CENTER ON CAPITALISM AND SOCIETY

COLUMBIA UNIVERSITY

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Working Paper No. 77, September 2012

JOB SATISFACTION: THE EFFECTS OF TWO ECONOMIC CULTURES

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Job Satisfaction: The Effects of Two Economic Cultures

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Date: 27 September 2012

Abstract

We present a test of our hypothesis that engaging and challenging work in a country, hence rewarding careers, depends on traditional and modern beliefs and attitudes. We start by defining traditionalism and modernism and on that basis construct simple indexes of traditionalism and modernism for a set of OECD countries based on data from the *World Values Survey*. Then, we investigate how these indexes relate to reported job satisfaction, based on data from the same source. We find that modernism and job satisfaction are related positively and significantly, in both statistical and economic terms. The relationship between traditionalism and job satisfaction is not totally clear but high levels of traditionalism appear to be associated with low job satisfaction. This relation survives the introduction of some classical controls, such as wage and job security.

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1. Introduction

A substantial and growing literature has recorded and tried to explain the persistent difference in economic performance among OECD countries since the late 1980s. Most studies have focused on differences in observable and "objective" measures of economic performance, such as productivity, labor market participation and unemployment. Yet, most economists would agree that what matters when evaluating an economic system is the welfare of the individuals. Individuals may prefer a job that they enjoy to a job with high productivity and high compensation that also makes them miserable. At least to academics, such an argument should not appear strange.

In this paper, we explore the possibility that these differences are due to differences in the levels of modernity and traditionalism across countries.
We start by documenting the differences in job satisfaction across OECD countries since the 1980s until the early 2000s. Next, we provide a working definition of modernism and traditionalism and form hypotheses about the channels through which modernism and traditionalism may affect employment outcomes and welfare, represented by job satisfaction. Then, we describe the data that we use in our study and discuss in some detail the composition of our indexes. Next, we apply some simple statistical tools to evaluate how our indexes relate to job satisfaction. In particular, we explore whether some "neo-classical" factors also influence job satisfaction. For this reason, we evaluate the effect of modernism and traditionalism only after controlling for the effect of wages, of job security, and of income tax.

We find that there are persistent differences in job satisfaction between Nordic countries, Anglo-Saxon countries, the US and Canada, on the one hand, and continental Europe, in particular the European South, on the other hand. Our indexes

reveal that traditionalism is particularly strong in Spain, Portugal, Italy, and France, while modernism is very high in the Scandinavian countries and Canada. Interestingly, we find the US has an average level of modernism but a very low level of traditionalism. We explore how our findings on traditionalism and modernism relate to job satisfaction. We plot the indexes and job satisfaction and then consider some simple reduced-form specifications in which we control for the effect of some obvious covariates of interest, such as wages, taxes, and job security. Our results indicate that even after the introduction of these controls, modernism and job satisfaction are related positively and the relation is very significant in an economic and statistical sense.

This paper contributes to the study of the persistent differences in economic performance among OECD countries in two ways. First, it switches the focus of attention to welfare, measured by job satisfaction. Second, it is the first to introduce the concepts of modernism and traditionalism to the study of economic performance. Previous work has focused on objective measures of economic performance among OECD countries and has tried to explain them with differences in the institutions or economic culture. Phelps (2006) is closest in its approach to ours here. He points out the importance of economic culture, but the paper does not explore the potential tension between traditional values and modern values.

Literature Review

Our paper contributes to a line of research that documents and tries to explain the persistent differences in economic performance across OECD countries since the 1980s. A number of papers document this development and the list that we provide here is necessarily very short. Hoon and Phelps (1997) were the first to link the sluggishness of the European labor markets to a greater set of issues, in particular the potential for and the origins of economic growth. Hall and Jones (1999) attempt to provide an explanation as to why some economies are much more productive than others. Allen (2001) specifically investigates the divergence in European wages.

An important part of the early literature tried to link differences in economic performance to differences in institutions. Some of the papers in this line of investigation include Phelps and Zoega (2004) and Aghion and Howitt (2005). Phelps (2006) was the first to focus on the importance of economic culture and to explore how differences in some dimensions of economic culture relate to differences in objective economic performance. Bojilov and Phelps (2010) provides a detailed description of individual beliefs and attitudes about work across OECD countries. This paper contributes to this literature by explicitly sorting beliefs and attitudes into two cultural dimensions, traditionalism and modernism. Snow (1959) is an early precursor of our approach. Unlike him, we focus on economic activity in general, develop our own notions of culture, and apply a slightly improved empirical methodology. Other related work on culture includes Banfiled (1958). More on the importance of innovation and the way it relates to economic culture can be found in Friedman (1962), von Hayek (1978), and Evans (2011).

2. Motivation

We start by considering the average levels of job satisfaction across OECD countries from the early 1980s to the early 2000s. We use data collected by the World Values Survey, 1981-2003. The designers of the survey ask the respondents to indicate their degree of job satisfaction on a scale from 1 to 10, where a higher number corresponds to a higher degree of job satisfaction. The average levels of job satisfaction by country are reported in Table 1. Our main observation is that there are persistent differences in job satisfaction across countries. In particular, we find that the Scandinavian countries, Canada, the US, and the UK always score higher average levels of job satisfaction than most continental European countries. We also find that these differences persist over time. They also coincide with differences in objective measures of economic performance across the same countries.

Table 1. Job satisfaction in OECD countries, 1981-2001.

	Job satisfaction		
Country	1981	1991	2001
Austria		8.03	7.81
Belgium	7.71	7.79	
Canada	7.99	7.89	
Denmark	8.29	8.24	8.06
Finland		7.56	7.65
France	6.76	6.78	7.13
Germany	7.02	6.98	7.70
Iceland	7.87	7.87	7.87
Ireland	7.92	7.81	7.82
Italy	7.23	7.29	7.34
Japan		7.66	
Netherlands	7.79	7.48	7.52
Norway	8.31	7.88	
Portugal		7.42	7.52
Spain	6.88	7.02	7.29
Sweden	7.92	7.93	7.32
UK	7.62	7.42	7.23
US	7.63	7.84	

For thousands of years the life of the average human being was nasty, brutish, and short, dominated by the overriding concern for survival. The economy revolved around agriculture and, to the extent that there was trade, it was highly regulated by the state or by interested guilds. This was the mode of living for the greater part of what we call the Iron Age. The Iron Age, unlike to some extent the Bronze Age, was completely dominated by war. States with superior armies could invade their neighbors and conquer them, regardless or in spite of the relative levels of economic or cultural sophistication of those neighbors. Those with the best army ruled the world. While it is not our goal to explain why this was so, we are very interested in the consequences of such an environment on societies and their economic beliefs and attitudes.

The constant threat of invasion and annihilation led to the creation of a centralized state that controlled all aspects of individual life. Societies were strictly hierarchical and all aspects of economic life were regulated and subjugated to the creation and maintenance of a strong army. Vestiges of this world view could be found even in the 20th century in the history of world powers such as Russia or the Soviet Union, Germany, China, and Japan. This social order was supported by a system of beliefs that subordinated the individual needs and aspirations to the good of the community. The community could be the family or the city, or the fiefdom, or the kingdom. Within the family, children owed unconditional obedience to their parents, in particular to their father or the *pater familias*. Within the fiefdom, individuals owed unconditional obedience to their lord and protector, and within the kingdom, all owed unconditional obedience to the king. In return, the lord and the king were supposed to be benign rulers who did what was best for their subordinates. This was their solemn

duty because the dominant view was that the subordinates were incapable of ruling their own lives by the very nature of their station. The church with its doctrine of the three estates and the relation between the church and the state cemented these beliefs and attitudes and offered the only possible outlet for the suppressed individual aspirations and dreams: the afterlife.

The opening of new trade routes of the 15th and 16th century, the financial innovations of the 14th-17th century and the first Industrial Revolution undermined these traditionalist views of society. Time and again, individual initiative, audacity, insubordination, reckless leaps into the unknown showed that individuals could achieve their aspirations with hard work, perseverance, belief in one's own abilities, and a little bit of luck. These developments were deeply disturbing for the old order and resulted in the birth of modernity. They found expression in the new value attached to the individual, his or her aspirations, ingenuity, and capabilities; in classical liberalism, which asserted that good societies should allow individuals to attain the fullest extent of their potential; and in the design of the modern capitalist economic system.

Modernity asserted that competition and freedom of initiative lead to a more prosperous, efficient and, as a result, better society. It thereby contrasted markedly with traditionalism, which emphasized coordination and regulation as the path to a strong, harmonious society with a rich social fabric. Traditionalism was based on the certitudes of divinely-inspired social relations between the individual and the family, between the individual and his community or lord, between the subjects and their sovereign. In contrast, nothing appears to be sacred to modernism: relations of all sorts are contractual in their nature, conditional and reciprocal. The birth of modernity amounts to nothing less than a revolution in human relations and life. And, as with all

revolutions, it had its victims. The destruction of traditional support networks, bonds, customs, etc. generated and continues to generate uncertainty, despair, and tensions in the world. For this reason, those adversely affected by modernity turned to various alternatives to modernity and its capitalism, such as corporatism (admittedly, one of the more innocuous alternatives).

In our previous work, we have emphasized the importance of economic culture to economic performance. However, this is the first attempt to sort out the different aspects of economic culture into those consistent with traditional values and beliefs and those that are consistent with modern values and beliefs. As already noted, we focus on the analysis of how traditional and modern beliefs and attitudes affect individual welfare, the ultimate objective of economic activity. Because of numerous limitations inherent in the available data, we will not attempt to identify all the different channels through which traditional and modern beliefs and attitudes affect welfare. Instead, we will set ourselves a humbler task.

Our goal is to create an index of traditionalism and an index of modernism and to investigate how these are related to individual welfare, measured in terms of job satisfaction. Some of the questions that we would like to answer are: Is modernism positively related to job satisfaction? Is traditionalism negatively related to job satisfaction? Does the relation survive the introduction of some classical economic controls, such as wage and job security?

3. Indexes of Modernism and Traditionalism

In this section, we describe our indexes of traditionalism and modernism based on the data presented in the preceding section. Then, we make a brief review of the levels of traditionalism and modernism in different countries according to our two indexes.

We construct an index of traditionalism for a set of developed OECD countries based on the second wave of the *World Values Survey*, conducted in 1991. The index is equal to the average of the proportion of people who respond in the affirmative to a set of questions. We give equal weight to each question because the limited size of the data does not allow us to derive factors and because assigning equal weight appears to us as good as any other arbitrary assignment of relative importance.

The first question that we include in the index is "Do you think that service and help to others is important in life (a007)?" With it, we hope to reflect the presence of a sense of duty and commitment to the larger community in which one lives. It is consistent with the teachings of all major religions and "traditional" philosophical schools. It also reflects a key feature in classical conservatism: individuals find the meaning of life within the web of bonds that a society represents.

We also incorporate "Should children respect and love their parents (a025)?" and "Should parents be responsible for their children (a026)?" These two questions reflect the degree to which one individual is defined in the context of her or his relation with the rest of society. We like these questions because they posit fundamental issues about what modernity is in an unexpected context. Since the time of the late Roman Empire, social relations have often been explained to laymen through an easy to appreciate analogy: the monarch relates to his subjects as the head of the family relates to his children. What makes the analogy very powerful is the combination of a

logical fallacy with the universal cultural preeminence of the *pater familias* in the Iron Age until the birth of modernity. The arrival of modernity, with its industrialization, wars, and changes of family and society, put all of these traditional roles and perceptions in question. Doubts about traditional roles in the society and the family, as well as relativism and the conditionality of one's relation to others, even within the family, are captured, we believe, through the negative response to questions a025 and a026.

Another way to interpret these questions is to explore the extent to which changes in the understanding of social order has affected the understanding of family relations and roles. Within a social context, the US Declaration of Independence was the first such document to provide a very powerful rationale for overthrowing the "old order": a government that has violated its obligations to its people has also forfeited any claim to the respect and the obedience of its people. This principle has been evoked innumerable times since. But to what extent has the same concept of contractual relations has also entered the private sphere, family relations in particular? We hope that the responses to questions a025 and 026 shed some light on this question.

Finally, we also consider "Is unselfishness an important child quality (a041)?" This question reflects the same concerns expressed above but in a more abstract context. Consciously or not, the importance of one's own good has been a central feature of modernity. Individualism is central to classical liberalism, to the understanding of society in terms of contractual relations, and, we believe, to the meaning of modernity. The question, as stated, is provocative and may be misunderstood by the respondents. Yet, we believe that the respondents had to confront the question of whether they would, as parents, ultimately prefer that their children give precedence in their actions to their communal duties or to their self-

interest.

Is traditionalism good or bad? We do not perceive traditional values and concerns as obsolete or degenerate. A sense of community, social trust, and consideration for others are not necessarily bad things and in many contexts they may be crucial to economic development and prosperity, as noted already by many. One hypothesis is that if they are very strong, that may hamper individual initiative, the implementation of new technologies or the adoption of new products. Alternatively, traditional values may create a sense of shared destiny when people undertake an economic venture, or they may build social capital. For a currently relevant example, many people have suggested that the traditional values of Confucianism are responsible for the strong work ethic of the modern Chinese. We take no stand on the role of traditionalism: We are simply interested in exploring how traditional values relate to economic development.

We also construct an index of modernism. This index, like the index of traditionalism, is equal to the average of the proportion of people who have answered in the affirmative to some questions contained in the second wave of the World Values Survey. As in the case of traditionalism, the sample size does not allow us to extract factors, so from all arbitrary rules, we assume that each question has the same contribution to the index. We include a set of questions intended to capture the attitude of the respondents to change and its consequences.

We hope that the response to the question "Are you worried about new things (e045)?" reflects attitudes towards the process that generates new products, technologies, techniques, morals, etc. That is, it reflects the degree of self-confidence when facing the rapidly changing world of modernity. The question "Do you accept new ideas (e046)?" is supposed to shed light on another aspect of the same

phenomenon: respondents may be worried about new things but regard them as necessary evils or as unpleasant phenomena that one must nevertheless accept as an inevitable part of modern life. Finally, the question "Do you think that changes bring new opportunities (e047)?" reflects the extent to which respondents associate new developments with new opportunities to be explored and exploited. A risk-averse agent may dislike the uncertainty associated with the lottery that modern life is, or she may accept it as inevitable but believe that the lottery itself provides an exciting set of opportunities, or she may regard it as an inevitable evil.

In addition, we also include some questions that represent views on the consequence of change in a modern world. We hope that attitudes towards inequality and fairness are central to the interpretation of the answers to "Two secretaries differ in their productivity. Is it fair to pay more to the more productive one (c059)?" That is, the question is whether fairness is to be understood as identical titles imply identical pay or different productivities imply different pay. Phenomena associated with modernity have continuously challenged traditional institutions and this has led to a "corporatist" reaction against some of the evils of modern life. The question of government of businesses has been central to the ensuing debate: should owners have control over the management of their firms or should they consult with other parties involved in the production process, such as workers and government regulators? We hope to capture at least part of these issues with the question "Do you agree that the owners ought to manage their firms (c060)?" Finally, we also include in our index "Do you agree that competition is good (e039)?" which reflects individual attitudes toward another defining feature of modern economic life. A more "corporatist" or "traditionalist" view would exhibit skepticism about the virtues of competition. Indeed, related schools of thought point out that often competition may undercut

social welfare due to displacement of people and the destruction of long-standing social contexts and communities. There are alternate views as well: competition may destroy the old but simultaneously free people to achieve their true potential and ensure that they do good by doing well, through the action of the proverbial invisible hand.

We report the two indexes by country in table 2. The average across countries of the index of modernism is 0.58. The countries with the highest values are Iceland, Finland, and Canada, at 0.63, 0.62, and 0.61 respectively, while the countries with the lowest values are Japan, Spain, and France at 0.42, 0.47, and 0.49 respectively. Surprisingly, the US score is 0.59, close to the average. Eyeballing the numbers reported in the table, one notices that the Scandinavian, Anglo-Saxon, or more generally Northern European countries have high levels of modernism according to the index. The picture in the south of Europe is, however, much more complex. Their average level of modernism is low relative to the North, but Italy's level is equal to that of the UK and almost the same as that in Germany and Denmark. How can one then possibly try to explain the low levels of job satisfaction in Italy? Perhaps the index of traditionalism can suggest a possible explanation.

The average level of traditionalism according to the index is 0.51. The three countries with the highest levels of traditionalism are Portugal, Spain, and France, 0.71, 0.62, and 0.59 respectively. The three countries with the lowest level of traditionalism are Finland, Denmark, and Norway, 0.38, 0.44, and 0.44 respectively. The level of the US is just below that of Denmark and Norway. As in the case of modernism, there seems to be a tentative division in Europe into a less traditionalist North and a more traditionalist South. Going back to the case of Italy, we see that traditionalism is relatively high at 0.58.

Table 2. Indexes of modernism and traditionalism

Country/region	Index of modernism	Index of traditionalism
Austria	0.55	0.49
Belgium	0.50	0.49
Canada	0.61	0.50
Denmark	0.58	0.44
Finland	0.62	0.38
France	0.49	0.59
Germany	0.58	0.45
Iceland	0.63	0.54
Ireland	0.54	0.59
Italy	0.56	0.58
Japan	0.42	0.48
Netherlands	0.58	0.49
Norway	0.53	0.44
Portugal	0.50	0.71
Spain	0.47	0.62
Sweden	0.62	0.51
UK	0.56	0.54
US	0.59	0.44
Average:	0.58	0.51

4. Relation between traditionalism, modernism and job satisfaction

This section relates the indexes of modernism and traditionalism from above to the principal outcome of interest in this paper: job satisfaction. We study this relation in two ways: we plot job satisfaction and each of the indexes and inspect how they relate to each other. Then, we perform some simple econometric tests to investigate whether the relation that we visually observe is statistically significant under successively more stringent specifications.

4.1 Preliminary Analysis

We start by plotting the levels of modernism according to our index against the levels of job satisfaction in 1991. We find a high correlation of 0.57, which is even higher if we exclude two clear outliers: Japan and Germany. These results can be observed on Figure 1. Unfortunately, these estimates are quite noisy. This figure presents nothing more than a correlation between the index and job satisfaction. First, we do not control for other factors that may influence both modernism and job satisfaction, or that may provide alternative competing explanation. Second, there is also the concern of reversed causality. For example, the findings in Figure 1 are perfectly consistent with an alternative story: that high job satisfaction leads, via some mechanism (say, reinforcement learning), to higher levels of modernism. We can do little to address the first criticism: we may try to control for some obvious factors within a simple regression specification but the extent of what can be done is severely limited by the small sample size. Nevertheless, we try to address at least some of these issues in the following subsection.

Figure 1: Modernism in 1991 and job satisfaction in 1991.

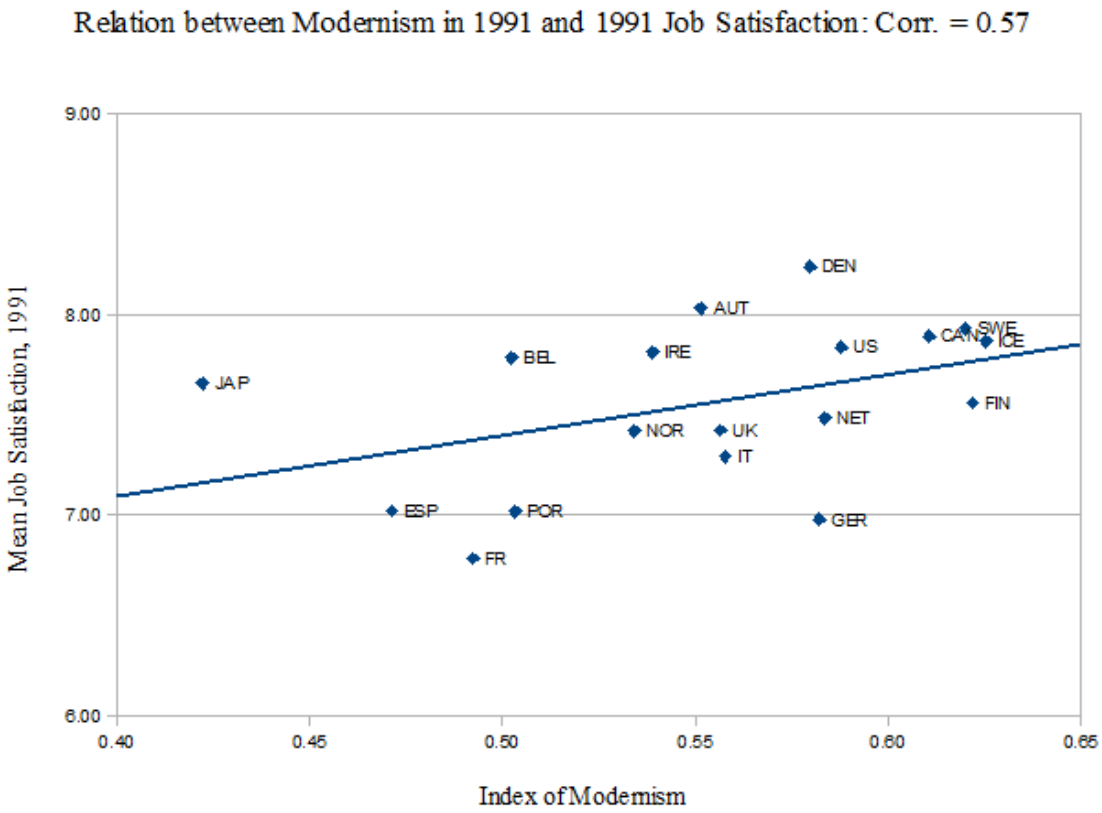
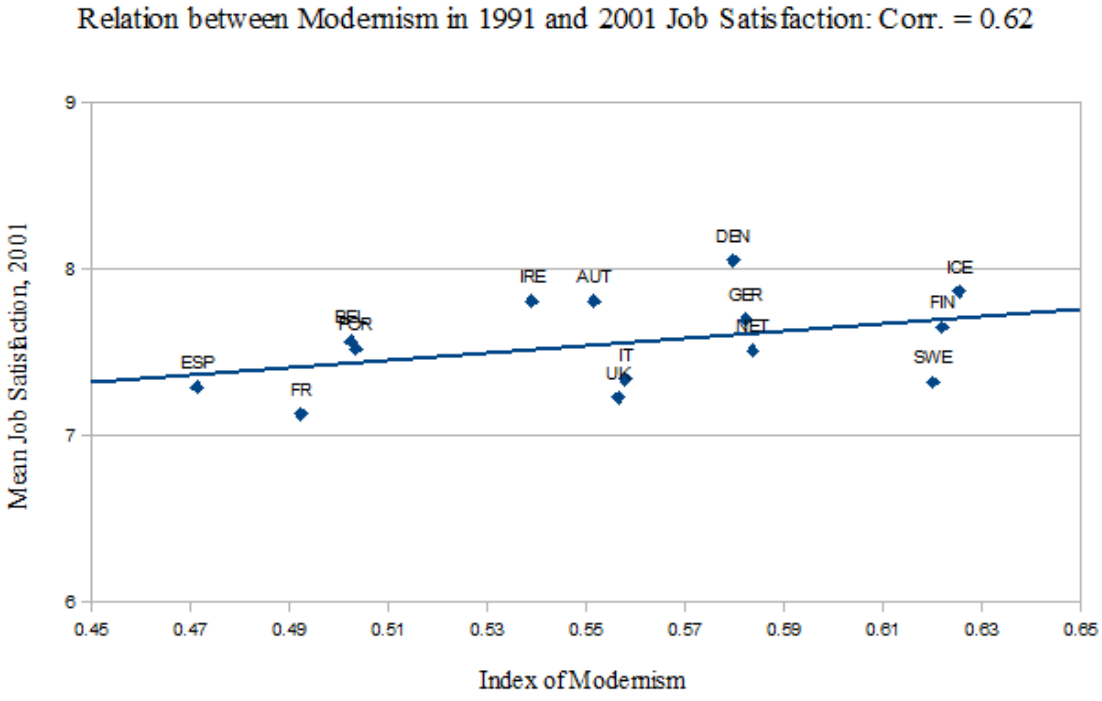


Figure 2: Modernism in 1991 and job satisfaction in 2001.



To address the concerns related to reversed causality, we consider the relation between modernism, as estimated on the basis of the second wave of the WVS in 1991, and job satisfaction in 2001. Clearly future job satisfaction is not very likely to cause past levels of modernism. The relation can be seen on Figure 2. We find an even higher correlation of 0.62 between the two and a much lower level of unexplained variation in the data. Unfortunately, the scope of these findings is somewhat limited by the absence of 2001 job satisfaction data for the US, Japan, and Norway. All in all, however, Figure 2 supports the hypothesis of a positive association between modernism and job satisfaction. It also indicates that if there is a causal relation, it is likely to go from modernism to job satisfaction rather than the other way around.

Next, we investigate the relation between job satisfaction and traditionalism. Figure 3 plots job satisfaction in 1991 and the level of traditionalism across countries according to our index. There appears to be less unexplained variation relative to the corresponding plot of job satisfaction and modernism. To address concerns about reversed causality, we plot on Figure 4 job satisfaction in 2001 and the index of traditionalism based on the 1991 data from the World Values Survey. Similarly to Figure 3, we find a negative correlation, equal to –0.42. Again, it depends on Spain, Portugal, France, and Italy. Both Figure 3 and Figure 4 indicate the possibility of a hump-shaped relation between traditionalism and job satisfaction. In small to moderate levels it improves welfare, possibly through cooperation and social trust due to strong social bonds. However, in very large doses, it becomes a brake to development and leads to stagnation and lack of satisfaction. Again, the unexplained variation is low, but we also find some evidence for heteroskedasticity in traditionalism.

Figure 3: Traditionalism in 1991 and job satisfaction in 1991.

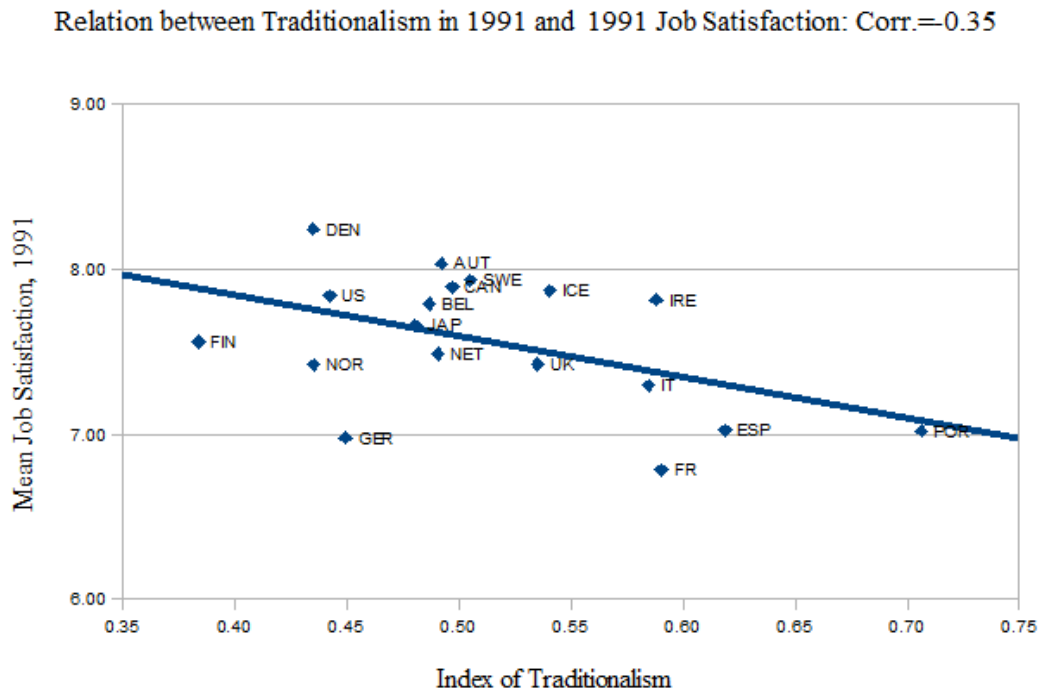
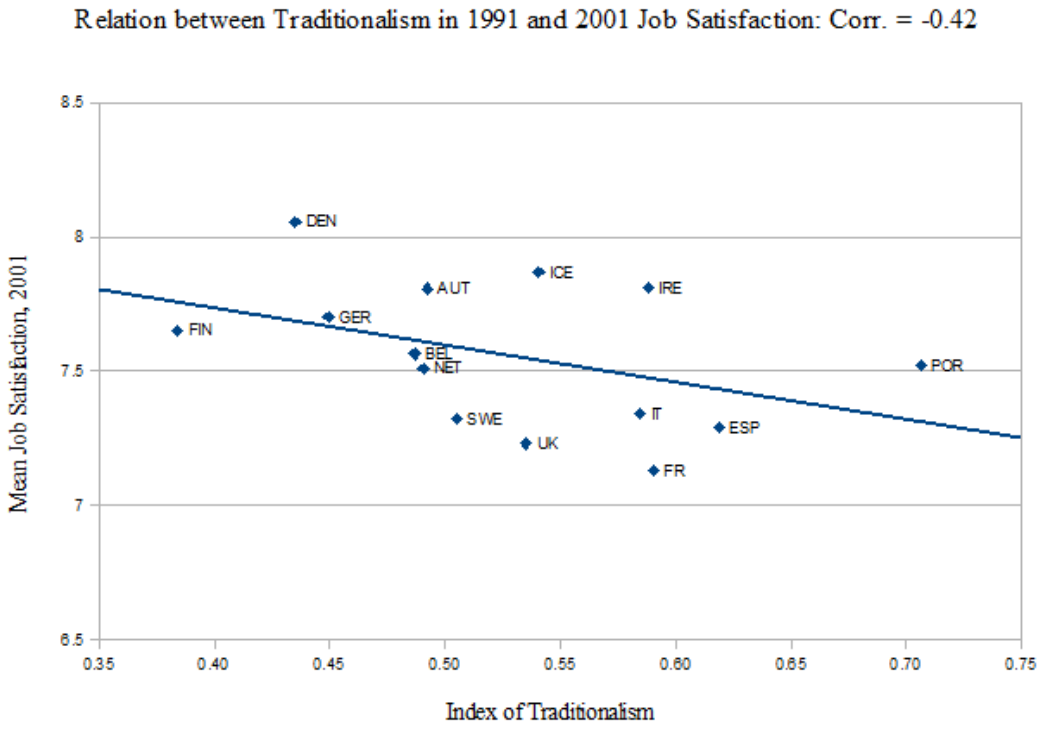
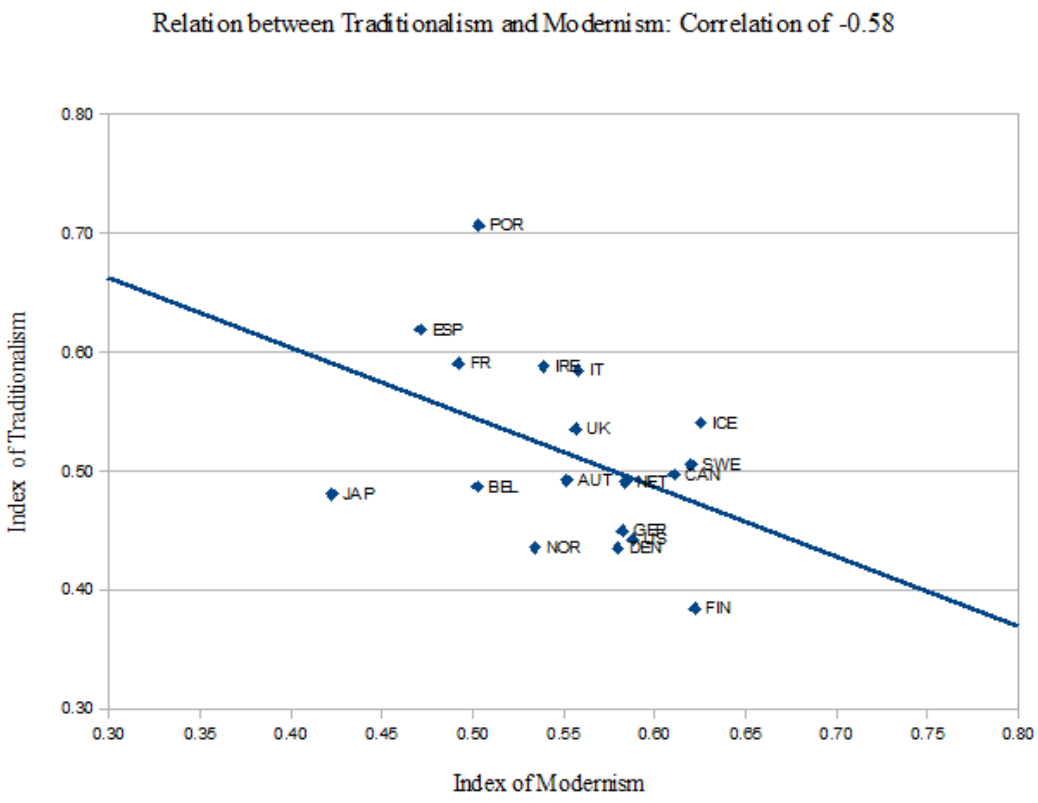


Figure 4: Traditionalism in 1991 and job satisfaction in 2001.



Finally, in Figure 5 we explore the relation between traditionalism and modernism. We find a strong negative correlation of 0.58 with little variance. This finding conforms to our expectation that an increase in modernism is associated with a decrease in traditionalism. However, we have not imposed such a relation on the data through some theoretical restriction when designing the indexes. Thus, the negative correlation is reassuring in the sense that it coincides with our preconceptions based on previous studies in economics and in other social sciences.

Figure 5: Relation between modernism and traditionalism.



4.2 Panel Data Analysis

As already noted above, another major concern is that the correlations presented in Figures 1 to 4 do not control for other factors, such as wage, job security, tax burden, time effects, etc. In what follows, we use some reduced-form regression specifications to address some of these issues. The limited size of our sample, driven mainly by data restrictions, precludes us from applying a more ambitious econometric framework to test for causal relation or control for the effect of other covariates.

Given the data limitations that we face, we estimate a panel data model in which we regress job satisfaction in a given year on our indexes of modernism and traditionalism and some covariates. We considered both fixed effect and random effect specifications in our preliminary regression analysis, where the two dimensions are year and country. Under the random effects specification, we can capture the effect of the two indexes on job satisfaction. However, this specification is applicable only when the unobserved country effect is not correlated with the observed explanatory variables. This is a very strong assumption, but in a preliminary step we perform a Hausman test for each of the models reported in Tables 3 and 4. In each of the tests, we fail to reject the null hypothesis that there are no significant differences between the coefficient estimates under fixed effects and random effects. These test results imply that we can focus the following discussion on the random effects specifications.

We start by statistically testing the relations that we explored in the preceding subsection. The results are reported in Table 3, Models 1 to 4. Model 1 represents a simple regression of job satisfaction in 1991 on our index of traditionalism. The estimated coefficient is negative, but not statistically significant. This result suggests that traditional values do not necessarily have a negative effect on job satisfaction in a

modern world. Indeed, visually exploring Figure 3, we observe that the relation between traditionalism and job satisfaction follows an inverted U pattern: for relatively low levels of traditionalism, the relation is positive, but for very large levels of traditionalism it is negative. Social bonds and trust that can be derived from traditional values may improve employment outcomes and job satisfaction. However, too much traditionalism may become an impediment to innovation, development, lead to many controls, checks and balances, which affect job satisfaction negatively. We explored a quadratic specification for traditionalism, but the added quadratic term was not significant.

Next, we regress job satisfaction on our index of modernism. This time, we find a strongly positive and statistically significant relation. This finding is in line with the visual analysis in the preceding subsection. Indeed, the regression analysis suggests that if modernism in the population increases by 1 per cent the level of job satisfaction increases by more than 4 per cent. The fact that the constant under Model 2 in Table 2 is statistically significant potentially indicates that we have (not surprisingly) omitted important covariates in our specification.

Model 3 in Table 3 considers a regression of job satisfaction on both modernism and traditionalism. The high positive effect of modernism from Model 2 survives the introduction of the new covariate. It only decreases in magnitude to 3.29. On the other hand, once controlling for modernism, traditionalism now has a negative effect on job satisfaction equal to –1.01. This effect is, however, not statistically significant.

The discussion of Model 1 would suggest that we should explore a more flexible specification for the effect of traditionalism on job satisfaction. We considered a quadratic specification and a specification using orthogonal polynomials

of order 3 for both traditionalism and modernism. Unfortunately, we did not find that allowing for greater flexibility leads to a significant improvement in the fit. We suspect that the reason why we cannot find non-linearities in the relation between job satisfaction, on one hand, and traditionalism and modernism, on the other, is the small sample size.

Finally, in Model 4 of Table 3 we introduce a dummy year to control for any cyclical or year-specific effects. This new specification does not seem to improve the fit significantly. All of the preceding specifications do not truly explore the panel structure. In what follows, we introduce some obvious "neo-classical" covariates that very likely affect job satisfaction. In particular, we consider wage, job security, and income tax.

As previously pointed out, modernism may directly and indirectly affect job satisfaction. When modernism and traditionalism create jobs with very high employee compensation and high compensation leads to a positive effect on job satisfaction, then we say that modernism and traditionalism indirectly have a positive effect on job satisfaction. Alternatively, an appropriate mix of modernism and traditionalism may have a positive effect on job satisfaction directly because they provide the right blueprint for action in the modern world and in doing so they reduce the disutility associated with working. In our work here, we do not try to identify the direct from the indirect channel. Instead, we try to test whether the established relations in Models 1 to 4 survive the introduction of some neo-classical controls. Put even more strongly, we would like to test whether we can find an alternative explanation, rooted in the neo-classical economic theory, for the differences in job satisfaction.

We start by introducing wage to the set of explanatory variables in Model 4. A reader might wonder whether the sources of high job satisfaction lie primarily in the

size of the paycheck rather than in the experience of work the job provides. If modernism is just a proxy for a set of conditions that lead to high wages, then introducing wages should annihilate the previously observed effects of modernism and traditionalism. Instead, wages would be the only significant variable. The regression results are reported in Table 4, Model 5. We find that the introduction of wages does not much change the estimated effects of modernism and traditionalism. Moreover, the coefficient of wages is very close to zero and not statistically significant.

Model 6 in Table 4 introduces job security as an explanatory variable. Again, if modernism and traditionalism (in particular) are just proxies for a set of conditions that generates secure jobs, the introduction of job security should wipe out any independent effect of our indexes on job satisfaction. Again, we do not observe such a phenomenon. The estimated coefficient of job security is positive, 0.84, but it is not statistically significant. Interestingly, the introduction of job security leads to a sharper negative estimate of the effect of traditionalism. This finding suggests that traditionalism tends to generate jobs that are stable, leading to higher job security. However, once we control for job security, the residual effect of traditionalism is unequivocally negative.

Next, we consider a specification in which we introduce both wage and job security as controls. The regression results are reported under Model 7, Table 4. We observe that modernism continues to have a very high positive and significant effect on job satisfaction. Traditionalism has an effect similar to the effect recorded under Model 5. Within this specification, it appears that job security is more important control than wages. This finding suggests that controlling for modernism and traditionalism, as well as for job security, pecuniary rewards do not really improve job

satisfaction.

4.3 Robustness Checks: Reversed Causality

The regressions in the previous subsections evaluated the relation between job satisfaction, modernism, and traditionalism while controlling for the effect of some important covariates. However, they could not address the concern about reversed causality. In this subsection, we consider some robustness checks to our regression specifications from above.

To limit the effect of reversed causality, we consider a specification in which job satisfaction in 2001 is regressed on modernism and traditionalism in 1991, as well as wages and job security. Thus, we limit our sample to the 14 countries for which we have data on job satisfaction in 2001. The countries for which we do not have such data are Canada, Belgium, Japan, Norway, and the US. We estimate the model using ordinary least squares. Given our hypothesis that modernism has a positive effect on job satisfaction, we expect to find that modernism in 1991 still has a positive effect on job satisfaction in 2001. Alternatively, if job satisfaction shapes the beliefs and attitudes of the respondents to the WVS, we would expect that beliefs and attitudes of a decade ago would have no or little effect on job satisfaction.

Our underlying assumption here is that, under the alternative hypothesis of job satisfaction causing self-congratulating beliefs, recent and current job satisfaction completely explains current beliefs and attitudes. In contrast, under the null hypothesis that economic culture affects job satisfaction, the stability of the beliefs and attitudes over time suggests that modernism and traditionalism of 1991 can still explain some of the variation one decade later. Indeed, if we find that the estimated coefficients are close to the coefficients from the panel data regressions, the empirical

evidence will be consistent with very stable beliefs and indicate that our random effects specification in the preceding subsection was econometrically appropriate.

Tables 5 and 6 report the results. Model 8 considers the relation between job satisfaction in 2001 and traditionalism in 1991. As before, the estimated coefficient is negative, but not statistically significant. Next, we regress job satisfaction in 2001 on modernism in 1991. The regression results are shown under Model 9 in Table 5. We find a strongly positive and statistically significant relation, which is consistent with our results in Table 3. The regression analysis suggests that if modernism in the population increases by 1 percent the level of job satisfaction increases by about 5.5 percent.

Model 10 in Table 5 considers a regression of job satisfaction in 2001 on both modernism and traditionalism in 1991. The strong positive effect of modernism survives the introduction of traditionalism as a covariate. It only decreases in magnitude to about 4.75. On the other hand, we find that for all intents and purposes, traditionalism has no effect on job satisfaction.

Next, we introduce wages and job security as controls. We start by introducing wage to the set of explanatory variables. The regression results are reported in Table 6, Model 11. We find that the introduction of wages actually leads to an increase in the size of the coefficient of modernism to 5.6. The estimated effect is significant in both an economic and a statistical sense. At the same time, the coefficient of traditionalism becomes positive but not significant. Moreover, the coefficient of wages is very close to zero, suggesting that wages have no independent explanatory power once we control for modernism and traditionalism.

Model 12 in Table 6 introduces job security as an explanatory variable. The estimated coefficient of job security is positive but not significant. Interestingly, the

introduction of job security leads to very noisy estimates of the coefficient of job satisfactions, which decreases in both size and significance. We suspect that this development is due to the high correlation between job security and modernism.

Finally, we consider a specification in which we introduce both wage and job security as controls. The regression results are reported under Model 13, Table 6. We observe that the coefficient of modernism recovers its magnitude to 5.23 and the precision of the estimates improves considerably relative to the results reported under Model 12. Thus, the results suggest that controlling for modernism and traditionalism, as well as for job security, pecuniary rewards do not really improve job satisfaction.

On the basis of these results, we conclude that, even within the more restricted setting explored in this section, there is a very strong and positive relation between modernism and job satisfaction. Moreover, the estimates in Tables 5 and 6 have the same magnitude, sign, and precision as the estimates in Tables 3 and 4. This finding provides some comfort that our panel data specification is appropriate.

5. Conclusion

In this paper we introduced the hypothesis that economic beliefs and attitudes can be classified as traditionalist and modernist. We constructed an index of traditionalism and an index of modernism and investigated how these relate to individual welfare, measured in terms of job satisfaction. We found that even after controlling for the effects of wages, job security, and the redistributive role of the state, modernism is very strongly and positively related to job satisfaction. We are aware of the limitations of our work, mainly due to the limitations of the available data. For this reason, we do not venture bold predictions and policy recommendations. However, we hope that our paper will provoke more interest in the relation between economic culture and economic performance, in particular in the study of traditional and modern values.

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Table 3. Panel data analysis of the relation between job satisfaction, modernism, and traditionalism.

	Model 1		Model 2		Model 3		Model 4	
job satisfaction	Coef.	t	Coef.	t	Coef.	t	Coef.	t
traditionalism	-1.73	-2.46			-1.01	-1.39	-0.99	-1.33
modernism			4.14	3.2	3.29	2.19	3.31	2.2
year							-0.03	-0.31
constant	8.49	22.8	5.18	6.21	6.20	5.19	6.20	5.18
Obs	32		32		32		32	
R^2	0.25		0.29		0.34		0.34	

Table 4. Panel data analysis of the relation between job satisfaction, modernism, and traditionalism, controlling for some important covariates.

	Model 5		Model 6		Model 7	
job satisfaction	Coef.	t	Coef.	t	Coef.	t
traditionalism	-0.31	-0.28	-1.13	-1.48	-0.33	-0.3
modernism	4.11	2.19	3.01	1.2	3.92	2.2
wages	0.01	0.84			0.00	1.2
perceived job security			0.41	0.88	0.50	5.02
income tax						
year dummy	-0.05	-0.48	-0.02	-0.18	-0.04	-0.38
_cons	5.14	11.2	6.20	5.19	4.91	2.19
Obs	32		32		32	
R^2	0.35		0.35		0.41	

Table 5. Regressions of job satisfaction in 2001 on modernism and traditionalism in 1991.

	Model 8		Model 9		Model 10	
job satisfaction	Coef.	t	Coef.	t	Coef.	t
traditionalism	-1.3	-1.6			-0.2	-0.23
modernism			5.04	3.01	4.76	2.23
constant	8.28	18.19	4.64	4.75	4.91	3.14
Obs	14		14		14	
R^2	0.18		0.38		0.43	

Table 6. Regressions of job satisfaction in 2001 on modernism and traditionalism in 1991, controlling for some important covariates.

	Model 11		Model 12		Model 13	
job satisfaction	Coef.	t	Coef.	t	Coef.	t
traditionalism	0.48	0.37	-0.4	-0.4	0.32	0.24
modernism	5.6	2.3	4.39	1.88	5.24	2.58
wages	0.001	0.77			0.001	0.83
job security			0.28	0.49	0.36	0.61
constant	3.8	1.77	5.06	3.07	3.86	1.74
Obs	14		14		14	
R^2	0.46		0.45		0.48	