

Bringing Putnam to the European Regions: On the (Ir)Relevance of Social Capital for Economic Growth

Steffen Baumann/Gerald Schneider
Faculty of Public Policy and Management
University of Konstanz
Box D 86
D-78457 Konstanz
Tel: +49-7531-88-2608/3081
Fax: +49-7531-88-2774
Email: Steffen.Baumann@uni-konstanz.de
gerald.schneider@uni-konstanz.de

One of the most influential contributions to the study of political culture of the 1990s is Robert D. Putnam's book on the positive impact that interpersonal trust supposedly has on economic welfare and the effectiveness of political institutions in Italy. We evaluate this hypothesis in a wider sample of regions by analyzing quantitatively the role that political culture has on economic growth in the regions of the European Union. We first develop a neoclassical growth model and incorporate political culture variables into this framework. Our cross-sectional regression results cast strong doubts on the generalisability of Putnam's bold claims. The analysis particularly shows that economic rather than cultural factors are the driving forces in the European regions.

Version 1.0 (May 20, 1999)

Paper prepared for presentation at the biannual conference of ECSA, Pittsburgh, June 3-5, 1999.

1. Introduction

When Robert D. Putnam published *Making Democracy Work* in 1993, commentators immediately heralded this book as a major breakthrough. *The Economist* even went as far as ranking this “great work of social science alongside de Tocqueville, Pareto, and Weber”. The academic discussion that the volume incited was equally intensive, but, by contrast, much more prosaic. While Putnam’s work certainly contributed to the revival of political culture as an important theoretical concept, some critics questioned the logic of his broad generalizations or doubted the reliability of some of the chosen indicators (e.g. Goldberg 1996; Tarrow 1996; Maraffi 1996; Levi 1996; Whiteley 1997).

In this paper, we take issue with one of Putnam’s central hypotheses and test whether a distinctive and well-developed political culture furthers economic growth. *Making Democracy Work* examines the relationship between civic traditions and economic development in a comparison of the Italian regions. Putnam (1993:152) describes the bivariate results he obtained with his collaborators Robert Leonardi and Raffaella Y. Nanetti as “powerful - almost mesmerizing -” and concludes: “A region’s chances of achieving socioeconomic development during this century have depended less on its initial socioeconomic endowments than on its civic endowments.the contemporary correlation between civics and economics reflects primarily the impact of civics on economics, not the reverse” (ibid.: 157). In Putnam’s view, it is largely a region’s reliance on horizontal social networks that is conducive to economic growth. Hence, if individuals are able to cooperate freely in non-hierarchical associations, they start to trust each other and thereby strengthen the social capital of their society.

Although Putnam’s work contributed to the renaissance of political sociology, no conclusive judgment is yet in sight on whether or not the envisioned nexus between culture and economic growth really exists. One reason for this stalemate is to some extent that researchers are using different research designs and rely, in contrast to Putnam, most often on the nation state rather than the individual region as unit of analysis. Further, examinations differ with respect to the control variables, temporal domain and the definition of culture.

It does not come as a surprise therefore that very different results have been obtained so far. Whiteley (1998:17, see also 1997) for instance shows in a pooled cross-section that the impact of social capital on growth is “at least as strong as the influence of human capital or education” and a variable measuring the influence of convergence between poor and rich states. Commenting upon the studies by Granato et al. 1996 and Swanke (1996), Jackman and Miller (1996), conversely, are much more skeptical and stress the need for examinations that at least try to account for the mediating influence that institutions exert on human behavior.

While relying as closely as possible on Putnam’s definitions and research design, we extend the framework of analysis to the regions of the European Union. Our statistical analysis strongly suggests that the effect of three variables measuring different facets of political culture on economic growth is at best marginal or even pointing into the wrong direction. Neither the average schooling level of the regions nor the intensity with which their inhabitant discuss politics are significantly related to economic progress. Further, and even when we control for a region’s initial GDP and other salient economic variables, regions where the average individual is not well informed about politics are more likely to experience strong economic growth than entities with better informed citizens. The economic variables that we derive from modern models of growth are, conversely, systematically related to the performance of the regional economies. The export orientation and the level of public investment in a region exhibit a particularly strong influence.

The paper is structured as follows: We will derive the hypotheses after a brief review of the extant literature on the nexus between political culture and economic growth. Next, we will introduce our research design, operationalize the theoretical concepts and present our data sources. We will conclude with a presentation of the statistical results and a brief conclusion.

2. Theoretical Overview and Derivation of Hypotheses

The concept of political culture has played a central role in the social sciences at least since Weber's ([1921] 1972) classic treatise on the role that Calvinism played for economic growth. Yet, the hypothesis that the success of a society not only depends on its incentive structure but also on the broad set of cultural factors remained largely unexplored. This lamentable situation only changed considerably with the publication of Robert D. Putnam's (1993) evaluation of the impact that civic traditions have on the economic performance of Italian regions. His treatment of cultural factors departed significantly from the concepts used in earlier studies. He particularly stated that one specific facet of political culture, namely the social capital that a society accumulates through trust, norms, and networks, plays a crucial role.¹ In his view, these distinctive features of a social entity can improve the efficiency of a society by helping to overcome collective action problems. He illustrated this effect through the example of a rural community in which mutual trust allows "each farmer to get his work done with less physical capital in the form of tools and equipment" (Putnam 1993:167).

Putnam's empirical finding echoes the central tenet of the literature on social capital. Both Bourdieu (1983) and Coleman (1990) for instance expect that social capital, once established, facilitates interaction. If one group member trusts another individual, not the least based on the expectation that this personal 'investment' will be reciprocated, the human capital stock of a society grows. According to Faist (1995), social capital is, thus, ultimately the network one is bound into.

Putnam further contended that only horizontal networks have these beneficial consequences, assuming that vertical information transmission is comparatively unreliable and that in an authoritarian structure sanctioning upwards is unlikely. In his view, "Only a bold or foolhardy subordinate, lacking ties of solidarity with peers, would seek to punish a superior" (Putnam 1993:174). This observation is the base for the hypothesis that hierar-

¹ Coleman (1990: 304) defines social capital as the change of the relation between individuals in a way that facilitates action: Physical capital and human capital facilitate productive activity, and social capital does so as well. For example, a group whose members manifest trustworthiness and place exclusive trust in one another will be able to accomplish much more than a comparable group lacking that trustworthiness and trust." He attributes the concept to the writing of Loury (1977, 1981). For an overview see Haug (1997).

chically structured organizations like the Church and the Mafia are conducive to bad government. Since the influence of these organizations differs regionally in Italy, successful forms of government are more likely to emerge in those parts of Italy where the horizontal networks are strong. Obviously, the Tuscany and the Veneto regions rather than the *Mezzogiorno* are supposedly blessed with governments that help stimulate the economy.

Drawing a line from a society's network structure to its economic growth rates, Putnam and his collaborators traced the economic gap between Northern and Southern Italy back to the different civic traditions that had their origin in the 11th century. Putnam rejects the possibility of an inverse causal arrow and writes: "The civic regions did not begin wealthier, and they have not always been wealthier, but so far as we can tell, they have remained steadfastly more civic since the eleventh century" (1993:153). Simple bivariate correlations between civic traditions and three indicators of socioeconomic development, by and large, confirm this hypothesis²

While helping to reinvigorate the study of political culture, this equally simple, bold, and elegant explanation received much attention and criticism³. Boix and Posner (1998) for instance criticize that social capital just as any other form of capital can be produced as well as destroyed within a short period of time. In their view, it is implausible that certain levels of social capital survive 600 years of history. Laitin (1995) attacks the big bang character of Putnam's account while Golberg (1996) qualifies it as "teleological". Similarly, the Italian scholars who reviewed the book, most notably Maraffi (1996), contend that *Making Democracy Work* overestimates the impact that the Italian dukes supposedly had on the course of history. Sabetti (1996) points out with reference to Cattaneo (1957) that Putnam did not discuss some classic Italian explanations of the crisis in the *Mezzogiorno*. Goldberg (1996) also shows that some of the tests lead to less straightforward results than claimed in *Making Democracy Work*, a result that is strongly echoed in the evaluation by Jackman and Miller (1996a). Be that as it may, Putnam contends that the trend continues to be influential into the present period, stating that "Over the past two

² . It should be noted that these tests are restricted to the development since the second half of the 19th century. Putnam partly uses principal component analysis to build the indicators.

³ Putnam's analysis particularly contributed to the growing interest in interpersonal trust. See for instance Braitwaite/Levy (1998) and Ostrom (1998) for reviews of the literature and further developments.

decades since the birth of the regional governments, civic regions have grown faster than regions with fewer associations and more hierarchy” (Putnam 1993: 176).

Unsurprisingly, this strong conclusion awoke the research interest of a considerable number of comparativists. Table 1 summarizes the most important studies that have been written on the relationship between culture and growth during the last few years.

Table 1: Summary of Statistical Studies of the Culture-Growth Relationship

Author(s)	Temporal Domain & Unit of Analysis	Estimation Techniques	Control Variables	Main Findings
Putnam et al. 1993.	11 th century to the early 1990s	Bivariate Correlations (19 th and 20 th century only)	None	High levels of civic culture promote growth
Whiteley. 1997, 1998	1970-1992 34 countries	Panel OLS-Regression	Education, Convergence, Democracy	Neoclassical models that incorporate cultural variables are superior to traditional models of economic growth
Granato et al. 1996 a, b.	25 Countries Mean rate of growth 1960-89	Cross-section OLS Regressions	GDP per Capita in 1960, education, investment, (post-)materialism	Models incorporating culture are more powerful than traditional neoclassical models
Swanke. 1996	25 Countries Mean rate of growth 1960-89	Cross-section OLS Regression	Corporatism, Confucianism	Communitarian polities, a correlate of social capital, are an important prerequisite of growth
Jackman and Miller. 1996a, b.	25 Countries Mean rate of growth 1960-89	Cross-section OLS Regression	Education investment, colonialism	The right mix of institutions is the key variable promoting economic growth

While Putnam’s analysis remained on a purely bivariate level, most researchers immediately moved to multivariate research designs, systematically incorporating the insights from neo-classic growth theory and occasionally relying on pooled cross-sections. However, all prominent studies rely on the nation state rather than the region as the basic

unit of analysis.⁴ Paul Whiteley (1997, 1998) for instance shows in a comparison of 34 countries over a period of 22 years that a neoclassical model of economic growth gains dramatically from the incorporation of cultural variables. High levels of social capital promote growth, and this regardless of the economic structure or even the degree of democracy that characterizes the political system. Furthermore, cultural variables are just as powerful predictors as education or human capital, variables that are typically used in the empirical tests of economic growth theory.

The insights that can be gained from the exchange between Granato, Inglehart and Leblang (1996 a, b), Jackman and Miller (1996a, b) and Swank (1996) are less straightforward. The authors of these articles all rely on the nation state as a unit of analysis and employ pooled cross-sections to estimate the impact of cultural factors on economic growth. While Granato, Inglehart and Leblang (1996a, b) believe in the superiority of refined models of economic growth, Swank (1996) stresses the importance of other cultural factors than the research group around Ronald Inglehart does. In his view, corporatist and confucianist values drive economic growth. Jackman and Miller (1996a: 635), state that culture does not have systematic effects on growth. They write in their conclusion that “further attempts to refine and test the case of political culture along the lines we have addressed ... are unlikely to be productive” (1996a, 654)⁵. This position is based on an institutional research design which proves more fruitful than the culturalist explanations in the macroquantitative tests. They particularly criticize that the conclusion of the other studies relies heavily on the incorporation of dummy variables. Granato, Inglehart and Leblang (1996a, b) control for the impact of certain Asian countries, while Swank (1996) employs two dummy variables to account for corporatist and confucianist values.

The controversy over the relative impact of cultural factors on economic growth has thus not yet led to a clear result. One reason for this impasse might be that authors rely

⁴ A partial exception is the study of Mudambi and Navarra (1999) on the influence of political culture on foreign direct investment. These authors treat “culture”, however, largely as a substitute for political ideology, showing that Italian regions with leftist leanings receive far less FDI than more conservative regions.

⁵ Jackman/Miller (1996a) also evaluate the hypothesis by Putnam that civic culture furthers institutional performance. Their analysis reveals major problems in the construction of the institutional performance indicator.

on different notions of culture or employ other temporal and spatial domains than Putnam and his collaborators did.

This study wants to contribute to this debate in a multivariate evaluation of Putnam's original claim. In contrast to most other studies, we rely on the same unit of analysis as Putnam did. Our comparison of the regions of the European Union has the particular advantage that the economic disparities within the countries do not confound our results. The German and the Italian case can illustrate that the discrepancies between the regions severely distort the implicit assumption of cross-country studies that such discrepancies between subunits do not matter. The GDP per capita in Hamburg, the richest region in Germany, was more than six times higher than the income per head in Thuringia in 1991 while average people in Lombardia earned more than the double in comparison to their compatriots in Calabria.

A further difference between our study and the extant literature is that we use a modern model of economic growth as a starting point, believing that any kind of new hypothesis has to be tested against the best evidence existing in the field. We will particularly control for the effect that the export orientation of a region, its previous growth, the level of public investment, and other salient characteristics of a regional economy have on the economic performance. In pathbreaking studies, Romer (1986, 1994), Rebelo (1991) and Barro (1994) have recently shown that the determinants for economic growth differ widely across regions. Their endogenous growth models extend neoclassical economic theory. The traditional approach predicts a convergence process due to the decreasing return on investment after a country's economic take off and accordingly holds savings rates and population growth responsible for economic growth (Solow 1956; Swan 1958). The more recent studies, by contrast, uncover a set of further variables and particularly point out that education and public investment play a crucial role. Accordingly, the measures by a government at the regional or national level are highly influential for the growth path that an economy takes. Since such political choices are often considered to be influenced by cultural factors, it seems not farfetched to draw a causal arrow from culture to economic growth and to test, as we do in this study, whether the claims made by Putnam and others receive empirical support.

Most studies of the growth patterns in the European regions have confirmed the hypotheses which can be derived from endogenous growth theory. Barro (1994) for instance introduces a lagged education variable as a measure of human capital. His cross-sectional analysis shows that political factors such as the 'rule of law' in a region and democracy as well as education have a strong positive impact on economic growth. Armstrong (1995), Barro (1994), Neven/Gouyette (1995) and others also support the hypothesis that there still is a trend towards economic convergence in the European Union. Neven/Gouyette (1995) contend that the Internal Market Program slowed down the process of catching up a bit. Armstrong (1995) confirms that the trend was more pronounced in the 1960s.

To sum up, advanced research in political science as well as economics suggests that growth is not only determined by economic factors. It remains, however, unclear whether political culture and social capital are really as neglected as resources of economic growth as Putnam and his followers try to show us since the publication of *Making Democracy Work*. We will summarize the different influences on economic growth in two hypotheses. We start with a generalizing baseline hypothesis that reflects the state of the art in the new studies in economics on the determinants of economic growth. Hypothesis 2, by contrast, states that different levels of political culture can be responsible for different levels of economic growth.

H1: The lower government consumption, the worse the starting conditions, and the higher public investment in a political entity, the faster is the economic growth of a region in the European Union.

H2: The more advanced the political culture of a region in the European Union, the faster is its economic growth.

We will test the second hypothesis by using different measures of political culture. We outline the research design below.

3. Research Design

Our analysis is based on a cross-sectoral evaluation of the determinants of growth in the regions of the European Union. We will use a standard OLS regression model to test the political culture hypothesis that Robert D. Putnam and his collaborators forcefully advanced in *Making Democracy Work*. Since political culture is a multi-dimensional concept, we will use different variables to measure its possible impact. We will include measures of the aggregated political orientation of these regions and the information density. A third variable finally measures the average number of times that the respondents in the region discuss political matters with their friends and try to convince others of their standpoint with regard to social and political matters. Especially the second and the third indicator are measures of the social capital endowment of a region and reflect the diverse forms that social networks can take.

We will discuss the eventual heteroskedasticity of our findings in our presentation of the data analysis. These problems might be particularly relevant since the growth patterns in the European regions might largely follow a country-specific pattern. Please note that this is also the case for Inglehart's recent book (1997) where Figure 7.1 clearly demonstrates that common growth trends are largely confined to some geographic regions⁶. In our sample of cases, strong country-specific influences particularly influenced the Greek regions which all had above-the-average growth rates exceeding the corresponding figures in comparable regions. To control for the ensuing effect, we have introduced a Greek dummy in our statistical analysis.

Our most encompassing model to test the political culture hypothesis looks as follows:

$$DGDP = \alpha + \beta_1 \cdot CULTURE + \beta_2 \cdot EDUC + \beta_3 \cdot INFOINDEX + \beta_4 \cdot GREECE + \beta_5 \cdot \ln GDP + \beta_6 \cdot EXPORT + \beta_7 \cdot INV + \beta_8 \cdot \ln GDPGOV + \beta_9 \cdot GOV + \varepsilon$$

⁶ The study by Granato et al. (1996b, 612) that illustrates that insights gained from a cross-national comparison might not hold in all subsamples under consideration. Hence, their study displays three clusters of countries

where DGDP is the change in GDP per capita from time t_0 to t_1 , CULTURE is our measure of social capital, EDUC the duration of formal schooling in years of the average member of the region, INFOINDEX the degree to which citizens employ different media sources for information on everyday life and political issues, GREECE a dummy variable for the Greek regions, lnGDP the level of wealth in the previous period, EXPORT the share of exported goods and services in the balance, INV the quota of private investment in the economy, lnGDPGOV the product of levels of welfare and the governmental spending as a share of the GDP, and finally GOV the share of government spending.

We will rely on the NUTS I categorization (Nomenclature des Unités Territoriales Statistiques-I) which the European Commission has developed to identify the regions within the European Union.⁷ This categorization is unproblematic for most federal states since the regions correspond to the subterritorial states like the German *Länder*, the *Comunidad Autónomas* in Spain, the Italian *Regione*, or the *Régions* in Belgium. The regional policy of the European Union has, on the other hand, also led to the distinction between similarly sized regions in some of the unitary states. Quite often, the demarcations are thus not completely arbitrary, but reflect the differentiation between distinctive cultural and economic entities that have continued to exist despite an eventual centralization of the political system and the ensuing lack of autonomy at the regional level.

We will compare the determinants of economic growth in the time from 1989 to 1993. During this period, the European Commission differentiated between 73 NUTS I regions. Since we do not possess longitudinal data on the development of social capital in the regions, we will employ a cross-sectional regression design to test our hypotheses. To control for the changing growth rates, we build average values.

Our examination is based on standard data sources. To gather data on political culture, we relied on the Eurobarometer survey 44.0 which was carried out between Oc-

(Africa, East Asia and the OECD world) while they only control for the East Asian group in their multivariate tests.

⁷ The European Union has divided each country into territorial units for administrative and statistical purposes. There exist three types of classifications NUTS I, II, and III with the first being the largest and the last being the smallest units by size. The categories do not necessarily correspond to national administrative units.

tober and November 1995 (Zentralarchiv Study Number 2689, 1996). We created average values per region for two of our three indicators of political culture CULTURE and EDUC. Information that yielded the variable INFOINDEX was only available on the aggregate national level. For the economic variables, we relied on data that was published by the "Office for official publications by the European Unions", Luxembourg (Europäische Kommission 1994). The measures are constructed as follows: DGDP is the change in the regional GDP between the average of the years 1989 through 1991 to 1992; INV is the percentage of public investments of the state budget; EXPORT measures the average share that exports had in the nation level GDP during the examination period. These three variables are measured in percentages. The variable CULTURE is constructed by the multiplication of respondents' answers to the Eurobarometer items "Discuss Politics" and "Convince Friends"⁸. These two questions allow respondents to express on a scale from 1 to 4 how frequently they discuss politics and try to convince friends of their own political and social point of view. We arrived at the information-index, INFO, by counting the number of sources of information that the respondent in a region employed for daily use. EDUC, finally, counts the number of formal education that the respondents had undergone.

Table 2 contains the descriptive statistics of the variables used in this study; the data themselves will be made available by the authors after the publication of the article.

⁸ The Eurobarometer question is: "How often do you, if at all, discuss politics/try to convince friends?" Respondents chose answers from a scale 1 through 4. Accordingly, the scale for CULTURE, the product of two items, ranges from 1 to 16.

Table 2: Descriptive Statistics of the indicators used in this study

<i>Variable</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>
<i>DGDP</i>	-11	16	3.10
<i>INV</i>	16.02	28.46	20.44
<i>EXPORT</i>	19.31	95.68	30.45
<i>GOV</i>	14.50	27.19	18.53
<i>CULTURE</i>	3.45	6.25	4.72
<i>INFO</i>	3.48	7.90	4.57
<i>LnBIP</i>	3.4012	5.270	4.47
<i>LnBIPGOV</i>	63.07	125.75	82.49
<i>EDUC</i>	11.21	20.47	15.98

2. The Impact of Social Capital and Political Culture

This section contains the preliminary results that we obtained in our tests of the Putnam hypothesis on the impact of political culture on economic growth. We will first discuss the political economy of growth across the European regions and then move on to the multivariate tests.

Table 3 reports the differences in the dependent variable and the political culture variables in a comparison of the member states of the European Union. A corresponding table with information on all regions can be found in the appendix. Both tables clearly show that considerable differences exist, and that the north-south-divide of Italy in political culture is not mirrored by a same cleavage in the comparison of the member states.

Table 3: The intensity of political discussion, the level of education, the average change in GDP and the number of respondents in the member states.

Country	Discuss Politics*Convince Friends	Years of formal schooling	Number of Information Sources	Change in GDP (1989-'91=t0 1992=t1)	N Respondents
Austria	4.73	16.00	6.59	7.0	1015
Belgium	4.52	18.35	4.00	6.0	1071
Denmark	5.23	20.47	5.85	1.0	1000
Finland	4.17	17.97	7.54	1.4	1032
France	4.34	17.21	4.50	0.3	1001
Germany	5.09	16.00	4.45	4.4	2090
Greece	5.52	14.50	4.49	13.0	1006
Ireland	3.92	15.44	3.84	8.0	1006
Italy	5.34	15.18	3.73	2.3	1070
Netherlands	5.45	17.94	6.06	1.3	1008
Portugal	3.92	11.25	3.48	10.0	995
Spain	4.33	14.14	4.11	2.7	999
Sweden	4.92	17.43	7.90	4.0	1010
UK	4.20	15.21	3.80	0.2	1412

The intensity of political discussions is for instance much higher in Italy, Greece, or the Netherlands than in Ireland which was one of the economic powerhouses during our period of examination. Portugal and Spain by contrast are much more in line with the generalization that can be derived from the work by Putnam. Only the level of education fits into the picture, with the Scandinavian countries being the clear leaders on this front.

Bivariate and multivariate regressions will in the following serve as our tests of the two competing hypotheses that either political culture or standard economic variables explain the considerable variation in economic growth across the regions of the European Union. Table 4 reports the results that we obtained in regressing the different independent variables on the average GDP growth rates.

Table 4: The determinants of economic growth in the regions of the European Union (bivariate OLS regressions)

<i>Variable</i>	<i>Parameter</i>	<i>t-value</i>	<i>adj. R²</i>
CULTURE	-0.010	-1.337	0.010
EDUC	-0.002	-0.600	0.010
INFOINDEX	-0.008	-0.940	0.002
lnGDP***	-3.912	-2.658	0.242
EXPORT**	6.59E-4	2.034	0.046
GOV	-0.003	-1.128	0.004
INV	0.001	0.652	0.009

Notes: The number of cases amounts to 73 in all tests.

***: significant at the .001 level (two-tailed)

** : significant at the .01 level (two-tailed)

* significant at the .1 level two tailed test

Our results cast strong doubts on political culture hypothesis, clearly showing the superiority of the economic factor over cultural variables in the explanation of growth. Only two out of eleven predictors exhibit positive impact on economic growth: the log of the initial economic conditions and the export orientation of a region. More particularly, our analysis clearly supports these examinations that show a tendency towards convergence (e.g. Armstrong 1995; Barro/Sala-i-Martin 1992, Newen/Gouyette 1995). Those indicators that measure the impact of the state on regional economic activities do, however, not have a clear impact on the growth patterns in Europe.

When we move to the multivariate level, the picture does not change dramatically. Table 5 distinguishes between four models. Model 1 is the political culture model and serves as a test for the political culture hypothesis while the other models are tests of both competing models of economic growth in the European regions.

Table 5: The determinants of economic growth in the regions of the European Union
(multivariate OLS regressions)

Variable/Model:	I	II	III	IV
Constant	9.31 (1.50)	-0.90 (-0.12)	-92.36** (-2.16)	-67.02 (-1.47)
GOV		0.01*** (2.67)	0.053** (2.37)	0.038 (1.53)
INFO	0.01 (0.90)	-0.02*** (-3.78)	-0.02*** (-3.00)	-0.027*** (-4.22)
GREECE		10.42*** (7.44)	10.42*** (7.671)	10.70*** (7.80)
LnGDP		-3.39*** (-3.84)	16.86* (1.80)	10.12 (0.98)
EXPORT		0.01*** (6.10)	0.01*** (6.09)	0.002*** (5.72)
INV		0.01*** (4.13)	0.01*** (4.30)	0.01*** (4.58)
LnGDPGOV			-0.01** (-2.17)	-0.01 (-1.35)
CULTURE	-0.01 (-0.62)			0.004 (0.83)
EDUC	-0.01 (-0.91)			0.003 (1.23)
adj. R-square:	0.02	0.62	0.64	0.65
F Statistics	0.62	18.39	17.45	17.45

Note: N is 73 for all models; t-values in parentheses;

*significant on the .1-level (two-tailed test)

**significant on the .05-level (two-tailed test)

***significant on the .01-level (two-tailed test)

The results reported in Table 5 do not tell much about the eventual impact of cultural factors on economic growth. On the contrary, the findings indicate that Putnam and his collaborators might have overstated the importance of social capital and related concepts for the development of the Italian regions and beyond. The results that we obtained for the cultural factors are, by and large, not significant. Only the level of political information exerts in model 2 to 4 an influence, yet in the wrong direction. The results indicate that regions where citizens talk more often with friends about politics and where the horizontal social networks seem well developed experienced growth rates beyond the average of the less politicized entities.

The multivariate tests lend support to the models of endogenous growth. Especially public investments are strongly related to economic prosperity. The negative impact that the interaction effect between the log of the starting condition with the consumption by the government, however, indicates that state intervention might come with a vengeance: well-developed economies, with a considerably large state sector experience growth rates below the average. The table also shows that the export orientation of a regional economy is key to prosperity if we control for other influences.

4. Conclusion

This paper has addressed a puzzle that preoccupies political economists at least since Weber's (1972 [1921]) pathbreaking study on the impact of calvinism on economic growth. We have particularly evaluated Putnam's (1993) claim that different civic traditions have contributed to the uneven political and economic development in Italy.

Our results of a macroquantitative model of economic growth in the regions of the European Union show that the impact of cultural factors on economic growth is marginal at best. None of the indicators that stand for different factors of a society's political culture bears the influence we expected it to have. This systematic test confirms suspicion of those commentators who believe that Putnam overstated his point and partly relied on rather questionable methods to test his hypotheses.

The results reminds us that the relationship between culture and growth, if it exists at all, is subtle, conditional and not nearly as general as some communitarists make us believe. Future tests should be more clearly focussing on the impact that trust has on economic activities. Since trust is also an indicator of political and social stability, it might well be that it is partly reflected in a country's or region's interest rate. Neoclassic models have shown us a long time ago that interest rate, and its correlate, savings, matter in the development of an economy.

Appendix: The intensity of political discussions, the education level, the average growth and the number of respondents in the regions and member states of the European Union

Region	Discuss Politics*Convince Friends	Information Sources	Years of formal schooling	Average change in GDP	Respondents
Austria	4.73	6.59	16.00	7.0	1015
Belgium	4.52	4.00	18.35	6.0	1071
Wallonie	4.10	4.00	18.23	4.0	347
Bruxelles	5.33	4.00	19.71	10.0	120
Vlaanderen	4.14	4.00	17.12	4.0	549
Denmark	5.23	5.85	20.47	1.0	1000
France	4.34	4.50	17.21	0.25	1001
Ile de France	4.56	4.50	19.04	2.0	165
Bassin Parisien	4.28	4.50	16.73	0.0	172
Nord-Pas de Calais	3.45	4.50	15.71	-1.0	75
East	4.13	4.50	16.50	2.0	85
West	5.02	4.50	17.18	-1.0	144
South West	4.74	4.50	16.40	-1.0	108
Centre East	5.01	4.50	19.22	1.0	135
Mediterranee	4.28	4.50	16.91	0.0	123
Finland	4.17	7.54	17.98	1.4	1032
Germany	5.10	4.45	16.00	4.375	2090
Schleswig-Holstein	4.52	4.45	17.05	7.0	45
Hamburg	5.85	4.45	16.58	1.0	33
Niedersachsen	4.81	4.45	15.92	3.0	119
Bremen	5.20	4.45	13.87	5.0	15
Nordrhein-Westfalen	4.56	4.45	15.30	2.0	311
Hessen	5.19	4.45	14.22	9.0	88
Rheinland-Pfalz	4.98	4.45	16.54	1.0	70
Baden-Württemberg	4.89	4.45	17.33	6.0	158
Bayern	4.61	4.45	16.08	5.0	209
Saarland	4.79	4.45	14.06	1.0	18
Berlin	6.25	4.45	16.85	-11.0	127
Brandenburg	5.16	4.45	16.71	8.0	174
Mecklenburg-Vorpommern	5.35	4.45	16.64	8.0	136
Sachsen	4.83	4.45	17.01	9.0	327
Sachsen-Anhalt	5.07	4.45	15.32	8.0	208
Thüringen	5.48	4.45	16.54	8.0	170
Greece	5.52	4.49	14.50	13.0	1006
Ireland	3.92	3.84	15.44	8.0	1006
Dublin	3.97	3.84	15.19	8.0	305
Rest of Leinster	3.78	3.84	15.78	8.0	230
Munster	3.98	3.84	15.76	8.0	287
Connaught	3.96	3.84	15.03	8.0	183
Italy	5.34	3.73	15.18	2.273	1070
North West	5.61	3.73	15.67	1.0	131
Lombardia	5.22	3.73	14.74	-1.0	156
North East	4.74	3.73	13.81	1.0	106
Emilia Romagna	5.19	3.73	15.46	0.0	81
Centre	5.38	3.73	15.67	2.0	127

Lazio	6.06	3.73	16.69	3.0	85
Molise e Abruzzi	5.91	3.73	16.66	3.0	32
Campania	5.56	3.73	13.88	3.0	92
South	5.28	3.73	16.03	3.0	99
Sicilia	5.36	3.73	14.45	5.0	83
Sardegna	4.48	3.73	14.00	5.0	31
Netherlands	5.46	6.06	17.94	1.25	1008
North	5.07	6.06	18.01	3.0	121
East	5.65	6.06	18.43	1.0	216
West	5.59	6.06	18.41	0.0	440
South	5.52	6.06	16.98	1.	241
Portugal	3.92	3.48	11.25	10.0	995
Spain	4.33	4.11	14.14	2.7	999
Galicia	3.83	4.11	15.87	1.0	70
North	4.31	4.11	15.21	1.0	42
North-East	3.85	4.11	15.16	16.0	68
Aragon Rioja	4.18	4.11	13.29	1.0	38
Madrid	5.01	4.11	15.22	3.0	126
Centre	4.57	4.11	13.88	1.0	136
Cataluna	4.47	4.11	13.07	2.0	156
East	4.01	4.11	11.21	2.0	117
South	4.53	4.11	14.30	0.0	209
Canarias	4.55	4.11	14.21	0.0	38
Sweden	4.92	7.90	17.43	4.0	1010
United Kingdom	4.20	3.80	15.22	0.174	1412
Scotland	3.87	3.80	18.62	3.0	95
North	4.19	3.80	14.72	0.0	276
Midlands, East Anglia	4.12	3.80	14.36	0.0	209
Wales	4.98	3.80	14.95	0.0	60
South East	4.83	3.80	15.78	-4.0	327
South West	3.79	3.80	13.34	2.0	87
Northern Ireland	3.65	3.80	14.75	4.0	304

Note: The new members were treated as unitary actors due to lack of data for the development in their regions before the entry into the European Union. The variables express

Literature

- Armstrong, Harvey W.. 1995. Convergence among Regions in the European Union, 1950-1990. *Papers in Regional Science* 74:143-52.
- Barro, Robert J. 1991. Economic Growth in a Cross Section of Countries. *Quarterly Journal of Economics* 106: 407-44.
- Barro, Robert J. 1997. *Determinants of Economic Growth: A Cross-Country Empirical Study*. Cambridge: MIT Press.
- Barro, Robert J. and Xavier Sala-i-Martin. 1995. *Economic Growth*. New York: McGraw-Hill.
- Barro, Robert J. and Xavier Sala-i-Martin. 1992. Convergence. *Journal of Political Economy* 100:223-51.
- Boix, Charles and Daniel Posner. 1998. Social Capital: The Politics Behind. *ECPR-news* 9(3): 13-14.
- Bourdieu, Pierre. 1983. *Ökonomisches Kapital, kulturelles Kapital, soziales Kapital*. In: Kreckel, Reinhard (ed.): "Soziale Ungleichheiten". Göttingen: Soziale Welt, Sonderband 2.
- Braithwaite, Valerie and Margaret Levy. 1998. *Trust and Governance*. New York: Russel Sage Foundation.
- Cattaneo, Carlo. 1957. La città considerata come principio ideale delle istorie italiane. *Scritti storici e geografici* 2: 383-437.
- Coleman, James S. 1988. Social Capital in the Creation of Human Capital. *American Journal of Sociology* 94: 95-119.
- Coleman, James S. 1990. *Foundations of Social Theory*. Cambridge, London: The Belknap Press of Harvard University Press.
- Europäische Kommission. 1994. *Wettbewerbsfähigkeit und Kohäsion: Tendenzen in den Regionen: Fünfter periodischer Bericht über die sozioökonomische Lage und Entwicklung der Regionen in der Gemeinschaft*. Luxemburg: Amt für amtliche Veröffentlichungen der Europäischen Gemeinschaft.
- Eurostat. 1997. *Regionen: Statistisches Jahrbuch 1996*. Luxemburg: Amt für amtliche Veröffentlichungen der Europäischen Gemeinschaft.
- Faist, Thomas. 1995. Sociological Theories of International Migration: The Missing Meso-Link. Paper presented at the Meeting of the Theory Group Migration and Development (MAD) Project Hamburg.
- Goldberg, Ellis. 1996. Thinking about how Democracy Works. *Politics and Society* 24(1): 7-18
- Granato, Jim, Ronald Inglehart and David Leblang. 1996a. Cultural Values, Stable Democracies, and Economic Development: A Reply. *American Journal of Political Science* 40: 680-96.
- Granato, Jim, Ronald Inglehart and David Leblang. 1996b. The Effect of Cultural Values on Economic Development: Theory, Hypotheses, and Some Empirical Test. *American Journal of Political Science* 40: 607-31.
- Haug, Sonja. 1997. "Soziales Kapital: Ein kritischer Überblick über den aktuellen Forschungsstand." Arbeitspapier AB II/Nr. 15. Mannheim: Mannheimer Zentrum für Europäische Sozialforschung.
- Inglehart, Ronald. 1988. The Renaissance of Political Culture. *American Political Science Review* 82: 1203-30.
- Inglehart, Ronald. 1990. *Culture Shift in Advanced Industrial Societies*. Princeton: Princeton University Press.
- Inglehart, Ronald. 1997. *Modernization and Postmodernization: Cultural, Economic and Political Change in 43 Societies*. Princeton: Princeton University Press.
- Jackman, Robert W. and Ross A. Miller. 1996a. A Renaissance of Political Culture. *American Journal of Political Science* 40: 632-59.
- Jackman, Robert W. and Ross A. Miller. 1996b. The Poverty of Political Culture. *American Journal of Political Science* 40: 697-716.
- Laitin, David D. 1995. The Civic Culture at 30. *American Political Science Review* 89(1): 168-73

- LaPalombra, Joseph. 1993. Book Review: Making Democracy Work: Civic Traditions in Modern Italy. *Political Science Quarterly* 108: 549-50.
- Levi, Margaret. 1996. Social and Unsocial Capital: A Review Essay of Robert Putnam's Making Democracy Work. *Politics and Society* 24(1): 45-55.
- Levi, Margaret. 1998. A State of Trust. *ECPR-news: The News Circular of the European Consortium for Political Research* 9(3): 14-15.
- Loury, G. 1977. A dynamic Theory of Racial Income Differences. In: Wallace, P.A. and A. Le Mund (Eds.): *Women, Minorities, and Employment Discrimination*. Lexington: Lexington Books.
- Loury, G. 1981: "Intergenerational Transfers and the Distribution of Earnings". *Econometrica* 49:843-67.
- Maraffi, Marco. 1994. Book Review: Making Democracy Work: Civic Traditions in Modern Italy . *American Journal of Sociology* 99(5): 1348-49
- Maraffi, Marco. 1998. Voluntary Associations, Political Culture and Social Capital in Italy: A Complex Relationship . *ECPR-news* 9(3): 15-16.
- Mudambi, Ram/Navarra, Pietro 1999. "Political Culture and Foreign Direct Investment: The Case of Italy". Unpublished Paper.
- Myers, David J. 1995. Institutional Performance, Political Culture, and Political Change. *Studies in Comparative International Development* 30(1): 84-91.
- Neven, Damien and Claudine Gouyette. 1995. Regional Convergence in the European Union. *Journal of Common Market Studies* 33(1):47-65.
- Ostrom, Elinor. 1998. A Behavioral Approach to the Rational Choice Theory of Collective Action: Presidential Address, American Political Science Association, 1997. *American Political Science Review* 92(1):1-22
- Putnam, Robert D. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press.
- Putnam, Robert. 1995. Bowling Alone: America's Declining Social Capital. *Journal of Democracy* 6(1): 65-78.
- Romer, Paul. 1986. Increasing Returns and Long-Run Growth. *Journal of Political Economy* 94(5):1002-37.
- Romer, Paul. 1994. The Origins of Endogenous Growth. *Journal of Economic Perspectives* 8(1): 3-22.
- Sabetti, Filippo. 1996. Path Dependence and Civic Culture: Some Lessons from Italy about Interpreting Social Experiments. *Politics and Society* 24(1): 19-44.
- Solow, Robert. 1956. A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics* 70: 65-94.
- Statistisches Bundesamt. 1997. *Statistisches Jahrbuch für das Ausland*. Stuttgart: Metzler-Poeschl.
- Swank, Duane. 1996. Culture, Institutions, and Economic Growth: Theory, Evidence, and the Role of Communitarian Polities . *American Journal of Political Science* 40: 660-79.
- Tarrow, Sidney. 1996. Making Social Science Work across Time and Space: A Critical Reflection on Robert Putnam's Making Democracy Work: Civic Traditions in Modern Italy . *American Political Science Review* 90(2): 389-97.
- United Nations. 1994. Statistical Yearbook: United Nations Publication No.: E/F.96.XVII.1. New York: United Nations.
- Weber, Max. [1921]. 1972. *Wirtschaft und Gesellschaft: Grundriß der verstehenden Soziologie*. Tübingen: J.C.B. Mohr.
- Weil, Frederick D. 1994. Book Review of Putnam's Making Democracy Work: Civic Traditions in Modern Italy. *Contemporary Sociology, a Journal of Reviews* 23(1): 373-74.
- Whiteley, Paul. 1997. "Economic Growth and Social Capital". ECPR workshop on Social Capital and Politico-Economic Performance, University of Bern, Switzerland, April 1997:
- Whiteley, Paul. 1998. Economic Growth and Social Capital. *ECPR-News* 9(3): 16-18.
- World Bank. 1997. *World Economic Indicators* (CD-Rom). Washington: World Bank.

Zentralarchiv für empirische Sozialforschung Köln. 1996. ZA Study Number 2689 Eurobarometer 44.0. Köln: ZA.