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The Demand for Job Protection. Some Clues from Behavioural Economics

Fabio D'Orlando and Francesco Ferrante *

Abstract

Radical differences in labour market regulations among countries that in other institutional respects are quite similar are still surprisingly frequent. Nonetheless, traditional theoretical analysis meets enormous difficulties in explaining these differences. The scope of our paper is to show that some clues from behavioural economics could be used to better theoretically treat this problem. Our argument is that workers are different, due to the effects of both culture and education. In particular, building on empirical evidence, we argue that *loss aversion* and *hedonic adaptation* are culturally-determined and country-specific aptitudes and that they may help explaining why workers, either employed or unemployed, ask for job protection and are willing to pay the cost of it. The main conclusion of our analysis is that, for poorly educated workers sharing a fatalist view of life, job protection can be more effective than public social expenditure. As a consequence, we suggest that countries with a poorly educated and fatalist workforce will be more prone to offer protection through job protection rather than public social expenditure, which is exactly what the empirical evidence shows.

Keywords: employment protection legislation, behavioural economics, *loss aversion*, *endowment effect*, *hedonic adaptation*, redistribution.

JEL Classification: D81, E24, D7, D31, J58

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Introduction

Over the past 15 years or so a general tendency towards deregulation of the labour market has swept most OECD countries, notably the highly-regulated European ones. Nonetheless, radical differences in labour market regulations among countries that in other institutional respects are quite similar are still surprisingly frequent. And deregulation has taken place with differing speed, deepness and resistance and has involved other instruments of social protection, such as unemployment benefits and the pension systems. Traditional theoretical analysis of labour market institutions has run into serious difficulties in explaining these different dynamics. We believe that these difficulties depend on the fact that the traditional approach mainly focus on the pecuniary cost of unemployment, leaving aside psychic costs.

In particular, the empirical evidence indicates that unemployment is one of the most negative outcomes in life, carrying non-pecuniary psychic costs as well as pecuniary ones (Clark and Oswald 1994, Frey and Stutzer 2002). Subjects appear incapable of fully recovering from the loss of well-being determined by unemployment episodes, even if they get full income replacement and even if they find a new job. On moral general grounds, in their study on happiness, Di Tella et al. (2007) argue that people can adapt completely to income shocks but that their adaptation to life's events is incomplete¹.

The standard explanations of the demand for job protection largely neglect the non-pecuniary components of the costs of unemployment, thus preventing theoretical analysis from fully grasping the determinants of the phenomenon. We believe that theoretical analysis should include psychic costs among the elements that may induce workers to demand employment protection legislation (*EPL*) capable of guaranteeing job protection, i.e. keeping workers from being (easily) fired. We also believe that the actual incidence of these psychic costs helps explain international differences in social protection policies and their evolution over time.

To study the role that these psychic costs of unemployment play in determining why workers ask for protection and how they prefer it to be delivered, this paper looks at psychological evidence and some clues from behavioural economics. Indeed, behavioural economics emphasises non-pecuniary costs of labour market flexibility which the standard approach to decision-making generally ignores. We focus on the role of some related phenomena examined in economic psychology: *loss-aversion* (Tversky and Kahneman 1991, Kahneman, Knetsch and Thaler 1991), the *endowment effect* (Knetsch and Sinden 1984, Knetsch 1989, Kahneman, Knetsch and Thaler 1990, Kahneman, Knetsch and Thaler 1991), the *status quo bias* (Samuelson and Zeckhauser 1988, Kahneman, Knetsch and Thaler 1991), and *hedonic adaptation* (Clark and Oswald 1994, Frey and Stutzer 2002). The inclusion of these phenomena and the analysis of their cultural determinants allows a more robust explanation of the demand for job protection and its relationship with workers' education. In particular, building on Ferrante (2004) and Bénabou (2000b), we show that workers' educational attainment is a fundamental factor in explaining the demand for job protection and that our interpretative framework helps explain the choice between *EPL* and social public expenditure (*SPE*) within Europe. The basic intuition is that education mitigates the adverse effects of fatalism on workers' perception of employment and income opportunities. According to this argument, *EPL* appears to be more effective to protecting poorly educated workers by reallocating the non-pecuniary costs of unemployment, than social insurance tools such as unemployment benefits (UBs) or other social programmes (i.e. *SPE* in general).

¹ On this point, see also Easterlin (2004).

Hence, we argue that countries with poorly educated workers should be more prone to provide job protection norms than *SPE*: exactly what empirical evidence shows. The basic conclusion is that flexibility (or inflexibility) is a behavioural attitude of individuals, that is affected primarily by culture and education, and not a normative characteristic of labour markets. But, whereas culture cannot be modelled by politicians and takes a long time to change, education can be affected through appropriate policy measures.

The paper is organized as follows. Section 1 offers some preliminary empirical evidence on how OECD countries provide protection by combining *EPL* and *SPE* as well as some preliminary interpretation. Section 2 gives an overview of the standard explanations of the determinants of demand and supply of social protection. Section 3 extends this analysis by focusing on some insights from behavioral economics. Section 4 describes the main policy implications of our analysis and draws the conclusions.

1. Some Empirical Evidence

1.1 Social Protection Systems in OECD Countries.

Governments around the world meet their workers' demand for social protection in different ways. The policy tools, include, social transfers and direct provision of public social services as well as the regulation of product and labour markets. All these tools are intrinsically redistributive, but their effects differ. Whereas social transfers and social public expenditure mainly redistribute income after it is produced, labour and product market regulations, due to their impact on labour demand and supply, substantially lead to ex-ante redistributive effects. Moreover, only some are explicitly targeted to workers.

The focus of this paper is on employment protection legislation and social public expenditure, which are the most important instruments of social protection against job risks; hence, we leave aside other labour market institutions and the regulation of product markets. The reason for considering social public expenditure as a whole and not just unemployment benefits as a means of providing social security to workers is that it is a more appropriate measure of the social safety net in the face of income risks due to job loss.

Based on empirical evidence, we can say that two important elements characterize and differentiate social protection systems within OECD: the overall extent of protection and the choice between social expenditure and employment protection.

A reasonable measure of the amount of protection provided through social public expenditure is given by *SPE* as a percentage of GDP, whereas a measure of the protection offered through labour market regulation is the OECD's index of labour market rigidity. The latter takes account of a large set of factors regarding labour contract regulations (Nicoletti, Scarpetta and Boylaud 2000). For neater international comparisons, we also calculated a normalised version of these indexes: *NISPE* is given by *SPE*/GDP divided by the sample maximum; *NIEPL* by the index of labour market rigidity divided by its maximum².

An overview of the social safety nets enjoyed by workers and their families in the 20 OECD countries examined is given in Table 1.³ As far as social public expenditure is concerned, the rough distinction between continental European countries providing, on

² Although more recent data are available for some of the variables we have limited the temporal span of the analysis so as to provide comparable data for all the variables.

³ All *SPE* data in Table 1 and in Figures 1 and 2 include old cash benefits.

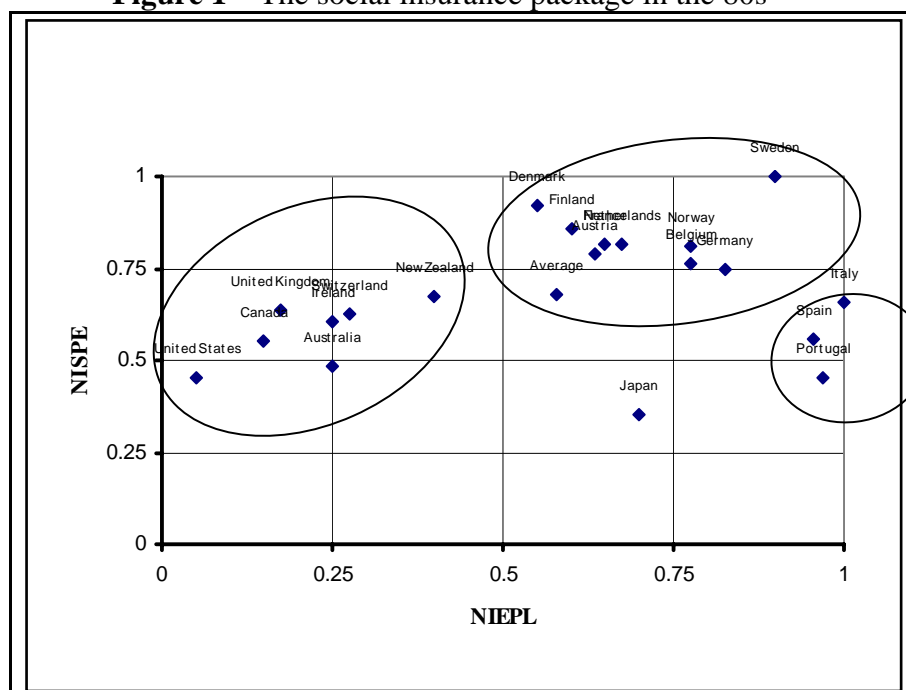
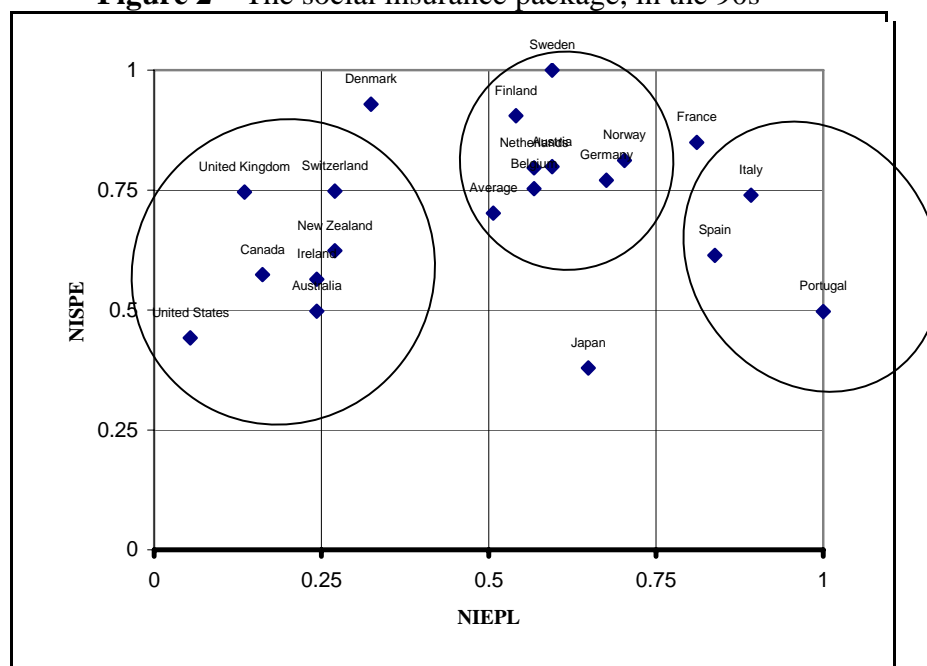
average, more social protection than other countries is confirmed with the major exception of the United Kingdom. Similarly, as for job protection legislation, the 20 OECD countries studied can be divided into two main groups in terms of the stringency of job protection: Australia, Canada, Ireland, New Zealand, Switzerland, the United Kingdom and the United States display relatively low levels of regulation, while Austria, Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Sweden, and Spain are characterized by relatively high levels of employment protection.

Table 1 - Labour market institutions and the social insurance package in 20 OECD countries

COUNTRY	Empl oyment prote ction legisl ation, 1973- 1987	Empl oyment prote ction legisl ation, late 90s	<i>SPE</i> /G DP (1980- 1989)	<i>SPE</i> /GDP (1990- 1999)
Australia	0.50	0.45	15.84	16.68
Austria	1.06	1.1	25.78	26.78
Belgium	1.55	1.05	24.77	25.24
Canada	0.30	0.3	17.91	19.24
Denmark	1.10	0.6	29.99	31.13
Finland	1.20	1	27.98	30.33
France	1.26	1.5	26.55	28.47
Germany	1.65	1.25	24.40	25.82
Ireland	0.48	0.45	19.70	18.92
Italy	2.00	1.65	21.34	24.78
Japan	1.40	1.2	11.51	12.70
Netherlands	1.35	1.05	26.62	26.69
New Zealand	0.80	0.5	21.86	20.91
Norway	1.55	1.3	26.44	27.21
Portugal	1.77	1.85	14.72	16.65
Spain	1.95	1.55	18.08	20.57
Sweden	1.63	1.1	32.55	33.52
Switzerland	0.55	0.5	20.41	25.07
United Kingdom	0.34	0.25	20.72	25.00
United States	0.10	0.10	14.67	14.81

Source: OECD web site

Figures 1 and 2 display *NIEPL*, respectively in the '80s and in the '90s, plotted against the *NISPE* in the same period, thus providing a more informative picture on different countries' choice between regulation and social benefits. The picture did not change greatly between the two periods, suggesting that North European countries have pursued their high redistributive targets relying more on redistribution of market-generated income through social public expenditure, South European countries more on stringent job security legislation, and central Europe somewhere in the middle. Apart from Japan, all the other countries with medium-low redistributive targets counted more on redistribution of market-generated income through social public expenditure.

Figure 1 – The social insurance package in the 80s**Figure 2 – The social insurance package, in the 90s**

Various explanations for these different attitudes to protection of workers have been suggested. The interpretative frameworks are not mutually exclusive and they offer, from their different perspectives, quite a composite picture. Nonetheless, they all rely on a standard framework that neglects some crucial behavioural and psychological elements. Taking these elements into account may give us a better understanding of the determinants of the phenomenon and help explain why some countries rely more on job protection than on public spending to obtain social protection.

Before leaving empirical evidence for theoretical analysis, we should discuss another important empirical pattern, namely the significant explanatory role of education.

1.2 *EPL vs. SPE: the explanatory role of education*

It is reasonable to ask whether, owing to the expected contribution of education to workers' ability to adapt to changes in occupational status, educational levels are a factor explaining the demand for social protection (Bénabou 2000b, Ferrante 2004). A related question is whether education affects the form in which workers wish protection to be delivered. We expect that education should improve workers' behavioural adaptability and thereby reduce the need for job protection.

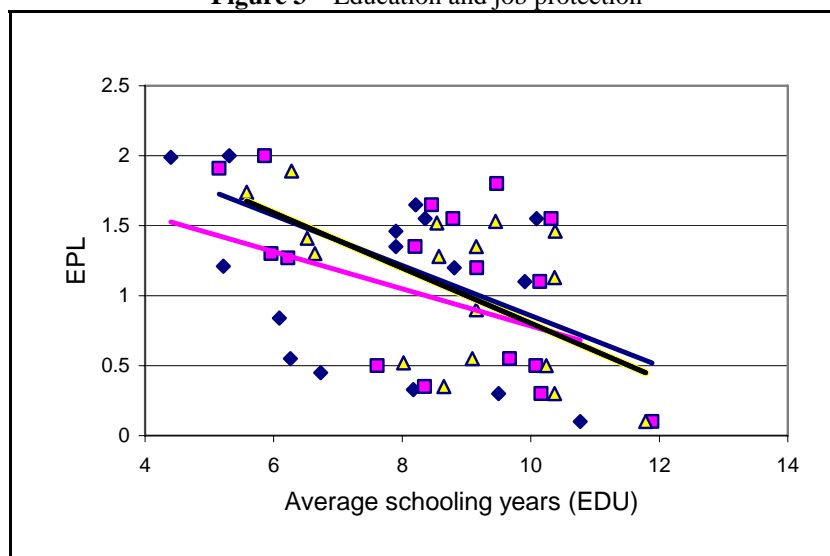
There is preliminary empirical evidence that the stringency of employment protection legislation (*EPL*) is correlated to the level of education, as Figure 3 shows for our 20 OECD countries studied in the '70s, in the '80s and in the '90s. The provision of job protection does decrease with educational attainment, as measured by average years of schooling and the regression coefficients are significant at 99% level in all periods. Conversely, Figure 4 suggests that there is no connection at all between workers' education and protection via public expenditure⁴. Countries with poorly educated workers are more likely to provide job protection than social public expenditure programmes.

A possible rationale for the demanding for job protection, rather than *SPE*, by less educated workers is neatly supported by Figure 5.

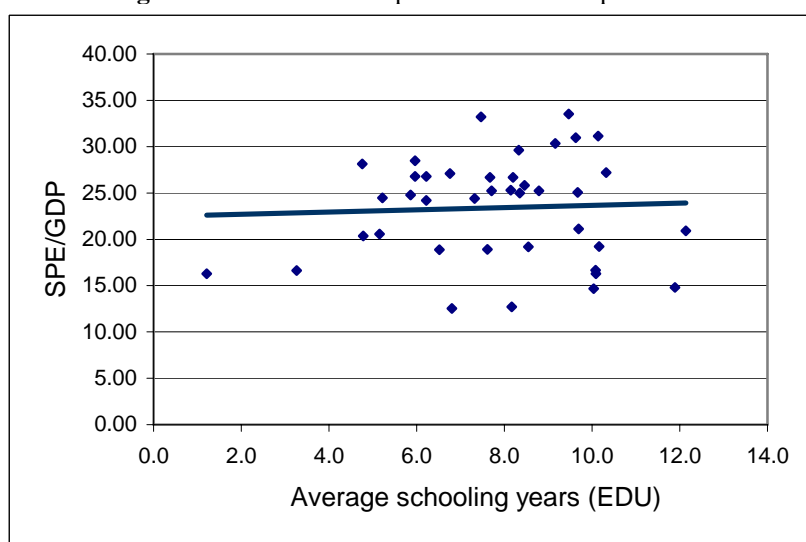
The data suggest that *EPL* does have a redistributive effect, in relative terms, in favour of less educated workers, working through unemployment rates driven by an increase of the duration of unemployment for the more educated workers. As a result, the relative unemployment rate of less educated workers⁵ in strictly regulated countries is half that in the less regulated countries. Preliminary data analysis supports the conclusion that job protection legislation is an effective means of redistributing occupational opportunities among workers with different educational attainment (Ferrante, 2004). Accordingly, educational divergences may have a good deal to do with the choice of the institutions to provide protection; a theory that aspires to explain the demand for job protection should take this factor into account.

⁴ The plot shows the average values of *SPE*/GDP in 20 OECD countries in the '80s and in the '90s against the corresponding educational attainment in 1985 and 1995.

⁵ The data are for 20 OECD countries in the '80s and in the '90s, for a total of 40 observations. On the vertical axis the plot shows the ratio of the unemployment rate of workers with less than upper secondary education and the average unemployment rate of workers with upper secondary and tertiary education. The coefficients are significant at 99% level in both the regressions.

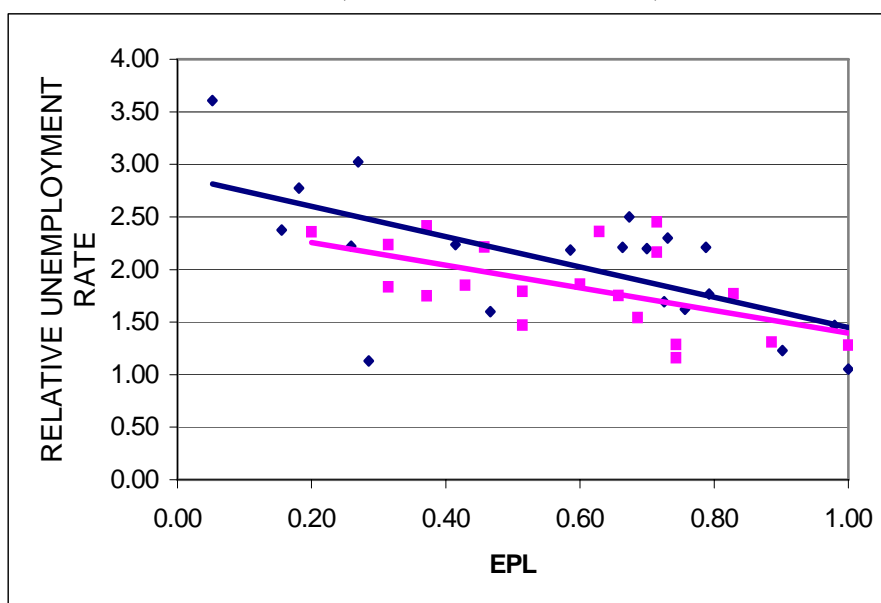
Figure 3 – Education and job protection

Source: Barro-Lee Data Set; devdata.worldbank.org/edstats/td10.asp

Figure 4 – Education and provision of social protection

Source: Barro-Lee Data Set; devdata.worldbank.org/edstats/td10.asp

Figure 5 - Relative unemployment rate and job protection
(Data source: OECD web site)



2. The Rationale for Job Protection

2.1 The effects of Employment Protection Legislation

In order to discuss why workers may ask for (and government may offer) social protection, through *EPL* rather than through *SPE*, and the specific role of education in this choice, we first need to inquiry into the expected impact of job protection on labour market; specifically, we must consider the trade-offs involved in choosing the desired level of protection.

In spite of the “popular view” (Agell 1999, p. 143) that any and all labour market institutions produce higher unemployment, empirical evidence and theoretical analysis appear to be incapable of establishing a clear causal link between employment protection legislation and labour market performance⁶. According to Freeman (2005, p. 8), “In short, while the position that labour market institutions are a major cause of unemployment and related aggregate economic problems has considerably more adherents, there is a substantial and growing number of economists and international agencies who take exception to that view.” Many economists now believe that regulating a competitive labour market through employment protection legislation has no effect on the average level of unemployment, although it increases the variability of employment and reduces the efficiency of the economy (see among others Bertola and Rogerson 1997, Garibaldi 1998, Agell 1999, Fitoussi et al. 2000, Blanchard and Landier 2001, Boeri and Garibaldi 2005, Freeman 2005), whereas other

⁶ In the long run, the unemployment rate does not seem to be affected by the stringency of job protection legislation (OECD 1999, p 50). It is worth noting that initially the OECD was much more inclined to maintain that employment protection legislation was an obstacle to full employment (see OECD 1994); in the last few years that position has changed: “the evidence of the role played by employment protection legislation on aggregate employment and unemployment rates remains mixed” (OECD 2004, p. 81).

forms of regulation may or may not increase unemployment (Agell 1999, pp. 143-144, Acemoglu 2001, p. 3-5).

The only strong, empirically-based inference is that, while *EPL* does not affect the average stock of unemployment it does affect the flows in and out of employment. International evidence shows that more strictly regulated markets have lower inflow rates and outflow rates from unemployment⁷. The evidence also suggests that stricter regulation reduces less skilled workers' probability of being fired at the cost of lengthening unemployment for all workers, including the better educated ones who are less likely to lose their jobs anyway. Hence, job protection improves the relative position of the less educated workers. In short, there are winners and losers in this game. All these elements have a central role in understanding why, in many European countries, the resistance to deregulation has been and in some respects remains particularly strong. The question is: why workers ask for regulation in general (i.e. as an alternative to deregulation)? And, why workers ask for regulation when, in a deregulated market, instead they could have the same unemployment *and* the safety net provided by social public expenditure? To answer this question we must explain why, *ceteris paribus*, the median voter might prefer lower inflow rates to higher outflow rates from unemployment and a stronger protection for less skilled workers.

2.2 Why Regulate: Standard and Less Standard Approaches

Theoretical analysis has developed two main approaches to justify labour market regulation through employment protection legislation. The first takes a political economy view of regulation, considering job protection legislation as a tool for protecting insiders and strengthening their wage bargaining position. As a result, the benefits from this type of labour market regulation accrue only to rent-seeking insiders (i.e. workers with a job) while the costs are borne by the unemployed and by society at large (Saint-Paul 1993, 1996 and 1997). So, insiders have a reason for demanding and defend regulation, and if they are politically strong enough they impose their interest on society at large. The second approach sees regulation as a solution that can increase welfare in the presence of market failures (Diamond 1981, Agell and Lommerud 1993, Acemoglu and Shimer 1999, Marimon and Zilibotti 1999, Agell 1999) positing that the demand for regulation is motivated originally by aversion to risk or to inequality of opportunity.

Simplifying somewhat, the first approach is closer to the “popular view”, emphasizing the costs of employment protection legislation, while the second emphasizes the benefits. According to this second approach, “[d]ue to externalities, the absence of complete insurance markets, etc., a laissez-faire economy may malfunction. These market failures also explain why an unregulated labour market may lead to an inefficient outcome” (Agell 1999, p. 144). Hence if market failures prevent the labour market from reaching an efficient equilibrium, there is a rationale for regulation. Job protection laws can oblige firms to internalise the social cost of lay-offs and to achieve an efficient equilibrium (Bertola 2004), which explains why, according to some authors (e.g., Agell 1999, Bènabou 2000a) regulation may generate efficiency gains. In this context, “Labour market institutions can be thought of as instruments of social insurance, that protect workers against risks for which private insurance is hard to come by” (Agell 1999, p. 144). In the presence of risk aversion, social insurance and

⁷ For example, the percentage of workers in the U.S. reporting a zero probability of unemployment is 30% against 60% of Italian workers (Manski and Straub, 2000; Guiso, Jappelli and Pistaferri 1999).

redistribution are crucial since individuals would like to transfer resources across states of nature (from employment to unemployment), but given of incomplete markets and liquidity constraints, they partially lack these possibility (Varian 1980, Bènabou 2000b). However, workers know that the same redistributive result can be obtained by appropriate labour market institutions or social transfers. So, employment protection legislation is not necessarily the result of lobbying by insiders but can generate social insurance without efficiency losses⁸.

Less standard motivations for demanding redistribution are aversion to inequality and to unequal opportunities. This approach has now produced a large body of work based on the idea that people appear to have not only individual preferences but also social preferences (Fong 1999, Feher and Fischbacher 2002). This literature generally links altruistic redistribution to the concept of reciprocity. That is, people are thought to favour redistribution when they believe that the recipients of social transfers are not free riders, and that if the positions were reversed they would replicate this altruistic behaviour. This implies that the attitude toward redistribution also depends on beliefs about the fairness of market outcomes: if people think opportunities are equally distributed, they are more likely to see individuals receiving social transfers such as unemployment benefits as free riders.

The fact is that risk and inequality aversion may be related⁹. Inequality aversion can be seen not merely as an altruistic personality trait (a sense of fairness) but as a standard characteristic of individuals associated - behind a Rawlsian “veil of ignorance”¹⁰ - with risk aversion. In fact, a risk-averse person who does not know in advance what abilities will be required in the job market and the position he or she will occupy in a society – over his or her entire life¹¹ – will prefer a more compressed earnings distribution and favour redistribution. This is exactly what happens with a risk-averse individual who, in the face of uncertainty, opts for smoothing consumption by transferring wealth across states.

2.3 *Employment Protection Legislation vs. Social Public Expenditure*

Once the choice for social protection is made, the choice of the instruments necessary to implement that level of social protection is still to be made. A given degree of social

⁸ Within the same incomplete market framework, an indirect benefit of job security that is generally overlooked in theoretical analysis is the positive effect of earnings stability in easing of liquidity constraints on workers in the credit markets. Access to loans is improved by lasting employment relationships, as creditors are more inclined to lend without collateral. Indeed, the benefits of this mechanism should be expected to accrue proportionally more to less skilled workers, who face more stringent liquidity constraints.

⁹ On the difference between the two concepts and issues of measurement, Kroll and Davidovitz, 2003.

¹⁰ Behind a *veil of ignorance* about one's abilities, psychological propensities and the social and economic status/states “[..]no one is advantaged or disadvantaged in the choice of principles by the outcome of natural chance or the contingency of social circumstances” (Rawls, 1971, p. 12).

¹¹ Flinn (2002) suggests a different conclusion relying on the idea that inequality indexes based on cross section analyses are not appropriate and should be replaced by inequality measures looking on the entire life-cycle of individuals.

protection target can be obtained by different combinations of instruments, and in particular it is a matter of social preference to determine how to combine progressive taxation, social expenditure and labour market regulation. In practice, progressive taxation and social transfers have proven to be less cost-effective than expected, owing to political and institutional failures. Notably, social transfers are difficult to allocate according to progressive principle, i.e. according to people's real needs.¹² In addition, owing to their partially discretionary nature, they are vulnerable to rent seekers, free riders and special interest groups. And tax evasion can significantly undermine the ability to raise revenues and the real progressivity of the fiscal system. Employment protection legislation will therefore be particularly effective in countries where markets are incomplete *and* redistribution cannot be easily achieved *ex-post* by fiscal measures, such as social transfers and taxes (for example, due to an inefficient fiscal system).

A robust empirical evidence on labour market flows and the data shown in section 1.2 suggest that employment protection legislation also redistributes income among workers by redistributing employment probabilities. The basic intuition is that appropriate measures of protection against unfair dismissal¹³ result in a more than proportional improvement in the position of the less educated and more severely wealth-constrained workers, who are more likely to be fired and less likely to be re-hired. So, while social public expenditure and social transfers provide *ex-post* redistribution of market-generated income, employment protection legislation provides *ex-ante* redistribution of employment probabilities, market-generated earnings and, finally, of the non-pecuniary costs of unemployment.

Building on psychological evidence, we argue that both the demand for *EPL* and the preference for *EPL* rather than *SPE* may depend on the fact that episodes of unemployment also cause a psychic, non-pecuniary cost, i.e. a cost that does not disappear even if the income loss is fully offset by unemployment compensation. And *SPE* can only partially cope with this psychic cost. According to this approach, a typical worker should choose his preferred regime by comparing the pecuniary and non-pecuniary net-benefits of the two alternative states of the world: one in which the labour market is regulated, so that the frequency of unemployment is lower and duration longer and one in which the labour market is unregulated, so that the frequency is higher but the duration shorter. The average rate of unemployment is the same in the two states (since, as we have seen, the long-term unemployment rate does not depend on the level of regulation). The varying impact of these psychic costs on workers of different countries (and, as we will see, of different culture and average education level) can hence justify different choices made by different countries.

Standard (and less standard) approaches are incapable to investigate the psychic costs involved in this choice. To properly discuss them we must leave standard approaches and use some models from behavioural economics.

¹² Support for this conclusion is provided, for example, by Boeri and Perotti (2002).

¹³ By “appropriate” protection we mean measures aiming to protect those in need, not to create rents for an elite of workers.

3. Some Clues from Behavioural Economics: Aversion to Loss and Hedonic Adaptation

3.1 Pecuniary and Non-Pecuniary Costs of Unemployment

According to Freeman (2005, p. 18) “[t]he prior that labour markets work perfectly absent institutional interventions comes from standard models of how rational maximizing agents interact in a competitive market. (...) [B]ut once empirical evidence shows that the perfect market model is incomplete, it is necessary to do more than search for impediments to perfection. (...) If it’s necessary to develop more realistic priors about behaviour in finance, where all that matters is money, then surely it’s necessary to do so in labour, where market participants are concerned with much more than monetary considerations”. We agree with Freeman and believe that, in addition to the risk-aversion and inequality-aversion arguments, other microeconomic explanations for the demand for job protection can be found within behavioural economics, in particular focusing on the non-monetary costs of flexibility.

Unlike the traditional approach, behavioral economics does not rely on a sole principle (maximization under constraints) to derive all the different behaviors of agents. Instead, the school recognizes a multiplicity of determinants of human behavior, each offering the best fit in a specific circumstance (Rabin 2002). This flexibility gets the scholar closer to actual economic behavior than traditional theory, albeit at the cost of greater difficulty in developing a unitary theoretical framework.

Among the numerous principles discussed within behavioral economics, the most important for our analysis are those associated with changes of status, i.e. *loss aversion*, *status quo bias*, the *endowment effect* and *hedonic adaptation*. These principles can help explain why people may want regulation to ensure lower frequency of unemployment at the cost of longer duration – i.e. why they may demand employment protection legislation and prefer *EPL* to *SPE*.

The costs involved in labour market dynamics, i.e. the costs of changing employment status, can be fruitfully divided into pecuniary and non-pecuniary components. Studies on happiness suggest that, apart from income loss, any unemployment episode imposes a non-pecuniary cost: “..the lower subjective well-being of unemployed people can be explained neither by the lower income level nor the self selection of intrinsically less happy people, unemployment has to be related to non-pecuniary costs. The drop in happiness may be attributed to a large extent to psychological and social factors” (Frey and Stutzer 2002, p. 420). Leaving aside social determinants, people’s attitude to change is affected by such factors as self-esteem, autonomy and optimism/fatalism. Indeed, the latter are also determined by shared cultural factors such as religion and ethnic origins (Guiso, Sapienza and Zingales, 2006).

Typically, social transfers compensate at least in part for the pecuniary losses stemming from joblessness but are not designed to provide relief for the non-pecuniary losses¹⁴. By contrast, job protection can compress the non-pecuniary cost of unemployment by reducing the number of episodes in one’s working life. If this is so, then the choice to seek protection through stricter job security legislation is affected by the psychological factors that determine the relative costs of episodes of unemployment as such and of their length.

¹⁴ We do not mean to imply that no amount of monetary transfer could compensate for job loss. We only mean that if unemployment generates a well-being loss greater than the earning loss, the unemployment benefit too should be greater than the earning loss (corrected for the utility of free time) to compensate it.

Loss aversion and *hedonic adaptation* are two well documented phenomena associated with changes in an individual's psychological status that help to explain why workers may accept longer unemployment in return for fewer episodes.

3.2 Loss Aversion: Status Quo Bias, Endowment Effect and Human Capital

A number of behavioural studies have focused on the *status quo* bias and the *endowment effect*. The two concepts are strictly linked, and also linked with the idea that people are more responsive to loss than to gains of equal size.

The *status quo* bias was originally described by Samuelson and Zeckhauser (1988), who found a strong preference of individuals for the *status quo* (or for what they believe is the *status quo*) "because the disadvantages of leaving it loom larger than advantages" (Kahneman, Knetsch and Thaler 1991, pp. 197-198). A quite similar behavioural principle, namely the *endowment effect*, has been verified empirically, mainly by repeated experiments (see e.g. Knetsch and Sinden 1984, Knetsch 1989, Kahneman, Knetsch and Thaler 1990). We can describe the *endowment effect* as "the fact that people often demand much more to give up an object than they would be willing to pay to acquire it" (Kahneman, Knetsch and Thaler, 1991, p. 194). When an object becomes part of the subject's endowment (and here is the link with the *status quo* bias), the subject tends to overvalue it.

Both the *status quo* bias and the *endowment effect* can be explained with the concept (and the theoretical framework) of *loss aversion*. *Loss aversion* has the advantage of being theoretically founded upon the *prospect theory* by Kahneman and Tversky (1979). According to Kahneman, Knetsch and Thaler (1991, p. 199): "A central conclusion of the study of risky choice has been that such choices are best explained by assuming that the significant carriers of utility are not states of wealth or welfare, but changes relative to a neutral reference point. Another central result is that changes that make things worse (losses) loom larger than improvement or gains. The choice data imply an abrupt change of the slope of the value function at the origin".¹⁵

Following Johnson, Gachter and Hermann (2006), the extent of the loss of well being R from a reduction of the endowment from r_i to x_i is a multiple λ_i of the increase of utility from an increase of the endowment of equal size.

$$\begin{aligned} R_i(x_i) &= u_i(x_i) - u_i(r_i) \text{ if } x_i \geq r_i \\ \text{and} \\ R_i(x_i) &= \lambda_i[u_i(x_i) - u_i(r_i)] \text{ if } x_i < r_i \end{aligned} \tag{1}$$

Estimated parameters λ_i , giving the ratio between the selling and the purchasing price in simple decision-making settings, provide quite a high measure of the average aversion to loss of 2.25 (Johnson, Gachter and Hermann 2006, p.4).

The *status quo* bias resulting from *loss aversion* seems to justify the demand for job protection as a way of reducing the cost of frequent unemployment. The psychological cost of

¹⁵ Another brilliant description of Kahneman's and Tversky's *prospect theory* is the following: "Their theory exploits a 'value' function, rather than a utility function. This value function is centered at the *status quo* (the 'reference point'); it is defined over deviations from the *status quo*; it is kinked at the *status quo*, being concave for gains and convex for losses; and it is steeper for losses than for gains. As a result, the value function exhibits risk-averting behaviour in choices involving sure gains and risk-seeking behaviour in choices involving sure losses" (Hartman, Doane, Woo, 1991, p.142).

frequent job losses, with the consequent loss of a given standard of living, in an unregulated market, may be greater than the cost of a longer wait for a new job (in a regulated market). And the perception of the loss is presumably affected by the fear that one's re-entry job will be worse. Both the ability to adapt to changing conditions and the quality of the re-entry job tend to be less for lower-skilled workers, so the expected cost of unemployment due to *loss aversion* is, on the whole,¹⁶ greater for a worker with less human capital¹⁷.

The idea that *loss aversion* is not a fixed innate characteristic of individuals finds empirical support in Johnson, Gachter and Hermann (2006), which show that it is decreasing in education or, more generally, one's knowledge endowment; age also exerts a strong negative impact. Overall, the best interpretation of these empirical findings is that *status quo* bias is related to the ability of subjects to adapt to changing external conditions.

Loss aversion can also explain why social mobility may be less important than is claimed in determining political aversion to redistribution (Benabou and Ok, 2001). With *loss aversion*, the positive expectations of gains from upward social mobility may well be offset by the negative expectations attached to even very small probabilities of downward mobility. Individuals holding these beliefs may thus rationally decide to bargain in the labour and political markets for stringent job protection.

Finally, *loss aversion/status quo* bias has also been cited by Fernandez and Rodrik (1991) to explain why "governments so often fail to adopt policies that economists consider to be efficiency enhancing" (Fernandez and Rodrik 1991, p. 1146). Contrary to rent-seeker models, which posit that the few gainers from the *status quo* are politically stronger than the many losers, Fernandez and Rodrik adopt the hypothesis that "there is a bias toward the *status quo* (and hence against efficiency-enhancing reforms) whenever (some of) the individual gainers and losers from reform cannot be identified beforehand" (Fernandez and Rodrik 1991, p. 1146). Even if the reform will produce gains for the majority of subjects, ignorance on the crucial matter of who will gain and who will lose generates resistance: "when individuals do not know how they will fare under a reform, aggregate support for reform can be lower than what it would have been under complete information, even when individuals are risk-neutral and there is no aggregate uncertainty" (p.147).

3.3 Hedonic Adaptation

Set-point theories of subjective well-being and empirical and experimental evidence suggest that people react to positive and negative life events, but then return to initial levels of happiness and satisfaction over time (Clark et al. 2004). This phenomenon is known as *hedonic adaptation*.

According to the studies on happiness, loss of one's job is one of the worst event in life (Frey and Stutzer 2002). Clark and Oswald (1994) and Di Tella, MacCulloch and Oswald (2003) show that the non-pecuniary components of the well-being cost of unemployment may be greater than the pecuniary ones and that the distress of unemployment is greater among those who have lost their jobs recently. The evidence is that *hedonic adaptation* does work

¹⁶ The pecuniary loss due to involuntary unemployment should be larger for more skilled workers earning higher wages.

¹⁷ Guiso, Jappelli and Pistaferri (1999) estimate that 72% of Italian college graduates face a 0 probability of unemployment episodes whereas the percentage for poorly educated workers drops to 57%.

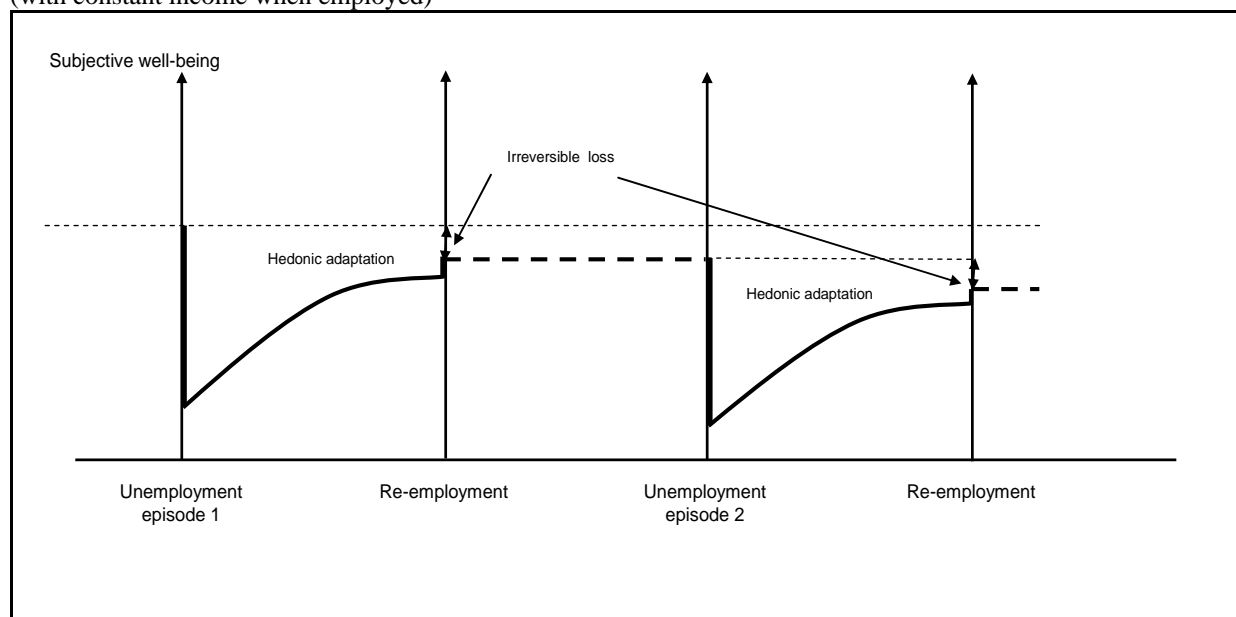
also in the case of unemployment but that the process is not complete. The same conclusion is reached by Clark et al., (2004, p. 8): “We test this idea by examining reaction and adaptation to unemployment in a 15-year longitudinal study. In accordance with set-point theory, individuals first reacted strongly to unemployment and then shifted back toward their former (or ‘baseline’) levels of life satisfaction. However, on average, individuals did not completely return to their former levels of life satisfaction, even after they became re-employed. The findings suggests that even a short period of unemployment can cause an alteration in a person’s long-term set-point.”

Strong empirical support to the idea that people adapt more easily to pecuniary shocks than to the non pecuniary effects of changing status is provided by Di Tella et al. (2007) and Easterlin (2004). The authors suggest that adaptation to income shocks is complete but that adaptation to life events is incomplete.

On the whole, the evidence suggests that the fixed non-pecuniary cost of unemployment episodes may be more important in determining well-being than the variable pecuniary cost of relatively protracted joblessness: “Although the baseline of life satisfaction was relatively stable for individuals from before to after unemployment, the experience of unemployment did on average alter people’s baseline. At the aggregate level, people were less satisfied long after unemployment, suggesting that the event lowered the average set point of these respondents(...) Our findings suggest that an unemployment experience might scar people in some way that they are less satisfied with life on average even after re-employment and even controlling for income” (Clark et al. 2002, p.12-13). The income that would be necessary to compensate people for the loss of well-being due to unemployment is very large and, according to many authors (see e.g. Winkelmann and Winkelmann 1998, Di Tella, MacCulloch and Oswald 2001 and 2003, Frey and Stutzer 2002), it implies a replacement ratio much greater than one.

Figure 6 below describes the time-path of well-being of a typical worker in the presence of *loss aversion* and *hedonic adaptation*, at constant wage income. After the first episode of unemployment, subjective well-being falls dramatically; thereafter, well-being slowly increases through *hedonic adaptation* but never regains its original level, even if the subject gets a new job. Each subsequent unemployment episode reduces the set-point of the worker’s well-being. The process is cumulative – even if the irreversible loss is progressively smaller at each episode due to long run *hedonic adaptation* – and the total size of the irreversible loss in well-being is a concave function of the number of unemployment episodes. As a result, the negative impact on well-being of many short unemployment episodes is greater than the impact on well-being of few long unemployment episodes. So, people have a rationale for preferring lower inflow rates to higher outflow rates from unemployment, i.e. they have a rationale for demanding employment protection legislation.

Figure 6 The time path of a worker's well-being with *loss aversion* and *hedonic adaptation* (with constant income when employed)



3.4. The cultural determinants of loss aversion and hedonic adaptation: fatalism.

Once we have recognised the key importance of *loss aversion* and *hedonic adaptation* in determining the choices of people with respect to labour market institutions, the basic question to be answered is why these two elements have different impact in different countries, i.e. why the same principles generate different institutional settings. Our argument is that *loss aversion* and *hedonic adaptation* have country-specific, culturally-determined structural determinants: indeed, the perception of occupational and income risks and the expectations about future well being has much to do with how fatalist people are. Empirical evidence shows that religious and ethnic factors affect economic outcomes (Guiso, Sapienza and Zingales 2006) and fatalism is a distinguishing features of South European countries (Italy, France, Spain and Portugal) and Japan, characterized by the highest levels of *EPL*. Fatalism is among the major determinants of *loss aversion* and *hedonic adaptation*, even if education has a crucial role in mitigating fatalism and the original cultural heterogeneity of populations.

Systematic differences in perceived job security may persist after the implementation of job protection regulations. This may explain the apparent puzzle that, in countries relying more on job protection through *EPL* than through Unemployment Benefits (UBs), workers feel less secure (Clark and Postel-Vinay, 2005). The standard interpretation of the latter evidence is that *EPL* is perceived as less effective than UBs by workers. In order to find conclusive empirical support to this interpretation one should be able to show that, *ceteris paribus*, workers in the same country feel more insecure with unemployment benefits than with *EPL*. However, this is a quite demanding empirical task. Building on our interpretative framework and lacking such an evidence, we argue that workers feel less secure in countries relying more on *EPL* because they share culturally-driven biases in the perception of job security, and these biases are the causes and not the consequences of the implementation of employment protection legislation rather than Unemployment Benefits. We think that these culturally-driven biases are sufficient to generate the observed country to country heterogeneity in *EPL*. Building on the assumed positive link between fatalism and the perception of occupational and income risks due to *loss aversion*, in Fig. 7 we show that an

index of fatalism¹⁸ is positively correlated with *NIEPL* but it is uncorrelated with a normalized index of *UB* (*NIUB*)¹⁹.

The mitigating effect of education on the link between culture and beliefs/preferences (Guiso, Sapienza and Zingales, 2006) helps explaining why people in more educated countries asks for less stringent *EPL*, as shown in Fig. 8.

3.5. Loss Aversion, Hedonic Adaptation and the Demand for Job Protection.

Putting all these elements together we can argue that the political demand for job security through employment protection legislation will be positively related to *loss aversion* and to the extent to which the process of *hedonic adaptation* is incomplete. Moreover, since empirical evidence (Johnson, Gächter and Hermann 2006) shows that *loss aversion* is decreasing in educational attainment, the data should show that *EPL* is stricter in countries characterized by relatively poorly educated workers; conversely, such a pattern should not emerge as far as the relation between *SPE* and education is concerned. And this is exactly what the data presented in section 1.2 show.

As we suggested, job protection reduces unemployment frequency and increases its duration which redistributes the costs of unemployment among workers with different skills. The latter effect is produced, for a given unemployment rate u , by increasing unemployment duration d for both skilled and unskilled workers but leaving unaffected the unemployment frequency of skilled workers, i.e.

$$u = d(f_s + f_{us})$$

$$d = \frac{u}{(f_s + f_{us})}; \quad \frac{\partial f_{us}}{\partial EPL} < 0; \quad \frac{\partial f_s}{\partial EPL} \cong 0 \quad (2)$$

where d and f are unemployment duration and frequency for, respectively skilled (s) and unskilled workers (us). Needless to say, there is a conflict of interest between well and poorly educated workers that is regulated in the political market. In this respect, one should expect that the higher the ratio of well to poorly educated workers, the less important will be *EPL* in the political equilibrium.

¹⁸ The index is based on the answer given to the following question contained in the World Values Survey (www.worldvaluessurvey.org; various years): "Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means "none at all" and 10 means "a great deal" to indicate how much freedom of choice and control you feel you have over the way your life turns out". We assumed that fatalism implies the perception of lack of control over our life. To check whether the index of fatalism could be considered a stable, structural factor, we computed the Pearson's correlation coefficient of the index between 1990 and 1999 for the group of countries under consideration and we found a value of 87% (0.01 sig.).

¹⁹ The index normalized to one is based on both duration and generosity of UBs.

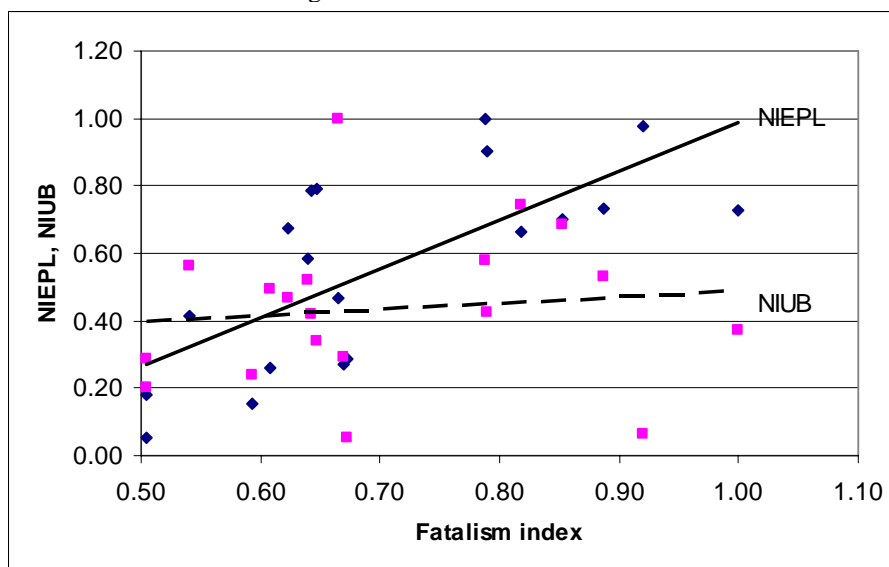
Fig. 7 Fatalism vs. *EPL* and UB

Fig. 8 Education and fatalism

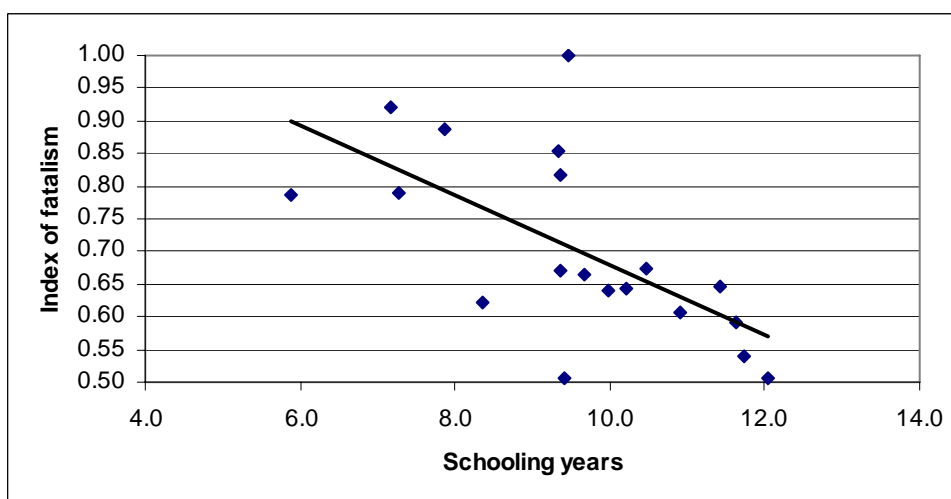
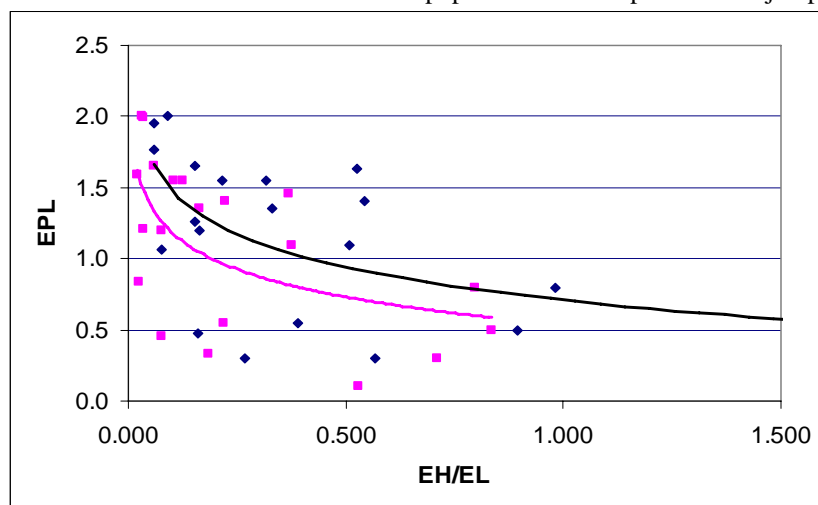


Figure 9 shows the ratio between the share of population with at least upper secondary education (*EH*) and the population with only elementary schooling (*EL*) against *EPL*, in two different periods²⁰ for our sample of OECD countries.

²⁰ Data on education are drawn from the Barro-Lee dataset and refer to the years 1985 and 1995. The index of *EPL* refers to the '80s and the '90s.

Fig. 9 The distribution of education within the population and the provision of job protection



The data supports a decreasing relationship and the previous conclusion about the impact of education on the median voter's preferences.

4. Conclusions

The joint impact of *loss aversion* and *hedonic adaptation* on well-being should lead workers to be willing to pay the cost of waiting longer for a new job in exchange for a lower frequency of unemployment. This latter attitude may explain why labour market reforms meet so much resistance.

The experimental evidence provided by psychological studies and casual observation both support the view that *loss aversion* and *hedonic adaptation* are pervasive phenomena that economists should take much more seriously into account in building models aimed at policy prescriptions. As for the rationale for regulating or deregulating labour markets, the arguments developed offer guidance for policy makers concerning the efficiency and feasibility of reforms.

First, policies that aim at increasing microeconomic flexibility should be primarily concerned with removing the causes of inflexible attitudes. Since the demand for job protection is negatively related to workers' skill level, education and training policies may be powerful instruments to reduce the need for social protection and the political opposition to reforms.

Second, on grounds of feasibility, the time span for reform in poorly educated and fatalist countries (such as Italy, Greece, Portugal and Spain) is a crucial variable, since educational attainment and age have been shown to be key factors in the *status quo* bias. The speed of reduction of the demand for protection depends mainly on the speed of generational turn-over in the labour force and of the resulting build-up of human capital.

Third, appropriate dual labour market reforms, generating flexibility at the margin and imposing heterogeneous job protection among workers with different ages and skills, can be efficient as well as fair as long as they provide different treatment for individuals endowed with different abilities to cope with change in occupational status.

Finally, we expect that in the presence of *loss aversion* and *hedonic adaptation*, stabilization policies may deliver a higher social dividend than is claimed by models based on risk averse agents (e.g. Lucas 2003, Barlevy 2004), even when prices and wages are flexible. In particular, the pervasiveness and the actual impact of *loss aversion*, as measured by the ratio between selling and purchasing prices, and the incidence of the non-pecuniary costs of

unemployment, all suggest that the loss of well being due to economic fluctuations is substantial indeed and that the share of that cost due to pure risk aversion is quite small.

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