DISCUSSION PAPER SERIES

No. 9028

SOCIAL INSURANCE, WORK NORMS, AND THE ALLOCATION OF TALENT

Giacomo Corneo

PUBLIC POLICY

Centre for Economic Policy Research

www.cepr.org

Available online at: **www.cepr.org/pubs/dps/DP9028.asp**

ISSN 0265-8003

SOCIAL INSURANCE, WORK NORMS, AND THE ALLOCATION OF TALENT

Giacomo Corneo, Frei Universität Berlin and CEPR

Discussion Paper No. 9028

Centre for Economic Policy Research
77 Bastwick Street, London EC1V 3PZ, UK
Tel: (44 20) 7183 8801, Fax: (44 20) 7183 8820
Email: cepr@cepr.org, Website: www.cepr.org

CEPR Discussion Paper No. 9028

ABSTRACT

Social insurance, work norms, and the allocation of talent*

Across countries, generous social insurance comes along with weak work norms. This finding is often taken to mean that in the long run social insurance generates large output losses. But neither individual nor country data corroborates the view that weak work norms worsen economic performance. This paper offers a model of endogenous work norms that rationalizes that evidence. Weak work norms do not harm labor productivity because they are associated with an improved allocation of individual talents to occupations, while strong work norms arise as a defensive strategy of parents aiming at perpetueting their occupation along family lines. Evidence from microdata supports the view that (i) social insurance favors intergenerational occupational mobility and (ii) more mobile individuals endorse weaker work norms.

JEL Classification: H2 and O0
Keywords: social insurance and work norms

Giacomo Corneo
Department of Economics
Free University of Berlin
Boltzmannstraße 20
D-14195 Berlin
GERMANY

Email: gcorneo@wiwiss.fu-berlin.de

*I benefitted from discussions with seminar participants in Beer-Sheva, Berlin, Budapest, Jerusalem, Mannheim, Oslo, Reading, Rethymno, Tel Aviv, and Washington D.C. I am also grateful for helpful comments from Mark Gradstein, Eivind Hoffmann, Omer Moav, Karl Ove Moene, Karine Nyborg, Moses Shayo, Paolo Vanin, Yoram Weiss, and Joseph Zeira.

Submitted 15 June 2012

1 Introduction

Social insurance entails a trade-off between the benefits from reduced consumption risk and the costs in terms of work disincentives created by taxes and benefits. Those disincentives may reach beyond the direct effects on labor supply usually estimated by economists: generous social insurance may weaken the work norms endorsed by individuals, i.e. it may diminish the symbolic value that individuals attach to achieving self-supportiveness through own work. As documented by Lindbeck and Nyberg (2006), data on attitudes and labor supply corroborate the view that in countries where social insurance is more generous people tend to endorse weaker work norms. However, the presumption that weak norms lead to bad economic outcomes is not borne out by the data. At the level of individuals, Corneo (2012) finds that stronger work norms are not associated with higher incomes even if many individual characteristics are controlled for. A similar finding obtains at the country level: across OECD countries, economic growth is uncorrelated with the strength of work norms. While that lack of correlations does not imply that concerns about the work ethic are misplaced, it raises a question about the mechanisms that relate social insurance, work norms, and economic performance to each other.

The current paper develops a theoretical framework that rationalizes both the negative cross-country correlation between generosity of social insurance and strength of work norms and the missing impact of work norms on economic performance. I develop a dynamic model of endogenous norms instilled by parents, in which individuals make a career choice with imperfect knowledge of their talent, and face the risk of failing in the labor market and becoming unemployed. An efficient allocation of talent to occupations is assumed to be key for economic performance. The generosity of social insurance towards the unemployed is endogenously determined through voting.

The analysis shows that weak work norms need not harm labor productivity because they improve the allocation of individual talents to occupations, and this can offset the adverse effect of weak work norms on labor supply. Strong work norms arise as part of a precautionary strategy of parents who aim at perpetueting their occupation along family lines. When individuals follow their parents' footsteps in the labor market, the risk of a complete failure is small because they can profit from both the network of contacts and the occupation-specific human capital that they inherit from their parents. For those individuals, endorsing a norm in praise of self-supportiveness is a relatively safe way to boost their self-esteem. Conversely, weak work norms arise when young adults do not

rely on their parents' help in the labor market and hence face a greater risk of ending up unemployed. Social insurance alleviates the material distress of the unemployed and makes independency from parents relatively more attractive viz. following their footsteps relatively less attractive. This can explain the empirical finding that countries that are generous with their unemployed exhibit relatively weak work norms. At the same time, insisting that children enter their parents' occupation irrespective of their individual talent leads to an inefficient allocation. This can explain why individuals and countries with stronger work norms do not compare favourably in terms of economic performance. There are circumstances under which multiple equilibria arise: an equilibrium with strong work norms, meager unemployment benefits, and widespread inheritance of occupations along family lines coexists with one where work norms are weak, unemployment benefits are generous, and there is much intergenerational mobility across occupations. Aggregate output is larger in the equilibrium with weak work norms if and only if the productivity gain from an efficient allocation of talent is sufficiently large.

Cross-country data for Europe is consistent with the claim that the generosity of unemployment benefits encourages intergenerational occupational mobility. This can be seen from Figure 1, where the generosity index on the horizontal axis captures the ratio of the after-tax unemployment benefit payable to a typical worker to that worker's after-tax wage, as computed by Scruggs and Allan (2006). The vertical axis has the fraction of male adults that follow the occupational footsteps of their fathers. That variable is obtained from the European Values Survey of 2008 which reports the four-digit ISCO code of the occupation of both the respondent and his father when the respondent was fourteen. All countries for which both sources of information are available have been used. The inheritance of occupations is negatively correlated with the generosity of unemployment benefits and the regression line has a R^2 close to .55. Figure 2 replicates the same exercise using Scrugg and Allan's (2006) general score of generosity of social insurance, which incorporates sickness and pension benefits along with unemployment benefits.

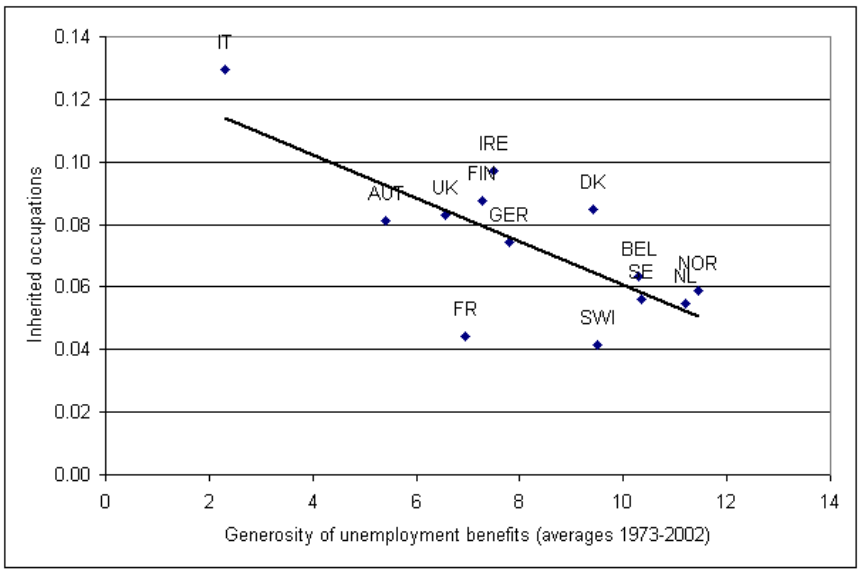

Figure 1: Generosity of unemployment benefits and intergenerational occupational mobility.

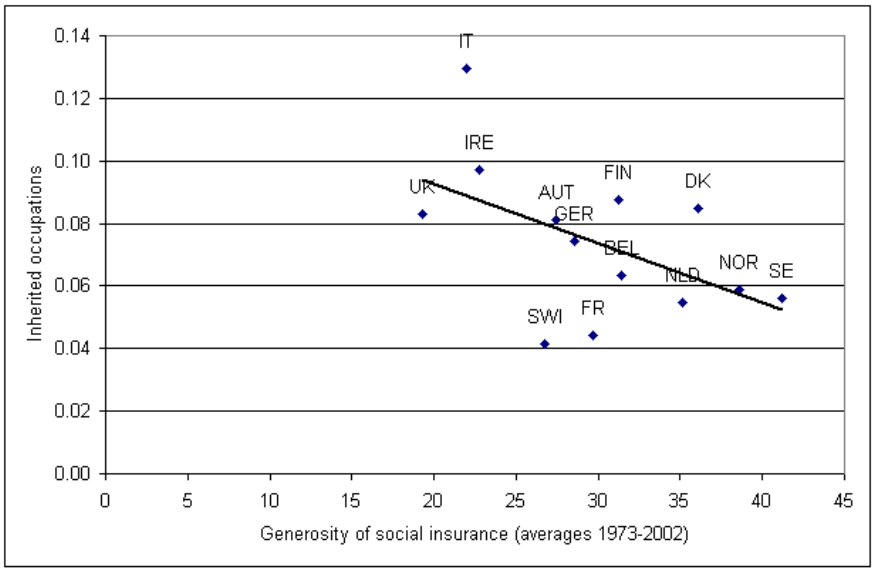

Figure 2: Generosity of social insurance and intergenerational occupational mobility.

The negative correlation between social insurance and inheritance of occupations is robust with respect to controls for individual characteristics of the respondents in the various countries. Taking the country-fixed effects from a regression that explains the probability to inherit the father's occupation yields scatter plots very similar to those of Figures 1 and 2.

To the extent that intergenerational occupational mobility fosters innovation and growth, that evidence contributes to explain the so called free lunch puzzle of the welfare state, i.e. the failure to detect any clear overall negative effect of larger tax-financed transfers on GDP (Lindert, 2004). As argued by Bénabou (2000), the observed variability

across countries can be understood as resulting from multiple equilibria such that none of them is superior to the other ones in terms of long-run economic growth.[1] The current paper identifies a novel mechanism that generates such a multiplicity of equilibria: each configuration in its model combines democratically chosen social insurance, family-transmitted work values, and patterns of intergenational occupational mobility that are mutually consistent and reinforce each other. Generous welfare states turn out to compensate weaker work incentives through a better match of talents to occupations.

The rest of this paper is organized as follows. The next Section is devoted to the strands of literature to which this paper relates. Section 3 presents the model and Sections 4-6 derive its main properties. In Section 7 the distinctive predictions of the theoretical model are confronted with the data. Section 8 concludes.

2 Links to the literature

Work norms refer to self-supportiveness: persons who are able to work should work so as to support themselves by their own work and they should not rely on support by others. In Lindbeck (1997) the disutility from deviating from that norm is assumed to decrease with the share of transfer recipients. Since transfer recipients may be individuals who break the norm, those models exhibit a critical-mass effect: the larger the share of the population that violates the norm, the smaller the utility loss from violating it, and the stronger the incentive to live off handouts from the government. There can be both an equilibrium with large norm compliance and ostracism of the unemployed and one where the norm breaks down. Lindbeck *et al.* (1999) show that under endogenous social insurance there can be either a laissez-faire equilibrium, supported by a majority of potential taxpayers, or one with a generous welfare state, supported by a majority of transfer recipients. The laissez-faire equilibrium is the one where the norm is obeyed and the economy thrives. Also in the model of this paper there are equilibria with either weak or strong norms; however, economic performance needs not be better in the equilibrium with strong norms.

Lindbeck and Nyberg (2006) endogenize work norms as the outcome of a purposive socialization process. Parents instill a work norm in their children so as to mitigate children's free-riding on parents' altruism. Social insurance shifts some of the costs of children's free riding from the parents to the government and weakens the incentive for parents to instill a work norm. In a related model, Gradstein (2010) allows families to invest in educa-

[1] See also the models with multiple equilibria developed by Alesina and Angeletos (2005) and Bénabou and Tirole (2006). In those models, however, the laissez-faire equilibrium dominates, in terms of national income, the welfare-state equilibrium.

tion and shows that education subsidies can prevent work norms from deteriorating. The current paper shares the view that parents purposively influence their children's work norms. However, those norms are modeled as resulting from a broader value system that parents transmit to their children, as in Corneo and Jeanne (2009).[2] Values and esteem depend not only on whether somebody is a transfer recipient or a worker, but also on his occupation. This is consistent with the observation that occupational pride and prestige are important ingredients in the choice of careers and occupations (Arcidiacono, 2004; Dolton *et al.*; 1989, Humlum *et al.*, 2012).

A few papers have offered models of endogenous work attitudes, as in Doepke and Zilibotti (2008) and Gradstein (2009). While work norms refer to self-supportiveness through own work, work attitudes refer to the willingness to substitute leisure for consumption at the margin. Those papers show that the intergenerational transmission of work attitudes can help to explain long-term patterns of income mobility, whereby children of poor parents can overtake children of rich parents. Differently from the current paper, those papers do not deal with unemployment and social insurance.[3]

Considerable empirical work has been devoted to the relationship between children's and their parents' labor market outcomes. A strand of literature has documented the extent of intergenerational persistence in occupational choice, whereby the father's occupation is found to be an important determinant of the son's occupation. However, most studies employ a broader definition of occupation than in this paper, one based on its socio-economic status, see e.g. Constant and Zimmermann (2003) and references therein. Another related study is Corak and Piraino (2011), about the intergenerational transmission of employers. Using Canadian data, they find that 6 % to 9 % of a cohort of young men have the same employer in adulthood for which their father worked. That is driven by fathers providing both informational networks and specific human capital to their children. The importance of the role of family networks for labor market outcomes is confirmed by Kramarz and Skans (2011), who analyze Swedish data. Interestingly, they find that family networks favor the transition between school and work especially for children with low schooling and poor grades. There are also empirical studies that find an important effect from parents' joblessness on children's earnings (Oreopoulos et *al.*, 2008) and unemployment (Corak *et al.*, 2004, Österbacka, 2004, and Page, 2004). My model is consistent with the main findings of the empirical literature: (i) there is a significant

[2]Becker (1996), Bisin and Verdier (2000), and Mulligan (1997) offer related approaches to the intergenerational transmission of values and attitudes.

[3]Algan and Cahuc (2009) investigate the role of civic virtue in explaining the presence of employment protection rather than unemployment benefits. Corneo and Grüner (2000) and Cervellati *et al.* (2010) analyze the role of social stigma and prestige in shaping governmental redistribution in the absence of an insurance motive.

intergenerational persistence in occupational choice; (ii) following a parent's occupational footsteps is especially attractive for less talented individuals; (iii) parents' unemployment has a negative impact on the labor market outcomes of their children.

Finally, the model in this paper is related to that part of growth theory that puts forward the allocation of talent as a key growth factor, as in Fershtman *et al.* (1996), Galor and Tsiddon (1997), Hassler and Rodriguez Mora (2000), and Murphy *et al.* (1991). The current paper stresses the benefits in terms of accumulated knowledge that accrue to society if individuals perform an activity for which they are talented. In my model, individuals are horizontally differentiated with respect to their talents; a coincidence of talents and occupations spurs creativity and new ideas, whereas a mismatch results in technological stagnation. This focus distinguishes the current paper from the previous literature that stresses the role of vertically differentiated talent in human capital investment and in the choice of entrepreneurial activities.

3 Model

At any time period $t \in \{0, 1, 2...\}$ there is a continuum of dynasties $i \in [0, 1]$. Individual i_t is the parent of individual i_{t+1} and lives one period. Every individual may either work and choose one of two occupations, referred to as a and b. Or, the individual may be unemployed and receive social benefits, in which case his (in)activity is denoted by u. In every period t, the following sequence of events occurs for every dynasty.

1. Individual i_t internalizes a value system instilled by i_{t-1}. A value system is a mapping that associates non-negative indexes $v(\cdot, i_t)$ - symbolic values - with activities $x \in \{a, b, u\}$. As values are intrinsically relative I use the normalization

$$v(a, i_t) + v(b, i_t) + v(u, i_t) = 1. \tag{1}$$

The strength of the work norm endorsed by individual i_t, $n(i_t)$, is defined as the symbolic value that individual i_t attaches to working:[4]

$$n(i_t) \equiv v(a, i_t) + v(b, i_t).$$

2. Individual i_t receives a signal about his unknown talent $\theta(i_t) \in \{a, b\}$. Talents are identically and independently distributed in the population. The signal about talent may be either σ_a or σ_b. The unconditional probability of each signal is 1/2; the conditional probabilities are

[4]It could equivalently be defined as the difference between the symbolic value attached to working and the one attached to living off the welfare state.

$$\Pr\{\sigma_{i,t} = \sigma_a | \theta(i_i) = a\} = \Pr\{\sigma_{i,t} = \sigma_b | \theta(i_t) = b\} = p, \tag{2}$$

where $p \in (1/2, 1)$ is the precision of the signal. It can be thought of as mirroring the quality of the education system.

3. Individual i_t chooses an occupational specialization $s(i_t) \in \{a, b\}$. Having a specialization is a necessary requirement for working in the corresponding occupation.

4. Individuals $i_t \in [0, 1]$ vote over balanced social insurance schemes (τ_t, z_t) and one is collectively chosen. $\tau_t \in [0, 1]$ is the wage tax rate and $z_t \geq 0$ is the unemployment benefit.

5. Nature privately reveals to each individual his talent $\theta(i_t)$, upon which the individual's productivity is determined. The productivity of individual i_t depends both on his talent for the chosen occupation and on his parent's activity, $x(i_{t-1}) \in \{a, b, u\}$. If $s(i_t) = \theta(i_t)$, individual i_t's gross hourly wage is $w_t(1 + \delta)$, where $\delta > 0$ is the talent premium. If $s(i_t) \neq \theta(i_t)$, the wage is $w_t > 0$ if $s(i_t) = x(i_{t-1})$ and 0 otherwise. Thus, untalented individuals can earn a positive wage only if they have followed their parents' occupational footsteps.

6. Individuals choose their work hours $h(i_t) \in [0, 1]$, produce, and are paid their market wage according to their productivity.

7. Consumption levels $c(i_t)$ are determined by redistributing the wage sum according to the social-insurance scheme.

Individuals derive utility from consumption, leisure, self-esteem and social esteem. Their preferences are described by a logarithmic utility function,

$$U = \ln c + \ln(1 - h) + \beta \ln selfv + \gamma \ln socv,$$

where c is consumption, $1 - h$ is leisure, $selfv$ captures self-esteem, and $socv$ is social esteem. Within each family, all individuals have the same "deep" preferences, while they may attach different symbolic value to the various activities. The weigth of the self-esteem concern in an individual's utility function is captured by $\beta \geq 0$. An individual's self-esteem is the value of his activity according to his value system:

$$selfv(x(i_t)) = v(x(i_t), i_t).$$

The strength of the concern for social esteem is captured by $\gamma \geq 0$. The social esteem in which an individual is held is the average of the esteem granted to his activity over the whole society:

$$socv(x(i_t)) = \int_0^1 v(x(i_t), j_t) dj_t. \tag{3}$$

A possible interpretation has individuals being randomly matched into pairs and exchanging courtesy and hostility according to their values.

The baseline productivity level in the economy, w_t, is determined by the economy-wide stock of knowledge K_t as of

$$w_t = \alpha K_t, \tag{4}$$

where $\alpha > 0$ is a parameter. The stock of knowledge accumulates as a by-product of the work of talented individuals. It evolves according to

$$K_{t+1} = [1 + g(H_t)]K_t, \tag{5}$$

where H_t is the total number of hours worked by individuals who are talented for their occupation. Function g satisfies $g(0) \geq 0$ and $g' > 0$.

An equilibrium is informally defined as

- a distribution of value systems, occupational specializations, and work hours at each period, $(v(x, i_t))_{i_t \in [0,1]}$, $(s(i_t))_{i_t \in [0,1]}$, $(h(i_t))_{i_t \in [0,1]}$,

- levels of social esteem at each period, $socv(x_t)_{x_t \in \{a,b,u\}}$,

- a social insurance scheme at each period (τ_t, z_t),

- and a productivity level at each period (w_t),

such that:

- for each i_t, the values $v(x, i_{t+1})$, $x \in \{a, b, u\}$ maximize the expected utility of i_{t+1} subject to (1), given $socv(x_t)_{x_t \in \{a,b,u\}}$, τ_t, z_t, and w_t,

- $socv(x_t)_{x_t \in \{a,b,u\}}$ obtains from the individually chosen values as of (3),

- for each i_t, the occupational specialization $s(i_t)$ and work hours $h(i_t)$ maximize his expected utility conditional on $socv(x_t)_{x_t \in \{a,b,u\}}$, τ_t, z_t, w_t, and his private information,

- (τ_t, z_t) maximizes the sum of the expected utilities of the voters among all (τ, z) that satisfy the budget constraint of the government in period t,

- equations (4) and (5) apply.

The initial conditions are a distribution of activities for the initial parents' generation, $(x(i_0))_{i_0 \in [0,1]}$ and an initial stock of knowledge, $K_0 > 0$. I posit that less than half of the initial parents' generation was unemployed and that employment was equally splitted between the two occupations.

4 Individual choices

For each individual, first his values, then his specialization, and finally his work hours are determined under the relevant constraints so as to maximize his expected utility under rational expectations. Those variables are now determined by backward induction.

4.1 Labor supply

When individuals choose their labor supply, they know about their net wage, the unemployment benefit, and the social esteem levels enjoyed by workers and transfer recipients. Individual productivity is private information and individuals who can earn a positive wage can mimick those who are unproductive and live off the welfare state. The mimicking decision is affected by one's values. Individuals who endorse a strong work norm may refrain from cheating because they want to preserve their self-esteem. If society mainly consists of people with strong work norms, the social esteem of transfer recipients is low, and this is an additional reason for refrainig from cheating the welfare state.[5]

Consider an individual who can earn a net hourly wage $\omega > 0$. Dropping the time index, his optimal number of hours, conditional on working, obtains from

$$\max\{\ln c + \ln(1-h)\}$$

subject to

$$c = \omega h.$$

The solution has

$$h = \frac{1}{2}.$$

The participation decision is made after comparing the indirect utility when working with the utility when living on the transfer. The utility level when working in occupation $x \in \{a, b\}$ is given by

$$\ln \frac{\omega}{4} + \beta \ln v_x + \gamma \ln \overline{v}_x,$$

where v_x and $\overline{v}_x$ respectively refer to the self-esteem and the social esteem obtained from working in occupation x. If the individual mimicks an unproductive one, he gets utility

$$\ln z + \beta \ln v_u + \gamma \ln \overline{v}_u.$$

Therefore, productive individuals only participate in the labor market if

$$\ln \frac{\omega}{4z} \geq \beta \ln \frac{v_u}{v_x} + \gamma \ln \frac{\overline{v}_u}{\overline{v}_x}. \tag{6}$$

The incentive constraint (6) plays a key role in this model. It describes how values and social insurance shape the willingness to work. A more generous social insurance reduces ω and raises z; thereby it decreases the l.h.s. of (6), i.e. the material gain from working. This is the direct disincentive effect from social insurance. Without value concerns ($\beta = \gamma = 0$),

[5] While the values endorsed by people determine their incentive compatibility contraints, they do not matter for their choice of working hours since the assumed utility function is separable.

individuals only work if $\omega \geq 4z$. The effect of work norms is captured by the r.h.s. of (6) which represents the intangible gain from not working. If individuals suffer a sufficiently large loss of self-esteem and/or social esteem when living off the welfare state, generous social insurance can go along with intact willingness to work. However, over time, a more generous social insurance could erode work norms, i.e. increase the r.h.s. of (6), and eventually diminish the willingness to work. This is the indirect disincentive effect from social insurance.

4.2 Occupational specialization

At the interim stage, every individual has received a signal about his talent and chooses his occupational specialization $s(i) \in \{a, b\}$ so as to maximize his expected utility, correctly anticipating his effective labor supply in each state of the world. That choice is affected by the activity of the parent: entering the same occupation as the one performed by the parent secures the individual a positive wage even if he turns out to be untalented for that occupation. To illustrate, consider the child of somebody who worked in occupation a and suppose that he received the signal σ_a. His expected utility from choosing specialization a is:

$$\begin{aligned} EU(a|a,\sigma_a) &= p \max\left\{\ln\frac{w(1+\delta)(1-\tau)}{4} + \beta \ln v_a + \gamma \ln \overline{v}_a, \ln z + \beta \ln v_u + \gamma \ln \overline{v}_u\right\} + \\ &\quad + (1-p)\max\left\{\ln\frac{w(1-\tau)}{4} + \beta \ln v_a + \gamma \ln \overline{v}_a, \ln z + \beta \ln v_u + \gamma \ln \overline{v}_u\right\}. \end{aligned}$$

The expected utility from specialization b is:

$$\begin{aligned} EU(b|a,\sigma_a) &= (1-p)\max\left\{\ln\frac{w(1+\delta)(1-\tau)}{4} + \beta \ln v_b + \gamma \ln \overline{v}_b, \ln z + \beta \ln v_u + \gamma \ln \overline{v}_u\right\} + \\ &\quad + p\left[\ln z + \beta \ln v_u + \gamma \ln \overline{v}_u\right]. \end{aligned}$$

The individual chooses the specialization $s(i) = a$ if and only if $EU(a|a,\sigma_a) \geq EU(b|a,\sigma_a)$.

Since occupations a and b are perfectly symmetric, optimal career choices are fully characterized by three rules. The first one, derived above, concerns the children who have received the signal that they are talented for their parents' occupation. The second one is used by children who have received the signal that they are talented for an occupation different from their parents' one. The third one is the choice rule for the children of the individuals who were unemployed in the previous period.

4.3 Value systems

In the first stage, before talent signals are received, parents select the value system of their children correctly anticipating their children's decision rules concerning specialization and

working time. Optimal transmission of values can be different for parents with a job and for the unemployed because their children's opportunity sets are different. Therefore, I examine their choices separately. The analysis assumes that social esteem satisfies $\overline{v}_a = \overline{v}_b \equiv \overline{v} > \overline{v}_u$, something which turns out to be the case in equilibrium. Proofs of all results are relegated to the Appendix.

4.3.1 Children of the unemployed

When instilling a value system, a parent can either set values that make her child choose a given career independently of the signal he will receive about his talent; or the parent can transmit values such that her child's career choice will condition on the received signal. The former is an instance of paternalism, where instilled values determine the child's future choices. In the sequel, I use the term *paternalism* only if the values are set so as to make the child choose to be a worker, conditional on being talented. If values make the child shun work, I write that the child is endowed with a *welfare culture*. The other way of raising children - letting them choose according to their perceptions about talent - is referrred to as *liberalism*, since parents effectively permit freedom of choice.

In the case of *paternalism*, unemployed parents are a priori indifferent between bestowing value on a or b, so say that in the case at hand specialization into occupation a is selected. Provided the incentive constraint (6) holds,[6] the child's expected utility amounts to

$$\frac{1}{2}\left[\ln\frac{w(1+\delta)(1-\tau)}{4} + \ln z + \beta(\ln v_a + \ln v_u) + \gamma(\ln\overline{v} + \ln\overline{v}_u)\right].$$

The optimal value system under paternalism is a triple (v_a, v_b, v_u) in the 2-simplex that maximizes the above expression. Solving that maximization problem shows that the optimal socialization strategy is to set $v_a = v_u = 1/2$, and $v_b = 0$.[7] With logarithmic utility, the symbolic value invested in each activity always equals the probability of that activity. Therefore, in case of paternalism, the resulting expected utility is

$$\frac{1}{2}\left[\ln\frac{w(1+\delta)(1-\tau)}{4} + \ln z\right] + \beta\ln\frac{1}{2} + \frac{\gamma}{2}(\ln\overline{v}\overline{v}_u). \tag{7}$$

Consider now the case of *liberalism*, i.e. the option to transmit values such that the child will choose his specialization according to the received signal. It yields expected utility

$$p\ln\frac{w(1+\delta)(1-\tau)}{4} + (1-p)\ln z + \beta\left[\frac{p}{2}(\ln v_a + \ln v_b) + (1-p)\ln v_u\right] + \gamma\left[p\ln\overline{v} + (1-p)\ln\overline{v}_u\right].$$

[6] The fulfillment of all relevant incentive constraints is shown in the Appendix.

[7] Or $v_b = v_u = 1/2$ and $v_a = 0$ if occupation b is targeted.

The optimal value system under liberalism has $v_a = v_b = p/2$, and $v_u = 1-p$. Substituting back, the resulting expected utility is

$$p \ln \frac{w(1+\delta)(1-\tau)}{4} + (1-p)\ln z + \beta \ln \frac{p^p(1-p)^{1-p}}{2^p} + \gamma \ln \overline{v}^p \overline{v}_u^{1-p}. \tag{8}$$

Finally, parents may opt to instill a *welfare culture* such that their children will always shun work. In that case, their expected utility is $\ln z + \beta \ln v_u + \gamma \ln \overline{v}_u$. Optimal welfare culture has $v_u = 1$ and $v_a = v_b = 0$. Then, the individual obtains utility $\ln z + \gamma \ln \overline{v}_u$ with certainty. Comparing that utility level with (7) and (8) yields the optimal socialization strategy.

Define $y \equiv \ln[w(1+\delta)(1-\tau)/4z]$, a variable that is inversely related to the generosity of social insurance. Optimal values can be characterized by reference to y.

Lemma 1 *There exist scalars y_1, y_2, y_3, and $\overline{p} \in (1/2, 1)$ such that the following holds true. Suppose $p > \overline{p}$; then, the optimal socialization strategy for parents who are unemployed is welfare culture if $y < y_3$ and it is liberalism if $y > y_3$. Suppose $p < \overline{p}$; then, optimal socialization entails a welfare culture if $y < y_1$, paternalism if $y_1 < y < y_2$, and liberalism if $y > y_2$.*

The intuition behind this result is straightforward. The generosity of social insurance, as captured by the inverse of y, determines the relative material reward of working. If social insurance is very generous, individuals prefer to live on public transfers and get endowed with a welfare culture, so that they enjoy a high level of self-esteem although they are transfer recipients. If social insurance is less generous, optimal values prepare the children to enter the labor market. Since unemployed parents cannot help their children in the labor market, they might be expected to encourage their children to follow the signal they receive about their talent. This is, however, not always the case. If the signal about talent is very noisy - p close to 1/2 - paternalism in occupational choice can be optimal if social insurance is sufficiently generous. The reason is that the self-esteem of workers is higher under paternalism than under liberalism, and this can compensate the lower probability of being productive if social insurance reduces the utility gap between the workers and the unemployed.

The thresholds y_1, y_2 and y_3, that determine which socialization strategy is optimal, depend on the preference parameters β and γ. If preferences differ across families, parents may opt for different socialization strategies.

4.3.2 Children of working parents

As compared to the children of the unemployed, the children of employed parents face a larger opportunity set since they can earn a wage in their parent's occupation even if they are not talented for that occupation. Correspondingly, their parent's set of potentially optimal socialization strategies is larger. Again, a parent can either transmit values that make her child choose a given career independently of the signal he will receive about his talent; or the parent can transmit values such that her child's career choice will condition on the received signal. In the case of working parents, a further distinction must be made within each class of socialization strategies: in case of lack of talent but same occupation as parent, values may either induce the child to work or shirk. The option to set values that make the child work in his parent's occupation independently of talent is termed *family specialization*. The option that consists of instilling values so that the child chooses his occupational specialization by following the signal about his ability and always works if he choose his parent's occupation is called *talent orientation*. For the corresponding cases where the individual does not work if he chose his parent's occupation and is not talented for it, I use the expressions of paternalism and liberalism used above as in fact those strategies are the same for working and unemployed parents. Of course, also the option of instilling a welfare culture leads to the same value system for the children of working parents as for the children of the unemployed. To sum up, as compared to the unemployed, working parents have two additional options: family specialization and talent orientation, both of which entail the expectation that the child will work even if he turns out to lack the talent for the chosen specialization, provided that it is the same as his parent's one.

In order to determine which socialization strategy is optimal, consider first the option of *family specialization* and suppose without any loss of generality $x(i_{t-1}) = a$. In this case, the optimal value system obviously has $v_a = 1$ and $v_b = v_u = 0$. The individual's expected utility associated with family specialization is therefore

$$\ln \frac{w(1-\tau)}{4} + \frac{1}{2}\ln(1+\delta) + \gamma \ln \overline{v}. \tag{9}$$

Consider now the option of *talent orientation.* It yields expected utility

$$p \ln \frac{w(1+\delta)(1-\tau)}{2} + \frac{1-p}{2}\left[\ln \frac{w(1-\tau)}{2} + \ln z\right] + \frac{1+p}{2}\ln\frac{1}{2} +$$
$$+\beta\left(\frac{1}{2}\ln v_a + \frac{p}{2}\ln v_b + \frac{1-p}{2}\ln v_u\right) + \gamma\left[\left(\frac{1+p}{2}\right)\ln \overline{v} + \left(\frac{1-p}{2}\right)\ln \overline{v}_u\right].$$

The optimal value system under talent orientation maximizes the above expression under the constraint (1). It has $v_a = 1/2$, $v_b = p/2$, and $v_u = (1-p)/2$. The resulting expected

utility is

$$\frac{1+p}{2}\ln\frac{w(1-\tau)}{4}+p\ln(1+\delta)+\frac{1-p}{2}\ln z+\frac{\beta}{2}\ln\frac{p^p(1-p)^{1-p}}{4}+\frac{\gamma}{2}\ln\overline{v}^{1+p}\overline{v}_u^{1-p}. \quad (10)$$

If the allocation of talent is important, i.e. δ is large enough,[8] the following fact can be established:

Lemma 2 *There exist scalars y_4, y_5, and y_6 such that the following holds true. Suppose $p > \overline{p}$; then, the optimal strategy for parents who had an occupation is welfare culture if $y < y_3$, liberalism if $y_3 < y < y_4$, talent orientation if $y_4 < y < y_5$, and it is family specialization if $y > y_5$. Suppose $p < \overline{p}$; then, their optimal strategy is welfare culture if $y < y_1$, paternalism if $y_1 < y < y_2$, liberalism if $y_2 < y < y_4$, talent orientation if $y_4 < y < y_5$, and it is family specialization if $y > y_5$.*

The most interesting case is the one where the children of working parents are socialized either according to talent orientation or family specialization, which requires $y > y_4$. Those two socialization strategies can be part of the same general equilibrium if β and γ differ across families and the individual-specific thresholds y_5 are distributed within a sufficiently narrow interval that includes y. Then, families that care relatively more about esteem socialize their children according to family specialization, while families that care relatively more about consumption and leisure opt for talent orientation. This has direct implications for the strength of the work norm endorsed by individuals, $n(i_t) = v(a, i_t) + v(b, i_t)$. Self-reliance is always achieved by individuals raised to follow their parents' occupational footsteps, so that $n(i_t) = 1$ for those individuals. Families that bet on their child's talent face instead a risk of failure in the labor market and transmit more tolerant values, implying $n(i_t) = (1 + p)/2 < 1$. Thus, we have:

Corollary 1 *Suppose that in equilibrium some individuals are socialized according to talent orientation and others according to family specialization. Then, those who work in the same occupation as their parents endorse on average stronger work norms than those who do not work in their parents' occupation.*

Lemmata 1 and 2 imply that the children of the employed may have values that differ from those of the children of the unemployed even if their utility functions are identical. In the case of identical utility functions, all thresholds y_j, $j \in \{1, ..5\}$, are the same for everyone and if $y > y_4$, the children of the unemployed are predicted to endorse weaker work norms. Since $y_4 > y_3$, the children of the unemployed are raised according

[8] Formally, δ is assumed to be bounded from below so as to meet a condition stated in the Appendix. That condition is supposed to be met in what follows.

to liberalism, which is associated with $n(i_t) = p$. The children of working parents are instead raised according to either talent orientation, in which case $n(i_t) = (1+p)/2 > p$, or family specialization, in which case $n(i_t) = 1 > p$.

Corollary 2 *Under common preferences, the children of the unemployed exhibit weaker work norms than other individuals in the same generation.*

Corollaries 1 and 2 are distinctive testable predictions of the current model. They will be confronted with the data in Section 7.

5 Short-run general equilibrium

Assume for the sequel that families have identical preferences. In the general equilibrium, the levels of social esteem $\overline{v}_a$, $\overline{v}_b$, and $\overline{v}_u$, as well as the social insurance scheme (τ, z) are endogenously determined. The social esteem levels associated with working and with living on transfers are determined by aggregation of the value choices made by all parents, as of (3). Tax rate and transfer are determined by voting, which occurs after the individuals have received their signal about talent and have selected their career, but before their actual talent is realized. So, the veil of ignorance has not been lifted at the moment of voting on the social insurance scheme. I posit probabilistic voting, where the platform that arises in equilibrium is one that is feasible and maximizes the sum of the expected utilities of the voters.[9]

The electorate selects a social insurance scheme that satisfies the budget constraint of the government. The per-capita tax revenue amounts to

$$\frac{\tau w}{2}\left\{\begin{array}{c}\mu\left[m_s\left(1+\frac{\delta}{2}\right)+m_t\left(p(1+\delta)+\frac{1-p}{2}\right)+m_l p\left(1+\delta\right)+m_p\left(\frac{1+\delta}{2}\right)\right]+\\ +(1-\mu)\left[n_l p(1+\delta)+n_p(1+\delta)/2\right]\end{array}\right\}. \tag{11}$$

In the above expression, μ denotes the fraction of individuals whose parents had an occupation. I denote by m_s the fraction of employed parents who instilled values of family specialization in their children; by m_t the fraction that adopted values of talent orientation; by m_l the fraction that opted for liberalism; by m_p the fraction that chose paternalism. With respect to the $(1-\mu)$ children of transfer recipients, I denote by n_l the fraction that diversified the values of their children according to liberalism, and by n_p the fraction of unemployed parents who specialized the values of their children to an occupation. The per-capita outlay of social insurance is given by

$$z\left\{\mu\left[1-m_s-\left(\frac{1+p}{2}\right)m_t-pm_l-\frac{m_p}{2}\right]+(1-\mu)\left[1-pn_l-\frac{n_p}{2}\right]\right\}. \tag{12}$$

[9] Analyzing the case of majority voting leads to similar results but is more cumbersome because of the associated discontinuities.

The budget constraint of the government is satisfied if per-capita outlay equals per-capita tax revenue.

In a short-run politico-economic equilibrium, social insurance is a pair (τ, z) that satisfies the budget constraint of the government and maximizes the sum of the expected utilities of all voters after they have received their ability signal but before their wage rate is realized. That voting outcome is correctly foreseen when people make their individual decisions.

Without significant loss of insight, the analysis can be restricted to the case of $p > \overline{p}$, which guarantees that in equilibrium the social esteem of the employed is larger than the social esteem of the unemployed. There are two relevant configurations to examine. The first one has all children of working parents being raised according to *family specialization*. Among all potentially optimal socialization strategies, this is the one that attaches the lowest symbolic value to lack of self-relience and the highest value to work. Therefore, I refer to this outcome as to the strong work-norms equilibrium, SNE for short.

Proposition 1 *If the concerns for self-esteem and social esteem are strong enough (β and γ sufficiently large), a SNE exists. In that equilibrium, the average strength of work norms is given by*

$$N^S = \mu + (1 - \mu)p. \tag{13}$$

In a SNE, all individuals whose parents worked follow their parents' occupational footsteps. Hence, those individuals face no risk of becoming unemployed and derive no benefit from social insurance. Since they constitute the majority of the population, the electorate selects a small social insurance program. This configuration only builds an equilibrium if the concern for the symbolic rewards of self-supportiveness is large enough. That concern prompts people to work even if their productivity turns out to be low. Conversely, if people did not care much about esteem, they would rather live on transfers in case of low productivity. But in that case, it would be better for them to maximize the probability of having a high productivity, which is achieved by following the signal about one's talent. This explains why family specialization only arises in equilibrium if the concerns for self-esteem and social esteem are strong enough.

The second relevant configuration is the one where all parents who have a job socialize their children according to *talent orientation*. To contrast it with the SNE, I refer to that situation as to the weak work-norms equilibrium, WNE for short.

Proposition 2 *There exists a compact set $X \subset \Re^2_+$ such that if $(\beta, \gamma) \in X$, a WNE exists. The average strength of work norms in such an equilibrium equals*

$$N^W = \mu \left(\frac{1+p}{2} \right) + (1 - \mu)p. \tag{14}$$

The WNE can readily be compared with the equilibrium of an economy where values do not matter, i.e. $\beta = \gamma = 0$. In such an economy, individuals choose their specialization by following their talent signal. This implies that both the preferences of voters over (τ, z)-pairs as well as the budget constraint of the government in case all productive individuals work are precisely the same as in the WNE of the corresponding economy where esteem matters. However, the incentive constraint (6) is different in the two model economies, which means that not all productive individuals may work in the economy without symbolic values under the social insurance scheme that is selected in the WNE. As can be easily verified, that social insurance scheme, denoted by (τ^W, z^W), indeed violates the incentive constraint for the individuals with low productivity in an economy without values, i.e.

$$w(1 - \tau^W) < 4z^W. \tag{15}$$

As a consequence, the following fact can be established:

Proposition 3 *In a WNE, material social welfare is larger than in the equilibrium of an othwerwise identical economy where symbolic values do not matter.*

Material social welfare is the sum of all expected utilities derived from consumption and leisure. Thus, material payoffs are higher if individuals do not care only about material payoffs. A concern about esteem is a commitment device that allows the polity to implement a more generous level of social insurance without violating incentive compatibility. This commitment effect of values is conducive to a higher level of material welfare because insurance is underprovided in equilibrium.[10]

If values matter, i.e. $\beta > 0$ and $\gamma > 0$, individuals optimally develop work norms that have the effect to relax the incentive constraints faced by social insurance. Interestingly, the strength of those work norms needs not be uniquely determined in equilibrium. For some set of parameters, both the SNE and the WNE can be sustained, i.e. the model exhibits multiple short-run equilibria.

Proposition 4 *For any given μ, there exists a compact set such that if (β, γ) belongs to it, both the SNE and the WNE exist. The tax rate is lower in the SNE than in the WNE. The output level is larger in the SNE than in the WNE if and only if*

$$\delta < \frac{1-p}{2p-1}.$$

[10] In the economy without values, the incentive constraint for working is binding and equilibrium social insurance is determined by that constraint and the budget constraint of the government. In the economy with values, the incentive constraint for working is not binding in equilibrium.

In one equilibrium, parents believe that their children will live in a society where the unemployed will fare decently as compared to successful workers. In case of bad luck, individuals will receive generous social benefits without being stigmatized. Thus, parents want their children to cultivate their individual talent even if this exposes them to the risk of failure in the labor-market. Parents raise children in that way by bestowing occupations and joblessness with rather similar values. In the sequel, children choose specializations that may differ from their parents' ones and face the threat of unemployment. Thus, in their position as voters, they highly value social insurance. A relatively generous scheme is then selected, which confirms parents' initial forecast about the good treatment of the unemployed and vindicates their socialization choice.

Given the same economic fundamentals, parents may instead believe that in case their children will be unemployed, the benefit they will receive will be meager and other people will ostracize them. Therefore, parents opt for the safe strategy of preparing their children to enter the same occupation as they are in, so that the parent can help if the child lacks talent. Those parents transmit a strong occupational pride and, as a consequence, society as a whole heavily stigmatizes the unemployed. When those children have become adults who vote, they have specialized as their parents and therefore face no risk of unemployment. Since they constitute the majority of voters, the voting outcome has a meager social insurance which, together with the low social esteem conferred upon the unemployed, confirms the forecast on which the parents based their socialization choice.

Proposition 4 states that if δ and p are large enough, aggregate output is higher in the WNE than in the SNE. Parameter p captures the extent to which talent is better allocated in the WNE, and δ captures the importance of talent for generating output. If those two paramters are sufficiently large, the better allocation of talent in the WNE more than compensates its lower level of employment as compared to the SNE.

6 Steady state

The dynamics of the model is driven by the evolution of employment in two ways. First, the employment rate in period t determines the fraction of children who can be helped in the labor market by their parents in period $t+1$. Second, the total number of hours worked by individuals who are talented for their job in period t determines the increment in the stock of knowledge between that period and period $t+1$. The asymptotic behavior of the economy is described by the steady state equilibrium. A steady state equilibrium is a short-run equilibrium such that the employment rate, the average strength of work norms, and the tax rate do not change over time while the stock of knowledge, output,

wages, and the unemployment benefit grow at an identical constant rate.

The steady state equilibria of this model parallel the two stylized facts mentioned at the outset: the negative cross-country relationship between generosity of social insurance and average strength of work norms, and the absence of a positive impact of strong work norms on economic performance.

Proposition 5 *Both the SNE and the WNE admit a steady-state equilibrium. There exists a compact set such that if* (β, γ) *belongs to it, both the SNE and the WNE exist as steady states. In the steady state, the SNE features a laissez-faire economy whereas the WNE has a social insurance program; while the employment level is higher in the SNE, growth is faster in the WNE.*

The above Proposition delivers two insights that may appear paradoxical at first glance. The first one concerns the relationship between economic role of the government and parenting styles. In the long run, a laisse-faire economy has interventionist parents, while an economy with governmental intervention has laissez-faire parents. The second paradox is about work norms and macroeconomic performance. In the long run, a population that attaches less value to being productive brings about a higher production level.

Of those two paradoxical insights, only the first one, which relates paternalism in the family to the lack of social insurance, is robust. The lower rate of economic growth in the equilibrium with strong work norms hinges on the assumption that the utility function is logarithmic. In the model, the growth rate increases with the total number of hours worked by individuals who are talented for their occupation. That number depends on the portion of the workforce that is efficiently allocated to an occupation and on the hours worked by each talented employee. In the steady state, the portion of efficiently allocated workforce is p in the WNE and $1/2 < p$ in the SNE. Wages are taxed at a strictly positive rate in the WNE, but not in the SNE. Since the utility function is Cobb-Douglas, the substitution effect from a change in the net wage is exactly offset by its income effect, so that employees work the same number of hours in the two equilibria. This explains why the growth rate is unambiguously higher in the WNE than in the SNE. Under more general assumptions, the substitution effect can dominate and the total number of hours worked by talented employees need not be higher in the WNE than in the SNE. As a result, the long-run growth rate can be similar in the two equilibria, which strengthens the plausibility of a stable coexistence of different compacts: one based on paternalistic families, strong work norms, persistence of occupations along family lines, and minimal government, and one based on a liberal parenting style, weak work norms, intergenerational occupational mobility, and generous social insurance.

7 Empirical evidence

At the individual level, the model makes distinctive predictions about the relationship between parental background in the labor market and endorsed work norms. Those predictions, formulated as Corollary 1 and Corollary 2, can be empirically evaluated on the basis of survey data on the work norms endorsed by individuals and their intergenerational occupational mobility.

According to Corollary 1, individuals who follow the occupational footsteps of their parents are predicted to endorse relatively strong work norms. In the data, the endorsement of a norm of self-supportiveness can be recovered from a survey question that was asked in the European Values Survey of 2008. There, respondents were asked whether they agree with the following statement: "*It is humiliating to receive money without having to work for it*". This question captures precisely the extent to which esteem depends on self-reliance. Respondents could choose "*Strongly agree*", "*Agree*", "*Neither agree nor disagree*", "*Disagree*", or "*Strongly disagree*". I use those answers as a measure of respondents' endorsement of self-supportiveness as a value.

As mentioned in the Introduction, the European Values Survey of 2008 also reports the four-digit ISCO code of the occupations of the respondent and his father when the respondent was fourteen. This allows me to identify those individuals who have followed their father's footsteps as those for whom their ISCO code coincides with their father's one. In order to avoid issues related to gender roles and retirement age, I focus on the male population aged between twenty-five and fifty-five.

Results from ordered-logit estimations of the probability to endorse strong work norms are reported in Table 1. All specifications include unreported country fixed effects and a constant. Standard errors are clustered at the country level. The only additional control variable in the first specification is the age of the respondent. The second specification also includes family status and job status. Education is added in the third specification and income - measured as the quintile in the income distribution - in the fourth one. The estimation results strongly confirm the prediction of the model that inheriting the parent's occupation is associated with endorsing a stronger work norm.

TABLE 1 ABOUT HERE

Table 2 presents estimation results from regressions that take into account the prediction from Corollary 2. Accordingly, the children of the unemployed are predicted to endorse weaker work norms than the rest. Therefore, I modify the regression equations of Table 1 by adding a dummy variable that takes value 1 if the respondent's father was

unemployed when the respondent was fourteen and 0 otherwise. Consistently with Corollary 2, father's unemployment significantly contributes to explain the endorsement of a weak work norm.

TABLE 2 ABOUT HERE

Thus, the predictions of the model fit well with the pattern of intergenerational occupational mobility revealed by the data. At the aggregate level, intergenerational mobility is high in countries where social insurance is generous. At the individual level, mobility correlates with relatively weak work norms.

8 Conclusion

This paper has developed a theoretical framework that contributes to explain the sustainability of generous social insurance despite the negative correlation between the generosity of social insurance and the strength of work norms. The proposed model portrays persisting differences in terms of generosity of social insurance as the result of multiple steady-state equilibria. In one equilibrium, the democratically chosen social insurance scheme is generous and people do not emphasize self-supportiveness as a value; in the other equilibrium, the polity opts for a minimal safety net and people endorse strong work norms. Because of counterveiling effects, macroeconomic performance needs not to be worse in the equilibrium with generous social insurance. On the one hand, that equilibrium has individuals that are more easily tempted to live off the welfare state, which restricts the set of economic outcomes that the polity can achieve. On the other hand, those individuals do not have to rely on their families' help in the labor market and can go their own way, choosing a career in accordance with perceived talent. In terms of aggregate output, the improvement in the allocation of talent may more than offset the disincentive to take up jobs. The two equilibria generated by the model are thus associated with differences in parenting styles and patterns of occupational choice: liberal parents and high intergenerational occupational mobility in the case of social insurance; paternalism and widespread inheritance of occupation in the case of laissez faire.

An exploratory look at the empirical evidence has corroborated the insights from the theoretical model. Across European countries, more generous social insurance comes along with more intergenerational occupational mobility. At the individual level, men who follow their father's occupational footsteps are more likely to endorse strong work norms.

Both the empirical and the theoretical analysis in this paper may be extended in

various directions. With more data available, one may compare intergenerational occupational mobility not only within Europe but also within the US and across a larger number of countries. For instance, it would be interesting to compare East Asia with Latin America. A limitation of the theoretical model is that it neglects the role of subcultures, i.e. norms developed within groups that live relatively segregated from the rest of the population. This is an important issue in some countries, e.g. in Israel where some are concerned about the low participation of ultra-orthodox Jews to the labor market. In the model of this paper, segregation could be introduced by restricting the set of agents that are relevant in determining the social esteem perceived by individuals. Horizontal effects in the transmission of values could be introduced alongside with vertical transmission. Investigating the dynamics of work norms and social insurance in such extended setups is left for future research.

APPENDIX

Appendix A: Proof of Lemma 1.

By comparing (8) with (7), one can determine the circumstances under which liberalism is preferred to paternalism, namely when the following condition is satisfied:

$$\ln \frac{w(1+\delta)(1-\tau)}{4z} \equiv y > -\frac{2\beta}{2p-1} \ln p^p (1-p)^{1-p} 2^{1-p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u} \equiv y_2. \tag{16}$$

The condition for preferring welfare culture over occupational paternalism is

$$y < 2\beta \ln 2 - \gamma \ln \frac{\overline{v}}{\overline{v}_u} \equiv y_1. \tag{17}$$

The condition for preferring welfare culture over liberalism is

$$y < -\frac{\beta}{p} \ln \frac{p^p (1-p)^{1-p}}{2^p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u} \equiv y_3. \tag{18}$$

Define $\overline{p} \in (1/2, 1)$ as the unique root of[11]

$$p \ln \frac{1}{2} = \ln \left[p^p (1-p)^{1-p} \right].$$

If $p < \overline{p}$, then $p \ln \frac{1}{2} > \ln p^p (1-p)^{1-p}$, which can be rewritten as

$$\ln p^p (1-p)^{1-p} + p \ln 2 < 0$$

or

$$2p \ln 2 < -\ln p^p (1-p)^{1-p} + p \ln 2.$$

Using the definitions in (17) and (18), this is equivalent to $y_3 > y_1$. By the same token, $p < \overline{p}$ implies

$$2p \left[\ln p^p (1-p)^{1-p} + (1-p) \ln 2 \right] < (2p-1) \left[\ln p^p (1-p)^{1-p} - p \ln 2 \right].$$

Using (16) and (18), this is equivalent to $y_2 > y_3$. As a consequence, $p < \overline{p}$ implies $y_1 < y_3 < y_2$. Then, by (17) and (18), welfare culture is optimal if $y < y_1$. By (17) and (16), paternalism is optimal if $y_1 < y < y_2$. By (16), liberalism is optimal if $y > y_2$.

The above reasoning also shows that $p > \overline{p}$ implies $y_2 < y_3 < y_1$. In that case, if $y < y_3$, then $y < y_1$ and by (17) and (18) welfare culture is optimal. If $y > y_3$, then $y > y_2$ and by (16) and (18) liberalism is optimal. QED

Appendix B: Proof of Lemma 2.

[11] It may be noted that $\overline{p} \approx 0.77$.

By comparing (10) with (9), one can determine the condition for talent orientation to be preferred over family specialization:

$$y < \frac{p}{1-p}\ln(1+\delta) + \frac{\beta}{1-p}\ln\frac{p^p(1-p)^{1-p}}{4} - \gamma\ln\frac{\overline{v}}{\overline{v}_u} \equiv y_5. \tag{19}$$

Now, determine the circumstances under which talent orientation is preferred to the strategies of liberalism and of welfare culture. By comparing (10) with (8), one can determine when talent orientation is preferred over liberalism, namely when the following condition is satisfied:

$$y > \ln(1+\delta) + \frac{\beta}{1-p}\ln p^p(1-p)^{1-p}4^{1-p} - \gamma\ln\frac{\overline{v}}{\overline{v}_u} \equiv y_4. \tag{20}$$

By comparing (10) with $\ln z + \gamma\ln\overline{v}_u$, the condition for talent orientation to be better than welfare culture amounts to:

$$y > \frac{1-p}{1+p}\ln(1+\delta) - \frac{\beta}{1+p}\ln\frac{p^p(1-p)^{1-p}}{4} - \gamma\ln\frac{\overline{v}}{\overline{v}_u} \equiv y_6. \tag{21}$$

If δ is large, the following holds true: $y_5 > y_4 > y_6 > \max\{y_1, y_2, y_3\}$. These inequalities are assumed to hold throughout. If $y > y_5$, by (19) family specialization is superior to talent orientation, which, by (20) and (21), is superior to the remaining strategies. If $y_4 < y < y_5$, by (19) and (20) talent orientation is superior to family specialization and to liberalism, which is superior to everything else. The rest follows from Proposition 1. QED

Appendix C: Incentive compatibility of working.

The preceeding proofs implicitly assumed that the incentive compatibility condition (6) is fulfilled in equilibrium, i.e. given optimally chosen values and specialization. I now show that this is indeed the case. First, consider the case where *paternalism* is optimal. The incentive constraint reads

$$y \geq -\gamma\ln\frac{\overline{v}}{\overline{v}_u}. \tag{22}$$

According to (17), paternalism arises in equilibrium only if

$$y \geq 2\beta\ln 2 - \gamma\ln\frac{\overline{v}}{\overline{v}_u}.$$

Thus, the incentive constraint (22) is satisfied in equilibrium if $2\beta\ln 2 \geq 0$, which is obviously true.

Consider the case where parents opt for *liberalism*. The incentive constraint reads

$$y \geq \beta\ln\frac{2(1-p)}{p} - \gamma\ln\frac{\overline{v}}{\overline{v}_u}. \tag{23}$$

If $p < \overline{p}$, a necessary condition for liberalism to occur in equilibrium is, by (16),

$$y \geq -\frac{2\beta}{2p-1} \ln p^p (1-p)^{1-p} 2^{1-p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u} = y_2.$$

Thus, the incentive constraint (23) is satisfied if

$$y_2 \geq \beta \ln \frac{2(1-p)}{p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u}.$$

By straightforward manipulations, the above inequality can be reduced to $2p(1-p) \leq 1$, which is true since $p \in (1/2, 1)$.

If $p > \overline{p}$, a necessary condition for liberalism to occur in equilibrium is, by (18),

$$y \geq -\frac{\beta}{p} \ln \frac{p^p (1-p)^{1-p}}{2^p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u} = y_3.$$

Thus, the incentive constraint (23) is satisfied if

$$y_3 \geq \beta \ln \frac{2(1-p)}{p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u}.$$

By straightforward manipulations, the above inequality can be written

$$-\ln p^p (1-p)^{1-p} \geq \ln \frac{1-p}{p},$$

which is true since the l.h.s. is positive and the r.h.s. is negative.

Finally, consider *talent orientation*. By (20), the value system associated with it only arises in equilibrium if

$$y \geq \ln(1+\delta) + \frac{\beta}{1-p} \ln p^p (1-p)^{1-p} 4^{1-p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u} = y_4. \tag{24}$$

The case of talent orientation is associated with two incentive constraints: one for the untalented, and one for the talented. The incentive constraint for the untalented - who have specialized in their parent's occupation - reads

$$\ln \frac{w(1-\tau)}{4z} \geq \beta \ln(1-p) - \gamma \ln \frac{\overline{v}}{\overline{v}_u}.$$

By (24), this incentive constraint is satisfied if

$$y_4 \geq \ln(1+\delta) + \beta \ln(1-p) - \gamma \ln \frac{\overline{v}}{\overline{v}_u}.$$

By straightforward manipulations, the above inequality can be written as

$$p \ln p \geq 2(1-p) \ln \frac{1}{2}.$$

It is easy to show that the above condition is always met if $p \in (1/2, 1)$. If the individual has not specialized in his parent's occupation, the incentive constraint reads

$$y \geq \beta \ln \frac{1-p}{p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u}.$$

By (24), this is satisfied if

$$y_4 \geq \beta \ln \frac{1-p}{p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u},$$

which is equivalent to

$$\ln(1+\delta) \geq -\beta \left[\frac{\ln p^p (1-p)^{1-p}}{1-p} + \ln 4 + \ln \frac{p}{1-p} \right].$$

One can always choose δ large enough, so that the above inequality holds. In particular, it is implied by the assumption $y_4 > y_6$, as one can readily verify. QED

Appendix D: Incentive compatibility of shirking.

Productive individuals mimick unproductive ones in the cases of paternalism and liberalism if they turn out to be untalented for the chosen occupation. I now show that in equilibrium they do have an incentive to shirk. First, suppose that the socialization strategy optimally selected by parents was the one of *paternalism*. By (6), an untalented individual shirks if

$$\ln \frac{w(1-\tau)}{4z} < -\gamma \ln \frac{\overline{v}}{\overline{v}_u}, \tag{25}$$

or, equivalently, if

$$y < \ln(1+\delta) - \gamma \ln \frac{\overline{v}}{\overline{v}_u}.$$

According to Proposition 1, a necessary condition for paternalilsm to be optimal is $y < y_2$. Hence, the incentive condition (25) is fulfilled if

$$\ln(1+\delta) - \gamma \ln \frac{\overline{v}}{\overline{v}_u} \geq y_2.$$

Substituting out y_2 yields

$$\ln(1+\delta) \geq -\frac{2\beta}{2p-1} \ln p^p (1-p)^{1-p} 2^{1-p}.$$

One can always choose δ large enough, so that the above inequality holds. In particular, it is implied by the assumption $y_5 > y_4$, as one can readily verify.

Suppose now that *liberalism* is optimal. By (6), an untalented individual shirks if

$$\ln \frac{w(1-\tau)}{4z} < \beta \ln \frac{2(1-p)}{p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u}.$$

Using (20), this condition is necessarily satisfied if

$$y_5 \leq \ln(1+\delta) + \beta \ln \frac{2(1-p)}{p} - \gamma \ln \frac{\overline{v}}{\overline{v}_u}.$$

After some manipulations, the above condition can be written as

$$\ln p - (1-p) \ln \frac{1}{2} \leq 0.$$

It is easy to show that the above condition is always met if $p \in (1/2, 1)$.

Appendix E: Proof of Proposition 1.

In a SNE, all parents who have a job invest all symbolic value in their own occupation. As implied by Lemma 2, in order for this to be individually optimal, one must have $y > y_5$. Since $y_5 > y_3$, by transitivity $y > y_3$ and by Lemma 1 the parents who live on the transfer choose their children's values according to liberalism, i.e. $v_a = v_b = p/2$, and $v_u = 1 - p$. By aggregating the symbolic values attached to work you obtain (13). Notice that, by (3), in equilibrium the social esteem received by workers amounts to

$$\overline{v}^S = \frac{\mu + (1-\mu)p}{2}, \tag{26}$$

while the social esteem of transfer receipients is

$$\overline{v}_u^S = (1-\mu)(1-p). \tag{27}$$

In a SNE, at the voting stage one half of all individuals who were raised by employed parents have expected utility

$$EU(\tau, z) = p \ln \frac{w(1+\delta)(1-\tau)}{4} + (1-p) \ln \frac{w(1-\tau)}{4} + const.$$

These are the individuals who received the signal that they are likely to be talented for the chosen occupation. The remaining half is likely to be untalented for their occupation and their expected utility is given by

$$EU(\tau, z) = p \ln \frac{w(1-\tau)}{4} + (1-p) \ln \frac{w(1+\delta)(1-\tau)}{4} + const.$$

The expected utility of the individuals whose parents were transfer recipients is

$$EU(\tau, z) = p \ln \frac{w(1+\delta)(1-\tau)}{4} + (1-p) \ln z + const.$$

The sum of voters' expected utilities yields the following social welfare function:

$$SW(\tau, z) = [\mu + p(1-\mu)] \ln(1-\tau) + (1-\mu)(1-p) \ln z + const. \tag{28}$$

By probabilistic voting, the outcome of the vote is a pair (τ^S, z^S) that maximizes that welfare function under the budget constraint implied by the incentive constraints characterizing all individuals. In a SNE, the selected policy is consistent with a budget constraint derived under the premise that all productive individuals work, i.e. by (11)-(12),

$$\frac{\tau w}{2}\left[\mu\left(1+\frac{\delta}{2}\right)+(1-\mu)p(1+\delta)\right]=z(1-\mu)(1-p). \tag{29}$$

Maximization of (28) subject to (29) yields

$$\tau^S=(1-\mu)(1-p), \tag{30}$$

$$z^S=\frac{w}{2}\left[\mu\left(1+\frac{\delta}{2}\right)+(1-\mu)p(1+\delta)\right]. \tag{31}$$

A SNE exists if and only if (τ^S, z^S) vindicates the associated individual choices with respect to values, specialization and labor supply, and if there is no different (τ, z) such that a higher level of social welfare can be reached at the voting stage, given the distribution of values and specializations. Thus, in order for (τ^S, z^S) to be part of a SNE,

$$y^S\equiv\ln\frac{w(1+\delta)(1-\tau^S)}{4z^S} \tag{32}$$

must be larger than y_5 as given by (19) and where social esteem levels are determined by (26) and (27), i.e.

$$y^S\geq\frac{p}{1-p}\ln(1+\delta)+\frac{\beta}{1-p}\ln\frac{p^p(1-p)^{1-p}}{4}-\gamma\ln\frac{\mu+(1-\mu)p}{2(1-\mu)(1-p)}\equiv y_5^S. \tag{33}$$

This condition ensures that the posited socialization strategies are optimal and nobody has an incentive to shirk. Substituting (30) and (31) into (32) reveals that condition (33) is equivalent to

$$\gamma\geq a^S-b^S\beta, \tag{34}$$

where $a^S>0$ and $b^S>0$ are functions of μ, δ and p. Condition (34) is satisfied if and only if β and γ are large enough.

It remains to be shown that the social insurance scheme preferred by the electorate lies on the piece of the government's budget contraint derived under the premise that all productive individuals work, i.e. on (29). The argument can be made using Figure 3, where (τ^S, z^S) corresponds to the point where the social indifference curve is tangent to the budget constraint (29). The complete budget constraint faced by the electorate is the bold piecewise linear curve which includes a piece for relatively large (τ, z)-combinations such that the individuals raised by transfer recipients prefer not to work. The straight

line (6) shows the incentive constraint for the children of the unemployed. Notice that (τ, z)-combinations on that piece of the budget constraint are dominated in terms of social welfare by (τ, z)-combinations on the virtual budget constraint where all productive individuals work, as shown by (29). In turn, those virtual (τ, z)-combinations are dominated by (τ^S, z^S) by construction. Hence, the latter is indeed the electorate's preferred social insurance scheme among all those that are feasible. QED

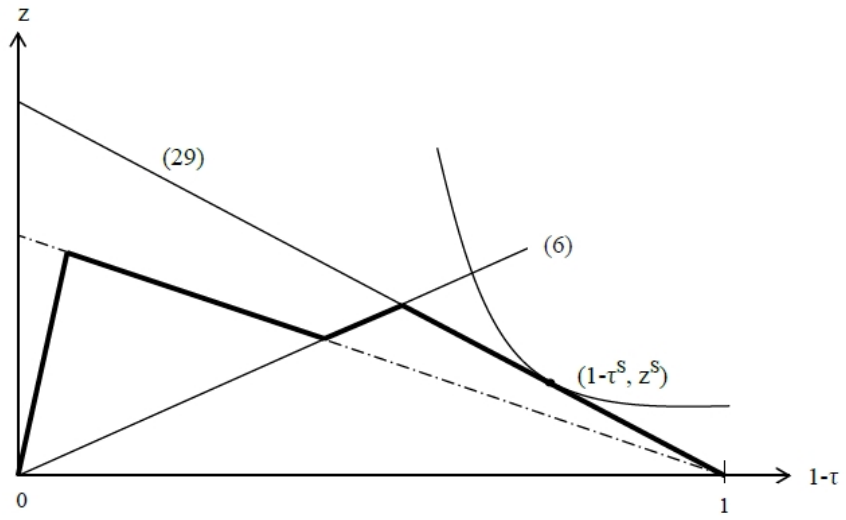

Figure 3: Determination of social insurance in the SNE.

Appendix F: Proof of Proposition 2.

In a WNE, all parents who have a job impart values that make their children specialize in the occupation for which they are more likely to be talented. Optimality of those values requires $y > y_4$. Since $y_4 > y_3$, it follows that $y > y_3$ and the parents who live on transfers bestow their children with values according to liberalism. From this, (14) directly follows. Notice that the resulting social esteem of workers is given by

$$\overline{v}^W = \mu\left(\frac{1+p}{4}\right) + (1-\mu)\frac{p}{2}, \tag{35}$$

while the social esteem of welfare receipients is

$$\overline{v}_u^W = \mu\left(\frac{1-p}{2}\right) + (1-\mu)(1-p). \tag{36}$$

At the voting stage, the children of employed parents who specialized in the same occupation as their parents have expected utility given by

$$EU(\tau, z) = p\ln\frac{w(1+\delta)(1-\tau)}{4} + (1-p)\ln\frac{w(1-\tau)}{4} + const.$$

The expected utility of the remaining individuals amounts to

$$EU(\tau, z) = p \ln \frac{w(1+\delta)(1-\tau)}{4} + (1-p) \ln z + const.$$

The resulting social welfare function reads

$$SW(\tau, z) = \left[\frac{(1-p)\mu}{2} + p \right] \ln(1-\tau) + (1-p) \left(1 - \frac{\mu}{2} \right) \ln z + const. \tag{37}$$

The voting outcome maximizes this welfare function under the budget constraint of the government. In a WNE, the selected policy is consistent with a budget constraint derived under the premise that all productive individuals work, i.e. by (11)-(12),

$$\frac{\tau w}{2} \left[p(1+\delta) + \mu \left(\frac{1-p}{2} \right) \right] = z \left[\mu \left(\frac{1-p}{2} \right) + (1-\mu)(1-p) \right]. \tag{38}$$

Maximization of (37) subject to (38) yields

$$\tau^W = \frac{(2-\mu)(1-p)}{2}, \tag{39}$$

$$z^W = \frac{w}{4} \left[2p(1+\delta) + \mu(1-p) \right]. \tag{40}$$

In order for (τ^W, z^W) to be part of an equilibrium, it must make employed parents instill values of talent orientation. By Prop. 2, one must have $y_4 \leq y^W \leq y_5$, where

$$y^W \equiv \ln \frac{w(1+\delta)(1-\tau^W)}{4z^W}. \tag{41}$$

By (20), (35) and (36), the first inequality can be written as

$$y^W \geq \ln(1+\delta) + \frac{\beta}{1-p} \ln p^p (1-p)^{1-p} 4^{1-p} - \gamma \ln \frac{2p + \mu(1-p)}{2(2-\mu)(1-p)} \equiv y_4^W.$$

Substituting (39) and (40) into (41) reveals that the above condition is equivalent to

$$\gamma \geq f - m\beta, \tag{42}$$

where $f > 0$ and $m > 0$ are functions of μ, δ and p.

The second inequality, $y^W \leq y_5$, amounts to

$$y^W \leq \frac{p}{1-p} \ln(1+\delta) + \frac{\beta}{1-p} \ln \frac{p^p (1-p)^{1-p}}{4} - \gamma \ln \frac{2p + \mu(1-p)}{2(2-\mu)(1-p)} \equiv y_5^W.$$

By substituting as before, the above condition is equivalent to

$$\gamma \leq a^W - b^W \beta, \tag{43}$$

where $a^W > 0$ and $b^W > 0$ are functions of μ, δ and p. It can easily be shown that $a^W > f$, so that there exists a compact set $X \subset \Re^2_+$ such that if $(\beta, \gamma) \in X$, both inequalities, $y_4^W \leq y^W \leq y_5^W$, are satisfied. By the same method applied to prove Prop. 1 it can be shown that there is no different (τ, z) such that a higher level of social welfare can be reached at the voting stage, given the distribution of values and specializations. QED

Appendix G: Proof of Proposition 3.

In order to show (15), substitute (39) and (40) into it and rearrange terms so as to get

$$4p(1+\delta) - 2 + (1-p)(\mu+2) > 0,$$

which is true. The Proposition then directly follows from the main text. QED

Appendix H: Proof of Proposition 4.

In order to show that the SNE and WNE can coexist it is sufficient to exhibit a subset in the (β, γ)-space such that each of its elements can sustain both the SNE ane the WNE. By the proofs of existence of those equilibria, such a subset exists if $a^W > a^S$. Tedious but straightforward manipulations confirms that this condition is always met.

The tax rate of social insurance in the SNE is given by (30) and the tax rate in the WNE is given by (39). It is easily seen that $\tau^W > \tau^S$.

The result about output stems from comparing output in the SNE,

$$Q^S = w\left[\frac{\mu}{2}(1+\delta) + \frac{\mu}{2} + p(1-\mu)(1+\delta)\right]$$

with output in the WNE,

$$Q^W = w\left[p\mu(1+\delta) + \frac{(1-p)\mu}{2} + p(1-\mu)(1+\delta)\right].$$

QED

Appendix I: Proof of Proposition 5.

In the SNE, the dynamics of the employment rate is given by

$$\mu_{t+1}^S = \mu_t^S + p(1-\mu_t^S). \tag{44}$$

Its steady state has $\mu^{S*} = 1$. Substituting into (30) yields $\tau^{S*} = 0$. Substituting into (13) yields $N^{S*} = 1$. In order to determine the growth rate, notice that half of the employed are talented for their job and that each of them devotes half of his time to working. Therefore, the growth rate in the steady state is $g^{S*} = g\,(1/4)$.

In the WNE, the dynamics of the employment rate is given by

$$\mu_{t+1}^W = \left(\frac{1+p}{2}\right)\mu_t^W + p(1-\mu_t^W). \tag{45}$$

Its steady state has $\mu^{W*} = 2p/(1+p) < 1$. Substituting that steady-state variable into (39) yields $\tau^{W*} = (1-p)/(1+p) > 0$. Substituting into (14) yields $N^{W*} = 2p/(1+p) < 1$. In order to determine the growth rate, notice that a share p of each generation turns out to be talented for its jobs and that each individual devotes half of his time to working. Therefore, the growth rate in the steady state is $g^{W*} = g\,(p/2) > g\,(1/4)$.

In the WNE, the dynamics of the employment rate is given by (45), which has a stable root. The WNE must also satisfy conditions (42) and (43) which depend on μ_t. As long as neither of them is binding, which is generically the case, the steady state is locally stable.

In the SNE, the dynamics of the employment rate is given by (44), which has a stable root. The SNE must also satisfy condition (34) which depends on μ_t. As long as that condition is not binding, which is generically the case, the steady state is locally stable. One can even prove a stronger stability property: once in a short-run SNE, the economy always remains in a SNE and evolves according to (44). Suppose namely that the economy is in a short-run SNE with $\mu_t^S < 1$. As implied by (44), $\mu_{t+1}^S > \mu_t^S$. Straightforward manipulations show that increasing μ makes condition (34) less stringent, so that if it was satisfied in period t it remains so in period $t+1$.

The latter property can be used to prove the existence of multiple steady states. By Prop. 4, for any given μ, there exists a compact set such that if (β, γ) belongs to it, both the SNE and the WNE exist. Set $\mu = \mu^{W*}$, which correponds to the steady state in the WNE, and assume that (β, γ) is such that both short-run equilibria exist. By construction, the WNE is a steady state. By the stability property established above, the SNE converges to a steady state. QED

Table 1

Table 1: Ordered logit regressions for strength of work norms; males, aged 25-55.

	(1)	(2)	(3)	(4)
Follower	0.168**	0.164**	0.147*	0.184**
	(2.87)	(2.81)	(2.40)	(2.81)
Age	0.002	-0.028	-0.031	-0.040*
	(0.10)	(-1.61)	(-1.81)	(-2.01)
Age squared	0.000	0.000	0.000*	0.001*
	(0.42)	(1.87)	(2.05)	(2.26)
Legal status				
-married		0.259***	0.252***	0.234***
		(5.00)	(4.84)	(4.66)
-divorced		0.099	0.090	0.101
		(1.26)	(1.13)	(1.16)
-widowed		0.526*	0.502*	0.455*
		(2.60)	(2.44)	(2.18)
Primary income source				
-Part time work		-0.148	-0.151	-0.158
		(-1.69)	(-1.68)	(-1.78)
-Self-employment		0.050	0.035	0.052
		(0.80)	(0.54)	(0.73)
-Pension		0.070	0.051	0.023
		(0.71)	(0.51)	(0.20)
-Wife's income		-0.784***	-0.800***	-0.859***
		(-4.43)	(-4.36)	(-4.35)
-Student		-0.234	-0.226	-0.336
		(-0.96)	(-0.91)	(-1.22)
-Unemployed		-0.183**	-0.216**	-0.276***
		(-2.72)	(-3.27)	(-4.21)
-Other		-0.442***	-0.472***	-0.442**
		(-3.38)	(-3.43)	(-3.41)
Education				
-Primary education			-0.117	-0.106
			(-0.73)	(-0.64)
-Some secondary education			-0.203	-0.228
			(-1.11)	(-1.03)
-Secondary education			-0.277	-0.269
			(-1.35)	(-1.29)
-Tertiary education			-0.381	-0.370
			(-1.78)	(-1.68)
Income	No	No	No	Yes
Country Dummies	Yes	Yes	Yes	Yes
Observations	12,319	12,222	12,176	10,424

t-Statistics in parentheses: * p<0.05, ** p<0.01, *** p<0.001

Table 2

Table 2: Ordered logit regressions for strength of work norms, controlling for unemployed fathers; males, aged 25-55.

	(1)	(2)	(3)	(4)
Follower	0.157**	0.153**	0.134*	0.174**
	(2.69)	(2.65)	(2.19)	(2.69)
Father unemployed	-0.145**	-0.145**	-0.168**	-0.125*
	(-2.72)	(-2.64)	(-3.03)	(-2.04)
Age	0.002	-0.028	-0.031	-0.041*
	(0.09)	(-1.62)	(-1.83)	(-2.00)
Age squared	0.000	0.000	0.000*	0.001*
	(0.43)	(1.89)	(2.06)	(2.26)
Legal status				
-married		0.261***	0.254***	0.235***
		(5.02)	(4.85)	(4.66)
-divorced		0.097	0.088	0.099
		(1.24)	(1.10)	(1.13)
-widowed		0.521*	0.495*	0.449*
		(2.57)	(2.40)	(2.15)
Primary income source				
-Part time work		-0.142	-0.144	-0.154
		(-1.61)	(-1.60)	(-1.72)
-Self-employment		0.051	0.036	0.052
		(0.81)	(0.55)	(0.74)
-Pension		0.07	0.051	0.021
		(0.72)	(0.51)	(0.18)
-Wife's income		-0.774***	-0.789***	-0.891***
		(-4.51)	(-4.45)	(-4.42)
-Student		-0.232	-0.223	-0.335
		(-0.95)	(-0.90)	(-1.22)
-Unemployed		-0.176**	-0.209**	-0.274***
		(-2.60)	(-3.13)	(-4.20)
-Other		-0.439**	-0.471***	-0.444***
		(-3.26)	(-3.42)	(-3.43)
Education				
-Primary education			-0.129	-0.110
			(-0.85)	(-0.70)
-Some secondary education			-0.253	-0.241
			(-1.30)	(-1.14)
-Secondary education			-0.304	-0.285
			(-1.57)	(-1.43)
-Tertiary education			-0.409*	-0.386
			(-2.03)	(-1.83)
Income	No	No	No	Yes
Country Dummies	Yes	Yes	Yes	Yes
Observations	12,319	12,222	12,176	10,424

t-Statistics in parentheses: * p<0.05, ** p<0.01, *** p<0.001

References

Alesina, A. and G. Angeletos, 2005, Fairness and Redistribution, *American Economic Review* 95, 960-980.

Algan, Y. and P. Cahuc, 2009, Civic Virtue and Labor Market Institutions, *American Economic Journal: Macroeconomics* 1, 111-145.

Arcidiacono, P., 2004, Ability Sorting and the Returns to College Major, *Journal of Econometrics* 121, 343-375.

Becker, G., 1996, *Accounting for Tastes*, Cambridge: Harvard University Press.

Bénabou, R., 2000, Unequal Societies: Income Distribution and the Social Contract, *American Economic Review* 90, 96-129.

Bénabou, R. and J. Tirole, 2006, Belief in a Just World and Redistributive Politics, *Quarterly Journal of Economics* 121, 699-746.

Bisin, A. and T. Verdier, 2000, Beyond the Melting Pot: Cultural Transmission, Marriage, and the Evolution of Ethnic and Religious Traits, *Quarterly Journal of Economics* 115, 955-988.

Cervellati, M., Esteban, J. and L. Kranich, 2010, Work Values, Endogenous Sentiments and Redistribution, *Journal of Public Economics* 94, 612-627.

Constant, A. and K. Zimmermann, 2003, Occupational Choice across Generations, *Applied Economics Quarterly* 49, 299-317.

Corak, M., Gustafsson, B. and T. Österberg, 2004, Intergenerational Influences on the Receipt of Unemployment Insurance in Canada and Sweden, in Corak, M. (ed.), *Generational Income Mobility in North America and Europe*, Cambridge: Cambridge University Press.

Corak, M. and P. Piraino, 2011, The Intergenerational Transmission of Employers, *Journal of Labor Economics* 29, 37-67.

Corneo, G., 2012, Work Norms and the Welfare State, *CESifo Economic Studies*, in press.

Corneo, G. and H., Grüner, 2000, Social Limits to Redistribution, *American Economic Review* 90, 1491-1507.

Corneo G. and O. Jeanne, 2009, A Theory of Tolerance, *Journal of Public Economics* 93, 691-702.

Doepke, M. and F. Zilibotti, 2008, Occupational Choice and the Spirit of Capitalism, *Quarterly Journal of Economics* 123, 747-93.

Dolton, P., Makepeace, G. and W. van der Klaauw, 1989, Occupational Choice and Earnings Determination: The Role of Sample Selection and Non-Pecuniary Factors, *Oxford Economic Papers* 41, 573-594.

Fershtman, C., Murphy, K. and Y. Weiss, 1996, Social Status, Education, and Growth, *Journal of Political Economy* 104, 108-132.

Galor, O. and D. Tsiddon, 1997, Technological Progress, Mobility, and Economic Growth, *American Economic Review* 87, 363-82.

Gradstein, M., 2009, Work Attitudes and Intergenerational Mobility, *Journal of Human Capital* 3, 268-88.

Gradstein, M., 2010, Social Insurance, Education, and Work Ethics, CEPR DP N° 7838.

Hassler, J. and J. Rodriguez Mora, 2000, Intelligence, Social Mobility, and Growth, *American Economic Review* 90, 888-908.

Humlum, M., Kleinjans, K. and H. Nielsen, 2012, An Economic Analysis of Identity and Career Choice, *Economic Inquiry* 50, 39-61.

Kramarz, F. and O. N. Skans, 2011, With a Little Help from my ... Parents? Family Networks and Youth Labor Market Entry, mimeo, CREST.

Lindbeck, A., 1997, Incentives and Social Norms in Household Behavior, *American Economic Review* 87 (Papers & Proceedings), 370-77.

Lindbeck, A. and S. Nyberg, 2006, Raising Children to Work Hard: Altruism, Work Norms, and Social Insurance, *Quarterly Journal of Economics* 121, 1473-1503.

Lindbeck, A., Nyberg, S. and J. Weibull, 1999, Social Norms and Economic Incentives in the Welfare State, *Quarterly Journal of Economics* 94, 1-35.

Lindert, P., 2004, *Growing Public: Social Spending and Economic Growth since the Eighteenth Century*, Cambridge: Cambridge University Press.

Mulligan, C., 1997, *Parental Priorities and Economic Inequality*, Chicago: University of Chicago Press.

Murphy, K., Shleifer, A. and R. Vishny, 1991, The Allocation of Talent: Implications for Growth, *Quarterly Journal of Economics* 106, 503-530.

Oreopoulos, P., Page, M. and A. H. Stevens, 2008, The Intergenerational Effects of Worker Displacement, *Journal of Labor Economics* 26, 455-483.

Österbacka, E., 2004, *It Runs in the Family*, Helsinki: Abo Akademi University Press.

Page, M., 2004, New Evidence on the Intergenerational Correlation in Welfare Participation, in Corak, M. (ed.), *Generational Income Mobility in North America and Europe*, Cambridge: Cambridge University Press.

Scruggs, L. and J. Allan, 2006, Welfare-State Decommodification in 18 OECD Countries: A Replication and Revision, *Journal of European Social Policy* 16, 55-72.