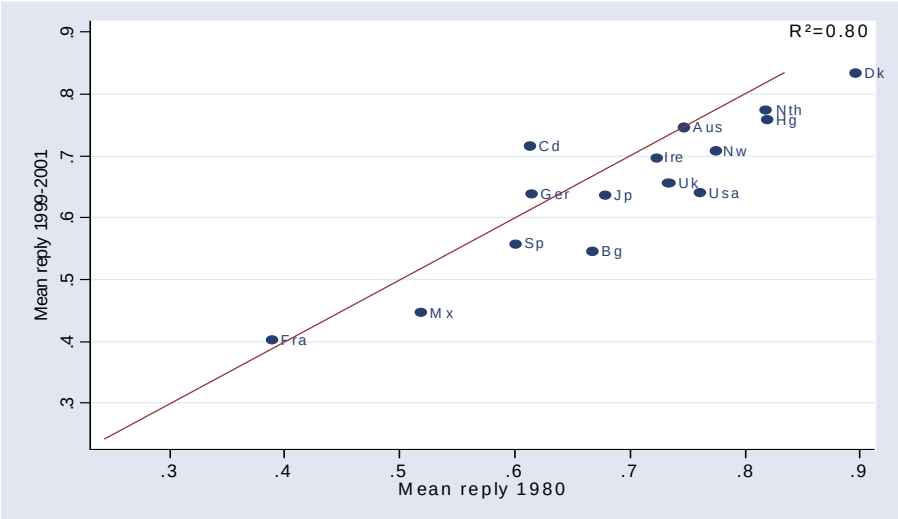

Figure 4: Mean reply to the question: "Do you think it can always be justified, never be justified or something in between to claim government/state benefits to which you have no rights". The score associated with the answer 'never' is 1, the score of other answers is zero. Source: WVS, 1980, 1999–2001.

3.2 The determinants of civic attitudes

The observation of cross-country stable differences in civic attitudes leaves the roots of such differences unexplained . We proceed in two steps in order to shed some light on this issue.

Firstly, we document the relation between civic attitudes and individual characteristics. This first step allows us to show that civic attitudes are strongly correlated with home country fixed effects capturing specific national features. Secondly, we delve further into the influence of national features by disentangling the cultural influence from other national economic and institutional environment. The analysis of civic attitudes of people of various different national origins, who face the same economic environment by living in the same country, allows us to show that cultural values have long lasting effects on civic attitudes. This analysis sheds light on the causal link between cultural backgrounds and individual civic values.

3.2.1 Civic attitudes and national features

The issue at stake is whether the observed cross-country heterogeneity in civic attitudes is correlated to individual characteristics or rather to country-specific effects. We thus estimate the specific effect of national features in the answers to the *WVS* question regarding attitudes towards cheating on government benefits. The dependent variable still takes the value 1 if the respondent thinks that cheating on government benefits is never justifiable and 0 otherwise. The national features are proxied by country dummies. Denmark is considered as the reference group since this country always displays the highest average level of civic attitude in this realm. To disentangle the country-specific effect, we also control for the main individual characteristics such as gender, age and age squared, the number of years of education, employment status, income category, political orientation and religious affiliation. This estimation is run on the three main waves of the *WVS* (1980,1990,1999-2001). We do not merge the estimations on the *WVS* and the *ISSP* since the question of interest is not originally coded in the same manner across the two databases. Yet, the results are not significantly changed if we run the estimation on the *ISSP* database (see next section).

Table 1 reports the probit estimates of the question on government benefits. Table 1 shows that all country dummies are significant at the 1 percent level. The marginal coefficients of each country are reported in Figure 5. They indicate to what extent living in countries other than Denmark lowers the probability of displaying good civic attitudes. The coefficients go from 0 for the reference group (Denmark) to $-.58$ for individuals living in Greece, which displays the lowest level of civic attitudes. Let us focus on the groups of countries with the highest gap compared to Denmark. One of them is made up of Latin American and Mediterranean countries. The

probability of having good civic attitudes decreases by 54 percent in Mexico, by 32 percent in Spain, 29 percent in Portugal and 25 percent in Italy. Another distinctive group consists of Eastern countries in which the probability of sharing high civic stands decreases by 35 percent in Slovakia or by 33 percent in Poland. It is noteworthy to stress the existence of an outlier (Hungary) which displays civic attitudes more comparable to those of Continental European countries. This result fits in squarely with the fact that Hungary is the only Eastern country to have implemented a high level of unemployment benefits. The group of countries much closer to Denmark is made up of Nordic and Anglo-Saxon countries. Living in Norway or in Australia instead of Denmark decreases the probability of good civic attitudes by only 6 and 12 percent respectively. The striking result is that this ordering of countries closely matches that of the unemployment benefits-employment protection trade-off.

It is also noteworthy to compare the size of the estimated country coefficients with that of the individual characteristics. Table 1 reports that the probability of considering it unjustifiable to cheat on government benefits increases with the level of education, the age and whether someone is employed rather than unemployed. Strikingly enough, people leaning to the right and to the Protestant religious affiliation also display better civic attitudes. But importantly enough, it turns out that coefficients of individual controls are much smaller than those associated with the country dummies. In terms of marginal effect,[16] the probability of thinking that cheating on government benefits is never justifiable increases by 3 percent if the respondent is Protestant rather than non religious or by 1 percent by each year of education.

As a matter of fact, the level of civic attitudes is mainly driven by national features. Fig 6 highlights this finding by showing the correlation between the mean reply to the question and the probit estimates of the coefficients associated with each country dummy. The correlation is almost perfect yielding a coefficient of determination of 0.86. Thus the key to understanding the cross-country heterogeneity in civic attitudes is to look at specific national features.

3.2.2 Cultural foundations of civic attitudes

To investigate the cultural foundations of civic attitudes, we look at civic attitudes of people of different national origins, who face the same economic environment by living in the same country. This approach allows us to identify the determinants of civic attitudes related to cultural background independently of the contemporaneous economic and institutional environment.

In line with the previous analysis, we still focus on the question regarding civic attitudes towards cheating over government benefits. But we use the ISSP database which is the only

[16] The coefficients reported are the total coefficients. Here, we use the corresponding marginal coefficient when interpreting the size of the coefficients.

Table 1: Probit estimation of civic attitudes

Dependent variable	Cheat on government benefits : Never justifiable=1	
	Coeff	Std Error
Country dummies	Yes***	
Male	-.067***	(.011)
Age	.033***	(.001)
Age2	-.000***	(.000)
Education	.035***	(.002)
Political orientation: Center	Reference	
Left	-.047***	(.014)
Right	.090***	(.014)
Religious affiliation: No_religion	Reference	
Catholic	.010	(.583)
Protestant	.085***	(.022)
Buddhist	-.001	(.050)
Muslim	-.106	(.114)
Jews	.000	(.992)
Other_religion	.034	(.029)
Pseudo-R^2	.098	
Observations	60014	

WVS database 1980, 1990, 1999-2001

***:1%, **: 5%, *: 10%

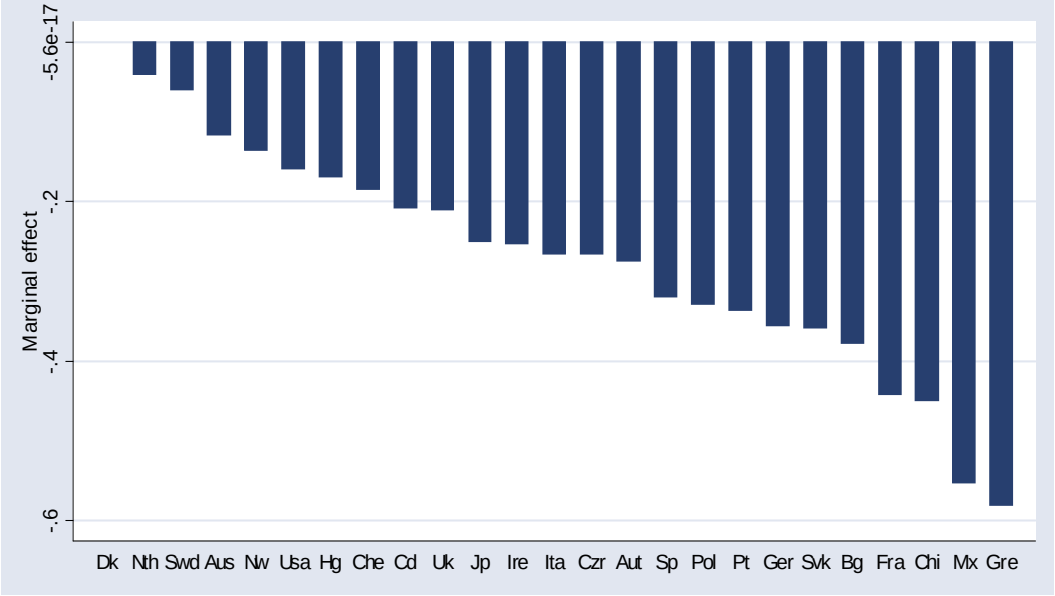

Figure 5: Marginal country effects associated with the question: "Do you think it can always be justified, never be justified or something in between to claim government/state benefits to which you have no rights". The score associated with the answer 'never' is 1, the score of other answers is zero. Source: WVS, 1980, 1990, 1999–2001.

one to provide information on the country of origin of the respondent's ancestors. The question is provided for the two waves 1991 and 1998 and reads as follows: "*Which country or part of the world did your ancestor come from? If there is more than one country, to which one of these countries do you feel closer*".[17] This question is mainly referenced for the United States on which our analysis will henceforth be based. In order to use the maximum number of observations, we group the different countries of origin into the following clusters: Nordic countries (Denmark, Netherlands, Norway and Sweden), European Anglo-Saxon countries (UK and Ireland), European Continental countries (France and Germany), Mediterranean countries (Italy, Portugal, Spain and Greece), Eastern European countries (Poland) and Latin American countries. We end up with a sample of 1057 people made up of 317 Anglo-Saxons, 192 Mediterranean, 39 Nordic, 40 Eastern Europeans, 65 Latin Americans and 404 Continental Europeans. We estimate to what extent the country of origin does matter by using dummies for each cluster within the United States.

We then assess to what extent the same pattern holds between individuals who are currently living in the countries of origins. For that purpose we group the different countries into the

[17] Unfortunately we cannot use the *WVS* questions in as much as this survey does not document the country of origin of the ancestors.

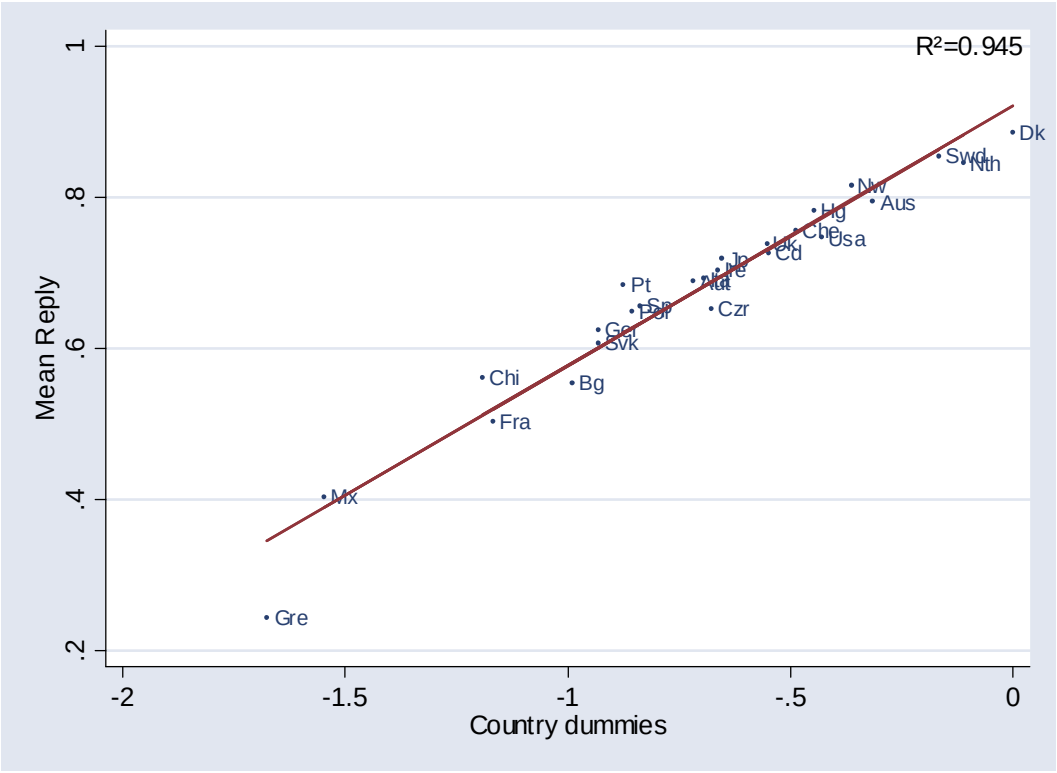

Figure 6: Correlation between the mean reply and the estimated country dummies associated with the question: "Do you think it can always be justified, never be justified or something in between to claim government/state benefits to which you have no rights". The score associated with the answer 'never' is 1, the score of other answers is zero. Source: WVS, 1980, 1990, 1999–2001.

same categories as that used for the ancestors' country of origin within the US. The estimation is run on the same two waves of the ISSP database.[18] The explained variable is still the answer to the question related to cheating over government benefits and we use the same individual characteristics as the estimations run on the US.

To disentangle the cultural channel from other national features, we use the following estimation strategy. Let us denote by γ_i our measure of civic attitudes of individual i. For every individual i this variable can be explained by

$$\gamma_i = \beta_0 + F_{c(i)} + \beta_1 X_i + \varepsilon_i,$$

where X_i stands for a vector of individual characteristics such as age, sex, education, income category and political orientation. ε_i is a random error term. $F_{c(i)}$ denotes the dummy variable for the cluster of countries c where the individual i is currently living. The country effect can be arbitrarily decomposed into two components: a cultural component $\theta_{c(i)}$ and another one, denoted by $I_{c(i)}$, capturing all other national features.

In the same manner, let us denote by $c(j)$ the cluster of countries of origin of the ancestors of the individual j currently living in the US. The measure of civic attitudes of individual j in the US can be estimated by the equation

$$\gamma_j = \beta_0^{US} + F_{c(j)}^{US} + \beta_1^{US} X_j + \varepsilon_j,$$

where $F_{c(j)}^{US}$ denotes the dummy variable for the cluster of countries $c(j)$ of origin of the ancestors of individual j. Since F_c^{US} captures the components of civic attitudes inherited from the ancestors of the cluster c, we define F_c^{US} as the cultural component of civic attitudes coming from cluster c. This definition allows us to identify the cultural component associated with the cluster c of countries. As this cultural component is assumed to influence the civic attitudes of individuals currently living in the US and in cluster c, we can identify the cultural component associated with cluster c with the dummy variable F_c^{US}. In other words $F_c^{US} = \theta_c$. Conversely, the component of civic attitudes of the individuals currently living in the cluster c which are due to national features different from cultural background is defined by

$$I_c = F_c - F_c^{US}. \tag{9}$$

Table 2 reports the probit estimates of the variables F_c^{US} and F_c. The explained variable is scaled 1 if people say that cheating over government benefits is seriously wrong. Our main variable of interest is the coefficient associated with the country of origin of the respondent.

[18] Note that in the *ISSP* database, the only Latin American country is Chile.

Households with Nordic origins are still considered as the reference group. As a first step we estimate the coefficient associated with the other regions of origins without controlling for individual's characteristics since most of these characteristics, such as education, income, family status and religious affiliation, are likely to be endogenous to the cultural backgrounds.

Table 2 - Col. (1), which reports the estimates of the F_c^{US} variables, shows that the fact of having ancestors from Eastern Europe, Mediterranean countries and above all Latin American countries, significantly reduces the probability that the respondent considers it seriously wrong to cheat on government benefits compared to people with Nordic ancestors. The coefficients are economically sizeable and statistically significant at the 5 percent level. Respondents with Anglo-Saxon or Continental European origins also display lower public-spiritedness, but the gap with people originating from Nordic countries is not statistically significant.

Table 2 - Col. (2) develops this analysis further by reporting probit estimates of the F_c^{US} variables when the main individual characteristics are controlled for. The same ordering of the regions of origins is still at stakes with the significant opposition between Latin American, Eastern European and Mediterranean countries on one hand, and Nordic countries on the other.

Table 2 - Col. (3) and Col. (4), reports probit estimates of the F_c variables. It shows that respondents living in Mediterranean, Eastern European and Latin American countries display much lower civic attitudes than Nordic households. The economic size and the statistical significance of the estimates of the F_c terms is robust to the inclusion of individual characteristics. More important: it turns out that the F_c variables are statistically different from zero but are not statistically different from the F_c^{US} variables at the 99 percent level of confidence. According to our analysis, this result means that individual attitudes are mainly shaped by the cultural background, since the component of civic attitudes related to other national features than cultural background, defined by the variable I_c in equation (9), is not statistically different from zero for each cluster of countries. This analysis strongly suggests that civic attitudes are mainly caused by cultural national features that have very long lasting effects.

Note that we have also checked the robustness of the results by also working with the initial variable about cheating over government benefit, which was initially ranked from one to four. Tab. 9 (displayed in Appendix E) reports the ordered probit estimates. The results about the cultural determinants of civic attitudes are consistent with the probit estimates and even more statistically significant.

Table 2: National origin and civic attitudes: Probit estimates

	Estimations on the US		Cross-country estimations	
	Country of origins		Country of residency	
	(1)	(2)	(3)	(4)
Nordic			Reference	
Anglo-Saxon Europe	-.281	-.339	-.240***	-.270***
	(.215)	(.222)	(.026)	(.034)
Continental Europe	-.243	-.271	-.381***	-.301***
	(.213)	(.219)	(.028)	(.038)
Eastern Europe	-.482**	-.503*	-.742***	-.739***
	(.243)	(.292)	(.027)	(.032)
Mediterranean	-.397**	-.442**	-.423***	-.439***
	(.182)	(.220)	(.031)	(.033)
Latin America	-.546**	-.505*	-.786***	-.746***
	(.257)	(.269)	(.037)	(.042)
Men		.030		-.076***
		(.082)		(.021)
Age		-.003		.005
		(.002)		(.007)
Age2		.000		-.000
		(.000)		(.000)
Education		.053***		.020***
(in years)		(.015)		(.003)
Unemployed			Reference	
Employed		.279		.191***
		(.276)		(.051)
Inactive		.332		.088
		(.284)		(.053)
			Reference	
Religious person		.285**		.012
		(.112)		(.026)
Income_class: Center			Reference	
Low		-.061		-.092***
		(.085)		(.023)
High		.188		.191***
		(.248)		(.051)
Pseudo–R^2	.018	.026	.082	.095
Nb of informations	1057	1057	15253	15253

ISSP database 1991,1998

A positive sign increases the likelihood that individuals say that it is never justifiable to claim state benefits to which you have no rights, ***:1%, **: 5%, *: 10%

3.3 Civic attitudes and economic behavior

For our analysis to be meaningful, heterogeneity in individual civic values should translate into the same heterogeneity regarding individual economic behavior on the labor market. In particular, to be consistent with our theoretical explanation, one should expect unemployed people displaying less guilt feelings in cheating over government benefits to have a higher probability of remaining unemployed. Besides this correlation should be all the more important that individuals with low civic virtue are currently living in countries providing high government benefits. Conversely, this correlation should be lower when the propensity to cheat is combined with an environment in which the probability of getting a job offer is scarce due to stringent employment protection. We estimate this relationship on the *WVS* database on the three waves 1980, 1990, 1999-2001. Since the *WVS* database does nor report the unemployment spells, we cannot directly estimate a duration model. But we can estimate the correlation between the probability of being unemployed and the degree of public-spiritedness.

Table 3 reports the cross-country probit estimates of this correlation pattern. The dependent variable is a dummy equal to one if the respondent is unemployed during the interview and zero if she is employed. The degree of civic virtue is still proxied by the answer to the question: "*Do you think it can always be justified, never be justified or something in between to claim government/state benefits to which you have no rights".* Recall that the answers are originally scaled from 1 for "Never justifiable" to 10 for "Always justifiable". Since the interaction between the different level of civic attitudes, the level of unemployment benefits and the level of job protection are likely to play a major role in the probability of being unemployed, it is more instructive at this stage to allow for different values of civic attitudes. We thus work with the original codification of the answer from 1 to 10 rather than the previous civic dummy which was equal to zero whatever answers were different to "Never justifiable".

The other main explanatory variables are the level of government benefits which provides potential disincentives to work and the employment protection legislation likely to affect the employment prospects. Concerning the former variable, we use the share of social expenditures (as defined by the OECD general indicator of social expenditure) in GDP. Social expenditure includes government spending in unemployment insurance, active labor market policies, health and housing. We select this variable since it is the closest available to the question at stake over government benefits. Moreover, this variable is more relevant than the unemployment replacement rate since it includes all social transfers likely to provide an incentive to remain unemployed. Regarding the level of employment protection used as a proxy for the scarcity of job offers, we use the time-varying Nickell et *al.* (2001) indicator. The higher the level of this

index is, the more stringent the employment protection becomes. The value-added element of this indicator compared to that of the OECD is to provide information in the early eighties when the first wave of the *WVS* database took place. For both the government benefits indicator and the employment protection index, we take their values at the time of each three waves in 1980, 1990 and 1999-2001.

We also control for traditional individual characteristics likely to influence the labor market employment status such as age, degree of education, gender and marital status. Further, we take into account the previous professional occupation of the respondent by a dummy variable indicating if the individual never had a job. Eventually, we include country dummies to control for heterogeneity in national economic environments. The regression is only run on the working age population, which leaves us with 35,755 observations in the benchmark regression.

Table 3 - Col.1 reports the correlation between the level of civic attitudes and the probability of being unemployed regardless of national institutions and country dummies. Recall that the higher the value of the index is, the lower the level of civic attitudes becomes. Consequently, and as expected, there is a positive correlation between this index and the probability of being unemployed. This effect is statistically highly significant at the one percent level.

Table 3 - Col.2 includes the index of national employment protection and national government benefits in the basic regression. Both legislations have an expected positive impact on the probability of being unemployed. The effect is statistically significant at the one percent level for the employment protection index and at the 10 percent level concerning government social expenditures. As previously, a lower level of civic attitudes is still positively and statistically significantly correlated with the probability of being unemployed.

Table 3 - Col.3 reports the same probit estimations when we control for the interaction terms between the individual level of civic attitudes and the aggregate national level of government benefits and employment protection. Strikingly enough, these interactions terms drive all the correlation patterns. The level of civic attitude by itself is no longer statistically significant. But the fact that people are ready to cheat on government benefits has a significant positive impact on the probability of being unemployed if the individual can benefit from high public social spending. Conversely, the probability of being unemployed decreases marginally if the individual displays low civic stands but faces scarce job offers proxied by employment protection. The effect is significant at the one percent level. The other individual characteristics have the expected sign. The probability of being unemployed decreases with the fact of being a man, with the level of education, and with the fact of having already occupied a job.

Up to now, it has been shown that there are important cross-country differences in civic virtue and economic behavior which are shaped to a large extent by national cultural values

Table 3: Civic attitudes and employment status: Probit estimates

Dependent variable	Unemployed status (=1)		
Civic attitudes			
(Cheat on gov. benefits:	.038***	.039***	.031
1=never justifiable	(.004)	(.004)	(.021)
to 10=always justifiable)			
Social spending (share of Gdp)		.012**	.628
		(.006)	(.841)
Employment protection		.375**	.469***
		(.153)	(.154)
Civic attitudes x Social spending			.223**
			(.106)
Civic attitudes x Emp. Protection			-.038***
			(.008)
Male (yes=1)	.092***	.080***	.080***
	(.021)	(.022)	(.022)
Age	-.036***	-.042***	-.041***
	(.006)	(.006)	(.006)
Age2	.000***	.000***	.000***
	(.000)	(.000)	(.000)
Partner (=1)	-.306***	-.297***	-.331***
	(.033)	(.033)	(.036)
Education (years)	-.029***	-.029***	-.029***
	(.003)	(.003)	(.003)
Never worked (=1)	.332***	.290***	.289***
	(.039)	(.042)	(.042)
Country fixed effect	Yes***	Yes***	Yes***
Pseudo-R^2	.070	.061	.062
Observations	35755	35755	35755
WVS database 1980, 1990, 1999-2001			

that have long lasting effects. This result leads us to analyze the correlations between civic attitudes and labor market institutions and to interpret such correlations as causal relations that go from civic attitudes to institutions for the period 1980-2003.

3.4 Civic attitudes, institutions and participation rates

Let us now analyze the relation between cross-country differences in civic attitudes and in labor market institutions and performance. In line with the political economy model, we test whether countries in which individuals exhibit a higher degree of civic virtue are more prone to insure workers with unemployment benefits rather than with employment protection. We also estimate to what extent the labor force participation is influenced by civic attitudes through the design of labor market institutions.

More precisely, our theoretical model predicts that labor market institutions (unemployment benefits and employment protection) at date t in country c, denoted by L_{ct}, are determined by the country's average level of individual i civic attitudes, denoted by $E(\gamma_{it}|c)$, and other relevant individual characteristics, denoted by X_{it}. Accordingly, the relation between labor market institutions and civic attitudes is estimated with the following equation:

$$L_{ct} = \alpha_0 + \alpha_1 E(\gamma_{it}|c) + \alpha_2 E(X_{it}|c) + \varepsilon_{ct}. \tag{10}$$

The indicator for unemployment benefits is the share of GDP per capita expenditure per unemployed worker provided by the OECD. The value-added element of this indicator is the capture of information on both the replacement rate and the spell of unemployment benefits. Moreover, this indicator is available for all OECD countries including Mexico and the Eastern European countries. The employment protection legislation is proxied by the OECD index on regular and temporary contracts.[19] Three time-varying indicators are provided for the late 80s, the late 90s and the early 2000s.

The main explanatory variables of interest for labor market institutions are national civic attitudes. They are proxied by the country average level of people who never find it justifiable to cheat on government benefits, computed for each of the three waves of the *WVS* in 1980, 1990 and 1999-2001. Other explanatory variables found in the political economy literature of labor market institutions are also taken into account. Agell (2001) argued that the degree of openness gives rise to more uncertainty for households and could have fuelled their need for more insurance. The level of insurance is also likely to vary over the business cycles captured by the growth rate of GDP taken in US 1995 dollars. We also take into account of the level of qualification of the labor force, proxied by the Barro and Lee index on the average years

[19] We use the OECD overall EPL1 indicator available at: http://www.oecd.org.

of education. Eventually we control for the demographic composition on each national labor market by including the share of the youth population aged between 16 and 24 years old among the whole working age population (15-64). This demographic composition is likely to play a role in the demand for insurance and the type of institutions depending on the insiders-outsiders status. Naturally, a lot of other explanatory variables might be relevant for explaining the level of employment protection, unemployment benefits and labor force participations but are not available for an extensive set of countries. We thus control for country fixed effects to capture other specific national features. We also introduce time period dummies to control for aggregate shocks.

Since we are interested in causal relationship between civic attitudes and labor market outcomes, we introduce a lag period between the explained variables and the proxies for civic attitudes. Namely the average national level of civic attitudes in the waves 1980, 1990 and 1999-2001 explain institutions in the late eighties, the late nineties and the early 2000s respectively. The data for the dependent variable and the other controls are taken as a five year average over the period 1985-89, 1990-94 and 1999-2003.

Table 4 reports GLS estimates of the determinants of unemployment insurance (UI), employment protection (EP), and the ratio of these two variables (UI/EP). As a first step, we estimate the effects of national civic attitudes without any other control, since these attitudes might influence the overall economic environment. The effects are statistically significant. Table 4 - Col. (1) shows that a 1 percent increase in the probability of saying that it is never justifiable to cheat on government benefits relatively to Denmark would increase UI spending by 0.7 percent. Table 4 - Col. (3) indicates there is a significant correlation between the civic attitudes indicator and employment protection. If the OECD indicator is rescaled so that it amounts to zero for the most flexible economy (the US) and to 1 for the most rigid economy (Portugal),[20] it turns out that a 1 percent increase in civic attitudes indicator leads to a 0.6 percent decrease in the EP indicator. As a matter of fact, Table 4 - Col. (6) shows that a relative increase in national civic attitudes increases the ratio of UI over EP. The coefficients associated with national civic attitudes are significant at the 1 percent level for each regression. As a second step, we control for the economic environment by introducing country fixed-effects and period dummies. The same relationship holds: a marginal increase in civic attitudes is associated with higher UI, lower EP and an increase in the overall ratio. The estimated coefficients are still significant at the one percent level.

Table 5 reports the simultaneous equations estimates. Table 5 - Col.(1) shows the coefficients estimates when the average national level of civic attitudes are used as the only explanatory

[20] The OECD overall EPL1 indicator goes from .2 to 4.1.

variables. It turns out that their effect on labor force going through the UI-EP trade-off is highly positive and statistically significant at the one percent level. And this correlation is robust to the inclusion of country fixed effects, as shown by Table 5 - Col.(2). The coefficient estimated in Col.(2) implies that a one percent increase in the indicator of civic attitudes leads to a 0.14 percent increase[21] in the participation rate. Looking at the size of the country marginal effects in Figure 5, this implies that differences in civic attitudes between Denmark and France, for instance, may explain between a fifth and a quarter of the difference in labor force participation rates of young people between these two countries.[22]

Table 4: Civic attitudes and labor market institutions. GLS estimates. Period: 1980-2003

	UI		EP		UI/EP	
	(1)	(2)	(3)	(4)	(5)	(6)
Average national level of civic attitudes	.740*** (.153)	.205*** (.051)	-1.306*** (.425)	-4.667*** (1.547)	.439*** (.152)	.878*** (.262)
Openness	.119** (.057)	-.140*** (.040)	-.110 (.076)	-.592 (.860)	-.025 (.054)	.193 (.145)
Education	-.014 (.012)	-.004 (.004)	-.378*** (.009)	.094 (.227)	.027** (.011)	-.193*** (.048)
GDP growth	-.017 (.011)	.009** (.004)	-.091*** (.007)	.234*** (.065)	.001 (.010)	-.044*** (.011)
Fixed Effects	No	Yes***	No	Yes***	No	Yes***
Period effects	No	Yes***	No	Yes***	No	Yes***
Observations	57	57	40	40	40	40

4 Conclusion

This paper argues that the efficiency of the Danish flexicurity Model relies on strong public-spiritedness which is absent in many other countries whose labor market institutions are different from those met in Denmark. From this perspective, the weak public-spiritedness observed in many European countries may hinder the implementation of the Danish recipe. More generally, this analysis suggests that public-spiritedness is a key ingredient in the possibility for a society to implement efficient public unemployment insurance. To that regard, a country may be unlikely to succeed in its labor market reforms without a comprehensive policy affecting civic behavior of its citizens.

[21] This figure is obtained by multiplying the coefficient of the country dummies by the coefficient of UI/EP in Table 5 - Col. 2.

[22] The employment rate of young people amounts to .50 in France and .78 in Denmark over the period 1999-2003.

Table 5: Participation rates of young people (20-24 years old) and civic attitudes. 3SLS estimates. Period: 1980-2003

	Labor force	UI/EP	Labor force	UI/EP
	(1)		(2)	
Average national level of civic attitudes		.468***		.863***
		(.131)		(.305)
UI/EP	.627***		.161**	
	(.143)		(.080)	
Openness		-.012		.265*
		(.054)		(.136)
Education		.024**		-.171***
		(.011)		(.045)
GDP growth		-.003		-.049***
		(.008)		(.011)
Fixed Effects	No	No	Yes***	Yes***
Period effects	No	No	Yes***	Yes***
R^2	.15	.35	.94	.92
Observations	40	40	40	40

This conclusion raises many questions about the scope and the instruments of policy reforms. In particular: how can civic attitudes be changed? Our paper suggests, along with many others (see Guiso et al., 2005), that it is far from being straightforward to change civic attitudes, because it turns out that they are largely shaped by cultural heritages and that they are not systematically influenced by the economic environment. From this point of view, more research is required to shed light on the relation between public-spiritedness, trust, other elements of social capital and the economic environment in order to improve our understanding of the dynamics of values and preferences.

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Appendix

A The equilibrium policy (τ, f, b)

Let us first remark that the system made of the participation constraint (3) and the incentive compatibility constraint (4) can be written as

$$\begin{aligned} v(0) &\geq v(b) - \alpha\bar{h} - \gamma, & \text{(A1)} \\ [1 - G(X)]\, v(w) + G(X)v(b) &= v(0) + \bar{h}. & \text{(A2)} \end{aligned}$$

Therefore, the maximization program of the elected candidate reads

$$\max_{\{w,b,X,\bar{h}\}} \int_0^{\bar{h}} \{[1 - G(X)]\, v(w) + G(X)v(b)\}\, dH(h) + \int_{\bar{h}}^{+\infty} [v(0) + h] dH(h),$$

subject to

$$\begin{aligned} \int_X^{+\infty} (x - w)\, dG(x) - G(X)b &= k, & \text{(A3)} \\ v(0) &\geq v(b) - \alpha\bar{h} - \gamma, & \text{(A4)} \\ [1 - G(X)]\, v(w) + G(X)v(b) &= v(0) + \bar{h}. & \text{(A5)} \end{aligned}$$

Let us denote by $\mathcal{L}$ the Lagrangian of this program and by μ_1, μ_2 and μ_3 the Lagrange multipliers associated with contraints (A3), (A4) and (A5) respectively. The first-order conditions read:[23]

$$\begin{aligned} \frac{\partial \mathcal{L}}{\partial w} &= 0 \Leftrightarrow v'(w) = \mu_1 - \mu_3 v'(w) & \text{(A6)} \\ \frac{\partial \mathcal{L}}{\partial b} &= 0 \Leftrightarrow v'(b) = \mu_1 + \frac{\mu_2}{G(X)} v'(b) - \mu_3 v'(b) & \text{(A7)} \\ \frac{\partial \mathcal{L}}{\partial X} &= 0 \Leftrightarrow X = w - b - [v(w) - v(b)] \left(\frac{1 + \mu_3}{\mu_1} \right) & \text{(A8)} \\ \frac{\partial \mathcal{L}}{\partial \bar{h}} &= 0 \Leftrightarrow \mu_3 = \alpha\mu_2 & \text{(A9)} \end{aligned}$$

The first-order conditions lead us to analyze two cases.

Case 1: $\gamma \geq (1 - \alpha)v \left(\int_0^{+\infty} x dG(x) - k \right) - v(0)$

In that case, $\mu_2 = 0$ implies, according to equations (A9), (A6) and (A7), that $b = w$. When $b = w$ and $\gamma \geq (1 - \alpha)v \left(\int_0^{+\infty} x dG(x) - k \right) - v(0)$, the incentive compatibility constraint (A4) is not binding. Therefore, there is full insurance and equation (A8) implies that $X = 0$. Then, free entry condition implies that $w = \int_0^{+\infty} x dG(x) - k$.

[23] In order to simplify the presentation of the first-order conditions, both sides of constraints (A3), (A4) and (A5) have been multiplied by $H(\bar{h}) > 0$.

Case 2: $\gamma < (1-\alpha)v\left(\int_0^{+\infty} xdG(x) - k\right) - v(0)$

In that case, $\mu_2 = 0$ which still implies, according to equations (A9), (A6) and (A7), that $b = w$, is impossible because the incentive compatibility constraint (A4) cannot be satisfied. Therefore, $\mu_2 > 0$, which means that the incentive compatibility constraint (A4) is binding. Equation (A6) can be written as $v'(w) = \mu_1/(1+\mu_3)$. Substituting this expression into (A8) yields

$$X = w - b - \frac{v(w) - v(b)}{v'(w)}. \tag{A10}$$

Therefore, the optimal value of (w, X, b) is defined by (A10), the zero profit condition (A3) and the binding incentive compatibility constraint (A4), where, $\bar{h}$ is defined by (A5). Then, using (A4) and (A5), it possible to define the optimal value of (w, X, b) thanks to equations (A10), (A3) and

$$v(w) - v(b) = \frac{(1-\alpha)\left[v(b) - v(0)\right] - \gamma}{\alpha\left[1 - G(X)\right]} \blacksquare$$

B Static comparative properties of b and X

Let us show that the optimal values of X and b are increasing with respect to γ when $\gamma < (1-\alpha)v\left(\int_0^{+\infty} xdG(x) - k\right) - v(0)$.

The optimal value of (w, X, b) is defined by the zero profit condition

$$\int_X^{+\infty} (x-w)\, dG(x) - G(X)b = k, \tag{B11}$$

and

$$X = w - b - \frac{v(w) - v(b)}{v'(w)}, \tag{B12}$$

$$v(w) - v(b) = \frac{(1-\alpha)\left[v(b) - v(0)\right] - \gamma}{\alpha\left[1 - G(X)\right]}. \tag{B13}$$

The zero profit condition (B11) implicitly defines w as a function of X and b. Let us denote by $w(X,b)$ this function, whose partial derivatives are

$$\begin{aligned} \frac{\partial w(X,b)}{\partial X} &= \frac{G'(X)}{1-G(X)}\left(w - X - b\right), \\ \frac{\partial w(X,b)}{\partial b} &= \frac{-G(X)}{1-G(X)}. \end{aligned}$$

When $w = w(X,b)$, the differentiation of equations (B12) and (B13) with respect to X, b and γ yields

$$\frac{db}{d\gamma} = \frac{1}{\alpha\left\{G(X)v'(w) + \left[1 - G(X) + \frac{1-\alpha}{\alpha}\right]v'(b)\right\}} > 0, \tag{B14}$$

$$\frac{dX}{d\gamma} = \frac{\left[v'(b) - v'(w)\right]\left[1 - G(X)\right] - G(X)\left[v(w) - v(b)\right]\frac{v''(w)}{v'(w)}}{\left[1-G(X)\right]v'(w) - G'(X)v''(w)\left(X - w + b\right)^2}\frac{db}{d\gamma} > 0. \tag{B15}$$

The last equation is positive because v is concave and $w > b$ when $\gamma < (1-\alpha)v\left(\int_0^{+\infty} xdG(x) - k\right) - v(0)$ ■

C Participation rate and the intensity of guilt feelings

Let us show that the participation rate $H(\bar{h})$ increases with the intensity of guilt feelings. Formally, this amounts to show that $\bar{h}$, increases with γ when $\gamma < (1-\alpha)v\left(\int_0^{+\infty} xdG(x) - k\right) - v(0)$. As the incentive compatibility constraint (A4) is binding, $\bar{h}$ is defined by $\alpha\bar{h} = v(b) - v(0) - \gamma$. Using equation (B14), the derivative of $\bar{h}$ with respect to γ reads

$$\frac{d\bar{h}}{d\gamma} = \frac{\left[v'(b) - v'(w)\right]G(X)}{\alpha\left[G(X)v'(w) + \left[1 - G(X) + \frac{1-\alpha}{\alpha}\right]v'(b)\right]},$$

which is positive because v is concave and $w > b$ when $\gamma < (1-\alpha)v\left(\int_0^{+\infty} xdG(x) - k\right) - v(0)$ ■

D Data and summary statistics

Table 6 reports the sample of countries used in the WVS database and the ISSP database. Table 7 shows the main individual characteristics of the respondents in these two surveys. The variable "Age" is expressed in years. The variable "Education" is the age at which the respondent completed her highest education. The variable "Income" derives from the question : "Here is a scale of incomes. We would like to know in what group your household is, counting all wages, salaries, pensions and other income that come in". The variable is ranked into deciles. We constructed three categories: low income (1th-3th deciles), mean income (4th-6th) and high income (7th-10th).

Table 6: Sample of countries in WVS and ISSP

Country	WVS (1980, 1990, 1999-2001)	ISSP (1991, 1998)
	Observations	Observations
Australia	3131	1310
Austria	2840	1986
Belgium	5508	
Canada	4844	974
Chile	2677	1503
Czech Republic	2790	1224
Denmark	2807	1114
France	3725	1133
Germany	5382	2346
Greece	1107	
Hungary	3311	2000
Ireland	3199	2015
Italy	5328	1991
Japan	3378	1368
Mexico	4761	
Netherlands	3038	3655
Norway	3558	3038
Poland	1998	2210
Portugal	2168	1201
Spain	8778	2488
Slovakia	1317	1284
Sweden	2854	1189
Switzerland	2491	1204
United Kingdom	3573	2061
United States	5242	2643

Figures 7 and 8 report the original ranking of answers related to civic attititudes towards cheating on governement benefits in the WVS database and ISSP database. In the WVS database, the answers are given on an ordering scale of 1 for "Never justifiable" to 10 for "Always justifiable". In the ISSP

Table 7: Summary statistics of WVS and ISSP

Variables	WVS		ISSP	
	Mean	Std. Dev.	Mean	Std. Dev.
Men	0.481	0.5	0.469	0.499
Age	42.807	17.278	46.228	17.332
Age education	17.317	3.582	11.845	3.885
Low-income	0.426	0.494	0.418	0.493
Mid-income	0.236	0.498	0.485	0.5
Up-income	0.339	0.473	0.097	0.296
Catholics	0.413	0.492	0.379	0.485
Protestants	0.322	0.467	0.289	0.453
Muslims	0.043	0.202	0.003	0.051
Jews	0.005	0.074	0.002	0.043
Buddhists	0.025	0.155	0.02	0.139
Others	0.025	0.155	0.032	0.175
No religion	0.168	0.374	0.268	0.443

database, the answer ranges from 1 to 4, which correspond to "Seriously wrong", "Wrong", "A bit wrong" and "Not wrong". For both surveys, the answers are averaged on the different waves (three waves in the WVS in 1980, 1990, 1999-2001) and two waves in the ISSP database (1991, 1998)).

In both surveys respondents were asked a question directly related to civic attitudes towards government benefits. The question reported in the *WVS* database reads as follows: "*Do you think it can always be justified, never be justified or something in between to claim government/state benefits to which you have no rights".* The answers are given on an ordering scale of 1 for "Never justifiable" to 10 for "Always justifiable". The wording in the *ISSP* database is somehow similar: "*Do you feel it is wrong or not wrong if a person gives the government incorrect information about himself/herself to get government benefits that she/ he is not entitled to?".* The answer ranges from 1 to 4, which correspond to "Seriously wrong", "Wrong", "A bit wrong" and "Not wrong".

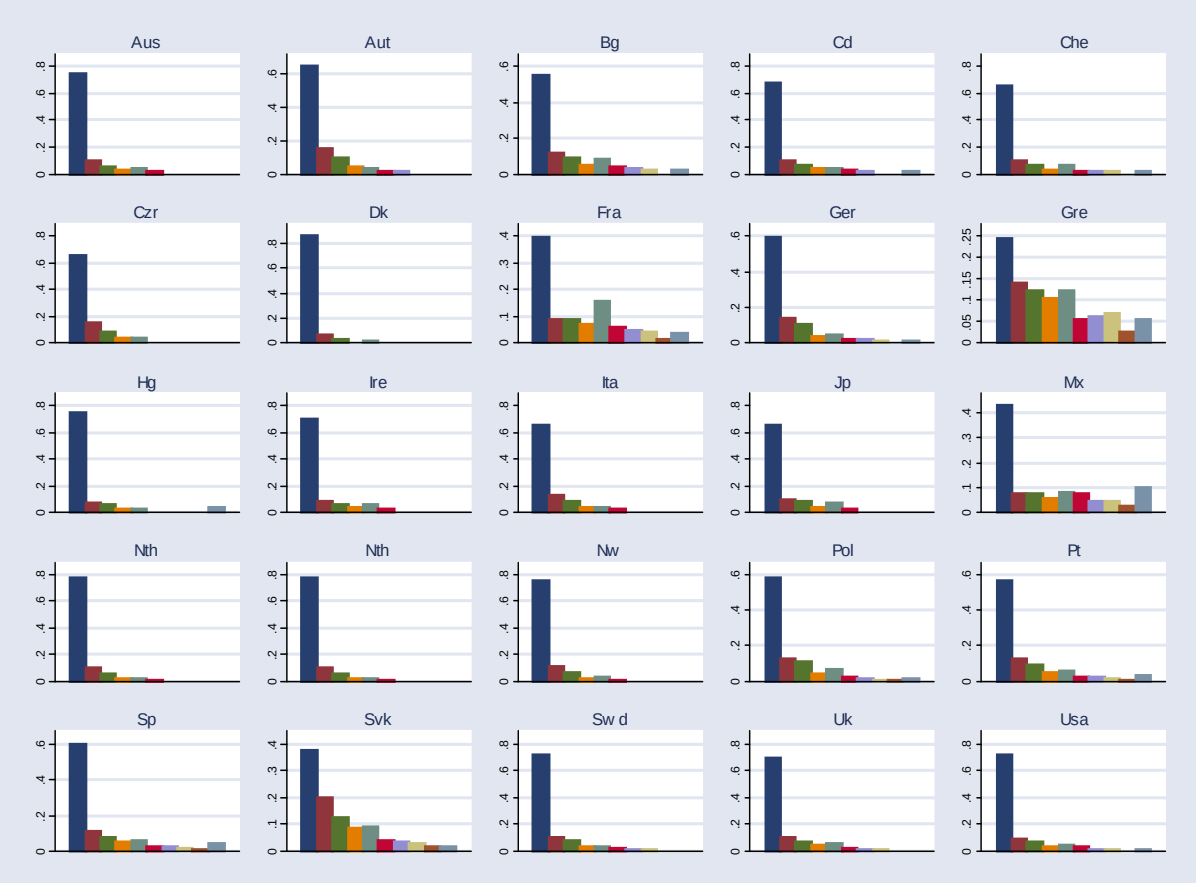

Figure 7: "*Do you think it can always be justified, never be justified or something in between to claim government/state benefits to which you have no rights".* From 1="Never justifiable" to 10"Always justifiable". WVS: 1980,1990, 1999-2001.

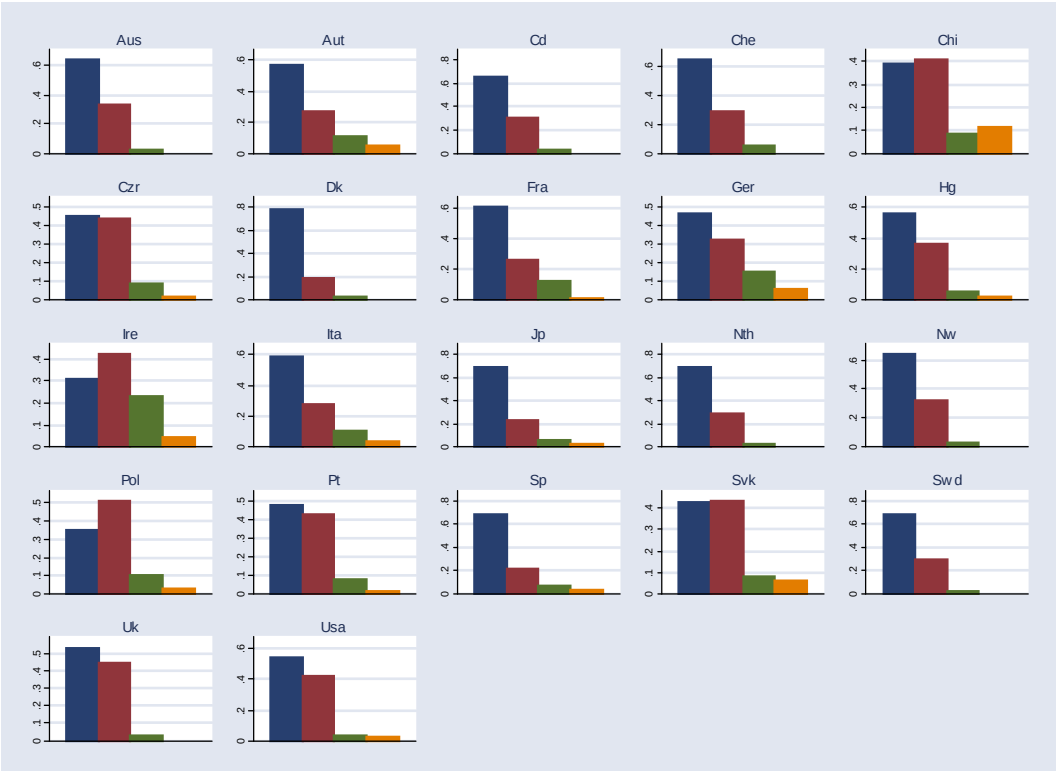

Figure 8: "*Do you feel it is wrong or not wrong if a person gives the government incorrect information about himself/herself to get government benefits that she/ he is not entitled to?*". The answer ranges from 1="Seriously wrong" to 4="Not wrong". ISSP 1991,1999

E Ordered Probit estimations

We also check the robustness of our estimations when one works with the original codification of the answers regarding civic attitudes rather than the constructed civic dummy variable used in the core of the text.

Tab 8 reports ordered probit estimates of the influence of individual characteristics and country fixed effects when one works with the original WVS variable. The answers are coded from 1 for high level of civic attitude to 10 for low level of civic attitudes. Thus a negative sign increases the probability that the associated characteristic decrease the level of public-spiritidness. We run the same estimations with the same controls and over the same period as in Section 3.2.1

Table 8: Ordered probit estimation of civic attitudes

Dependent variable	Justifiable to cheat on governement benefits 1=Never to 10=Always	
	Coeff	Std Error
Country dummies	Yes***	
Male	.066***	(.010)
Age	-.032***	(.001)
Age2	.000***	(.000)
Education	-.008***	(.001)
Political orientation:		
Center	Reference	
Left	.117***	(.012)
Right	-.071***	(.012)
Religious affiliation: No_religion	Reference	
Catholic	-.118***	(.017)
Protestant	-.166***	(.021)
Buddhist	-.081	(.046)
Muslim	.124	(.092)
Jews	-.100	(.078)
Other_religion	-.111	(.025)
Pseudo-R^2	.061	
Observations	56311	
WVS database 1980, 1990, 1999-2001		
***:1%, **: 5%, *: 10%		

Tab 9 reports ordered probit estimates of civic attitudes on the ISSP database. The variable is coded from 1 for the highest level of civic virtue to 4 for the lowest value of civicness. Thus a negative sign increases the probability that the associated characteristic decreases civic virtue. We run the same

estimations within the United-States and then across the clusters of countries as in Section 3.2.2.

Table 9: National origin and civic attitudes: Ordered probit estimates

	Estimations on the US	Cross-country estimations
	Country of origins	Country of residency
	(1)	(2)
Nordic		Reference
Anglo-Saxon Europe	-.261	-.388***
	(.219)	(.057)
Continental Europe	-.298	-.574***
	(.217)	(.057)
Eastern Europe	-.624**	-.737***
	(.279)	(.056)
Mediterranean	-.451**	-.641***
	(.226)	(.049)
Latin America	-.642**	-1.02***
	(.260)	(.056)
Men	-.018	-.066***
	(.078)	(.015)
Age	-.001	.007
	(.002)	(.007)
Age2	.000	-.000
	(.000)	(.000)
Education	.044***	.014***
(in years)	(.015)	(.002)
Unemployed		Reference
Employed	.337	.228***
	(.245)	(.036)
Inactive	.375	.145***
	(.254)	(.037)
		Reference
Religious person	.323***	.076***
	(.105)	(.020)
Income_class: Center		Reference
Low	-.108	-.099**
	(.081)	(.017)
High	.137	.016
	(.237)	(.025)
Pseudo-R^2	.024	.043
Nb of informations	1008	15023

ISSP database 1991,1998

A positive sign increases the likelihood that individuals say that it is never justifiable to claim state benefits to which you have no rights, ***:1%, **: 5%, *: 10%