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Social Capital and the Quality of Government

Evidence from the United States

Governments perform better where there is more general trust and strong civic norms; they perform less well where citizens are less trusting and less civic-minded.

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Summary findings

Social capital—in the form of general trust and strong civic norms that call for cooperation when large-scale collective action is needed—can improve government performance in three ways:

- It can broaden government accountability, making government responsive to citizens at large rather than to narrow interests.
- It can facilitate agreement where political preferences are polarized.
- It is associated with greater innovation when policymakers face new challenges.

Consistent with these arguments, Putnam (1993) has shown that regional governments in the more trusting, more civic-minded northern and central parts of Italy provide public services more effectively than do those in the less trusting, less civic-minded southern regions. Using cross-country data, La Porta and others (1997) and Knack and Keefer (1997) obtained findings consistent with Putnam's evidence. For samples of about 30 nations (represented in the World Value Surveys), they found that societies with greater trust tended to have governments that performed significantly better. The authors used survey measures of citizen confidence in government as well as subjective indicators of bureaucratic inefficiency.

Knack further analyzes links between social capital and government performance using data for the United States. In states with more social capital (as measured by an index of trust, volunteering, and census response), government performance is rated higher, based on ratings constructed by the Government Performance Project.

This result is highly robust to including a variety of control variables, considering the possibility of influential outlying values, treating the performance ratings as ordinal rather than cardinal, and correcting for possible endogeneity.

This paper—a product of Regulation and Competition Policy, Development Research Group—is part of a larger effort in the group to identify the determinants of good governance and of institutions conducive to long-term economic development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Sintim-Aboagye, room MC3-422, telephone 202-473-8526, fax 202-522-1155, email address psintimaboagye@worldbank.org. Policy Research Working Papers are also posted on the Web at www.worldbank.org/research/workingpapers. The author may be contacted at sknack@worldbank.org. December 2000. (32 pages)

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Social Capital and the Quality of Government: Evidence from the U.S. States

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1. Introduction

Putnam (1993) has shown that regional governments in the more-trusting, more civic-minded northern and central parts of Italy provide public services more effectively than do those in the less-trusting, less civic southern regions. Using cross-country data, La Porta et al. (1997) and Knack and Keefer (1997) obtained findings consistent with Putnam's evidence. For samples of about 30 nations represented in the World Value Surveys, they found that higher-trust societies tended to have significantly better performing governments, using survey measures of citizen confidence in government as well as subjective indicators of bureaucratic efficiency.

This study extends the analysis of links between social capital and governmental performance to the American states. In states with more social capital--as measured by an index of trust, volunteering and census response--governmental performance is rated more highly, using ratings constructed by the Government Performance Project. This result is highly robust to (1) inclusion of a variety of control variables, (2) consideration of the possibility of influential outlying values, (3) treating the performance ratings as ordinal rather than cardinal, and (4) corrections for possible endogeneity.

These findings have potential relevance for development issues, because the efficient delivery of public services can directly affect welfare, and because good governance is associated with better economic performance (e.g. Knack and Keefer, 1995). However, understanding the importance of social capital tells us very little about how to increase it. More research is needed on what interventions, if any, can build generalized trust and strong civic norms.

Section 2 summarizes related literature, and arguments for how social capital influences government performance. Sections 3 and 4 respectively provide detailed information on the measures of government performance and social capital used in the empirical analysis. Section 5 discusses other determinants of governmental performance that are controlled for in the analysis. Section 6 reports results, and section 7 summarizes the findings.

2. Background

In their classic book, Almond and Verba (1963: 3) argue that the performance of democratic government depends on "civic culture," defined as "the ways in which political elites make decisions, their norms and attitudes, as well as the norms and attitudes of the ordinary citizen, his relation to government and to his fellow citizens..." They note that "theorists of democracy from Aristotle to Bryce" have stressed that well-functioning democratic government requires "a widespread sense of civic responsibility."

Building on Almond and Verba (1963) and on Banfield's (1958) work on "amoral familism," Putnam (1993) linked interpersonal trust and other dimensions of "social capital" to the efficiency and responsiveness of democratic government across Italian regions: "In the civic regions of Italy...social trust has long been a key ingredient in the ethos that has sustained economic dynamism and government performance" (p. 170).

There are three major ways in which social capital can improve governmental performance. First, it can broaden governmental accountability, so that government must be responsive to citizens at large rather than to narrow interests. Second, it can facilitate

agreement where political preferences are polarized. Third, it is associated with greater innovation in policymaking in the face of new challenges.

Holding governments accountable is arguably the most important means by which social capital influences performance. Greater trust and more civicminded attitudes can improve governmental performance by affecting the level and character of political participation, reducing "rent-seeking" and enhancing public-interested behavior. Knowledge of politics and public affairs by large numbers of citizens, coupled with their participation through voting and other modes of citizen voice, are important potential checks on the ability of politicians and bureaucrats to enrich themselves or narrow interests that they are allied with. But narrowly self-interested citizens may find it rational not to vote, or to attend meetings or protest rallies, or even to acquire information about the performance of public officials. Where trust is higher, voters can more easily overcome the collective action problem in monitoring officials. As Putnam (2000: 346) writes: "Citizens in civic communities expect better government, and (in part through their own efforts) they get it...if decision makers expect citizens to hold them politically accountable, they are more inclined to temper their worst impulses rather than face public protests." In less civic regions, citizens "more commonly assume the role of alienated and cynical supplicants" (Putnam, 1993: 182). Where too many citizens "free ride" on the other hand, by being uninformed and unwilling to write letters or otherwise protest government malfeasance, public officials can more easily indulge in patronage practices and other inefficient policies that serve narrow interests.

Government officials may need less monitoring in the first place in higher-trust states with a widespread sense of civic responsibility, if public employees are broadly

representative of the populations from which they are drawn. Where high-level officials, their subordinates, and the public all carry high expectations of mutual competence and probity, a cooperative equilibrium is more likely to be produced in which incompetent or dishonest behavior is more likely to be detected and less likely to be tolerated.

Consistent with these arguments on improving accountability, Putnam (1993) found that in the more civic regions of Italy, citizen-initiated contacts with government officials tended to concern public issues, while in the less civic regions, such contacts "overwhelmingly involve requests for jobs and patronage" (Putnam, 1993: 101). In the more civic regions, citizens viewed government as a provider of necessary public goods from which everyone could benefit, while citizens of less civic regions viewed government as a source of private goods.

In addition to making government more accountable, social capital can reduce inefficiencies associated with polarization. Putnam (1993: 105) found political leaders in the more civic regions of Italy to be more willing to compromise with their political opponents. Where trust and norms of reciprocity are stronger, opposing sides are more likely to agree on the ground rules for seeking debate and resolution of disagreements (Putnam, 2000: 339-344). Where fewer citizens are motivated by a sense of civic obligation to stay informed and to participate in political life, the extremes on the political spectrum are more likely to dominate the public agenda, and debate becomes more polarized. Putnam (2000: 342) in fact has found that declines in participation (in local civic organizations, political parties, writing to newspapers, etc.) in the U.S. in recent decades have been concentrated among political moderates, with almost no decline observed for persons on either end of the ideological spectrum.

There is also evidence linking social capital to greater innovation and flexibility in policymaking. Putnam (1993) found that the more civic regions in Italy were much more successful than the less civic regions in responding to newly-identified problems and challenges in the areas of day care programs, family clinics, job training centers, promotion of investment and economic development, and setting environmental standards. Where citizens are less public-spirited, politics is more likely to be dominated by elites that resist policy change. Where an absence of trust and a sense of civic obligation make politics more divisive and polarized, it may be more difficult to agree on adoption and implementation of policies responding to new challenges or crises.

Consistent with all of these arguments, Putnam (1993) has shown that regional governments in the more-trusting, more civic-minded northern and central parts of Italy provide public services more effectively than do those in the less-trusting, less civic southern regions. Using cross-country data, La Porta et al. (1997) and Knack and Keefer (1997) obtained findings consistent with Putnam's (1993) evidence from the Italian regions. For samples of about 30 nations represented in the World Value Surveys, they found that higher-trust societies tended to have significantly better performing governments, using survey measures of citizen confidence in government as well as subjective indicators of bureaucratic efficiency.

This paper conducts analyses of social capital's impact on governmental performance in the U.S. states. Results strongly indicate that social capital matters. Namely, where interpersonal trust is higher and citizens demonstrate a greater sense of civic responsibility, governments perform better.

Rice and Sumberg (1997) also analyze cross-state differences in governmental performance as a function of "civic culture." This analysis differs from theirs in several important ways. First, the measure of governmental performance used here is a relatively technocratic one, as explained in the next section, assessing the details of financial and capital management, human resource policies, etc. Rice and Sumberg use an index that reflects ideology more than it reflects performance in a technocratic sense. One of the three components of their index is an indicator of policy liberalism, while another is a measure of policy "creativity" (each of these components is itself a composite of several indicators). Their civic culture index also differs substantially from the social capital index used here; it is constructed using public sector outcomes such as public library books per capita, the percentage of public school teachers who are men, the percentage of state legislators who are women, and crime rates. Finally, their set of control variables is different from that used here, and they do not address the potential for reverse causation from government performance to civic culture.

3. Measuring State Government Performance

The quality of state governments' management practices were rated in the February 1999 issue of Governing magazine (Barrett and Greene, 1999). Ratings were produced by the Government Performance Project, a joint effort of Governing magazine and the Maxwell School of Citizenship and Public Affairs at Syracuse University.

On a scale of A to F, governments for each of the 50 states are graded on their "overall performance," as well as on five specific dimensions of performance: financial

management, capital management, human resources, "managing for results," and information technology. These assessments were based on detailed information provided by 49 state governments (all but California) in response to a survey questionnaire, and on almost 1000 in-person interviews of budget officers, public managers, auditors, academics, and legislative aides.

A total of 35 explicit criteria were used in making judgements on performance. For example, among the 13 criteria used to assess financial management are accuracy of revenue and expenditure forecasts, structural balance between revenues and expenditures, prudent management of long-term debt, multi-year perspective on budgeting, timeliness of budget adoption[1], adequacy of financial audits, and effectiveness of procurement management. The four criteria under "managing for results" include existence of a strategic plan, involvement of stakeholders in the development of strategic plans, and the effective use of performance data for policy making, management and evaluation of progress.

The 35 criteria reflect reasonably well the three major ways, outlined above, in which social capital can improve governmental performance. For example, timely adoption of budgets and prudent debt management can each be derailed where opposing interests resist compromise (e.g. Alesina and Drazen, 1991; Alt and Lowry, 1994; Berg and Sachs, 1988). Adequacy of financial auditing, effective procurement management, budgets that reflect policy priorities, involvement of stakeholders in the development of strategic plans, and the communication of performance results to stakeholders all reflect

[1] "Budget promptness" was one of the components of Putnam's (1993) index of performance for Italian regional governments.

strong accountability processes. Flexibility and innovation in policymaking are reflected in the seven information technology criteria[2], the six human resource management criteria (which stress the use of incentives for performance, and flexibility in hiring and promotion), and criteria in each of the five dimensions which emphasize long-range planning. The feasibility of flexible personnel and procurement rules depends on having employees and managers with a sense of public responsibility, who can be trusted to not take advantage of flexible rules for their own personal benefit.

In this study, the "overall performance" ratings are used as the primary dependent variable, converting the A, A-, B+ etc. letter grade scale to a numerical scale with a maximum possible value of 12 for an A and a minimum possible value of 1 for an F.[3] The lowest actual grade is a D (for Alabama), while the highest grade assigned was an A- (for MO, UT, VA and WA). The median grade was a B-. Figure 1 depicts the distribution of grades among the states. Results will also be presented for each of the five dimensions of performance.

In addition to the indicators produced by the Government Performance Project, a final dependent variable is the "reinventing government" implementation index constructed by Brudney et al. (1999). This index is based on survey responses from 1,229 heads or directors of state government agencies in the 50 states. Administrators were asked the extent to which their agency had implemented over the last four years each of 11 changes, in the areas of training programs to improve services, quality

[2] Two of the information technology criteria address the ability of IT systems to generate data that are useful to managers and to transmit it effectively. Similarly, Putnam's (1993: 67-68) index of government effectiveness in the Italian regions included an indicator of statistical and information services, including facilities for data collection, statistical processing, and computer-based analysis.

[3] As will be shown, results are robust to treating the letter grades as an ordinal rather than interval scale.

improvement programs, benchmarks for measuring results, strategic planning, systems for measuring client satisfaction, simplification of personnel rules, increasing managerial discretion to transfer or carry over funds, privatization of programs, flattening the agency's structure, decentralizing decision making, and greater discretion in procurement. Florida (two standard deviations above the mean) earned the highest score on the "reinventing government" index, with Alabama ranked lowest (nearly two standard deviations below the mean).

There is quite a bit of conceptual overlap between these 11 items and the 35 criteria judged in the Government Performance Project. The Brudney et al. index is correlated with the overall performance grade at .29 (significant at .04). The greatest conceptual overlap is with the "managing for results" dimension. Not surprisingly, "managing for results" is more highly correlated with the Brudney et al. index (.37) than are any of the other four dimensions covered by the Government Performance Project. While statistically significant, the correlations between the Brudney et al. index and the performance grades are rather modest. The absence of a stronger relationship may be attributable to the fact that the Brudney et al. index considers only changes in the 1990-94 period, while Government Performance Project grades can reflect the impact of reforms made before, during, and after that period (up to 1999). Because of the limited scope of the Brudney et al. index, it is used below only as a supplement to the Government Performance Project grades, which are analyzed in greater depth.

4. Measuring Social Capital

A state-level social capital is constructed from three indicators. The first is a measure of interpersonal trust, closely related to the trust measure used by La Porta et al. (1997) and Knack and Keefer (1997). This variable is the percentage of a state's survey respondents who agree with the statement that "most people are honest." Several studies have shown that higher levels of trust as measured by survey items such as this one reflect environments in which trustworthy behavior is more frequently exhibited (e.g., Knack and Keefer, 1997; Putnam, 2000: 347-348).

These survey data on honesty perceptions were kindly provided by Robert Putnam, and were originally collected for DDB Needham, an advertising firm, from a series of surveys conducted by the commercial polling firm Market Facts. Each of these national surveys includes about 3500 respondents, but with only a small, non-representative sample for each state. However, the data from this annual survey were accumulated over 1975-97, with changing sampling units over time so that respondents in a particular state are not drawn from the same small corner of the state year after year. A series of validity tests performed by Putnam (2000) strongly suggest that the data are representative of states' populations. Data on the trust variable are available for the 48 continental states. The mean value is 66.8%, with a low value of 54% (Mississippi) and a high value of 74.5% (Vermont).

The second social capital indicator used in the analysis is based on actual behavior reflecting a sense of civic responsibility, rather than on survey attitudes. Households were asked to mail in their 1990 census forms by April 1, 1990. The Census Bureau calculated mail-in response rates for each state as of April 28, 1990, shortly before field enumeration efforts began. Mail-in response rates were used by the Census Bureau as its

indicator of the level of citizen cooperation with the 1990 census. Mailing in the census form saves one's fellow taxpayers the costs of expensive enumeration efforts; the lower-than-anticipated mail-in response for the 1990 census necessitated the hiring of far more enumerators than originally planned by the Census Bureau. Mailing in the census form can thus be viewed as a public good for all Americans. Cooperating with the census can also be viewed as a public good at the state level. A brochure accompanying the census form mailed to households noted that participation with the census would "help make sure your community gets its fair share of federal and state funding" and that census counts "are used to decide how many members of Congress your state sends" to Washington (Thompson 1991). In a national survey on "good citizenship" issues conducted by USA Today in 1990, 71.6% of respondents cited responding to the census as a characteristic of good citizenship. Analyses of cooperation with the census using individual-level data view mail response as "a form of community involvement, reflecting a sense of civic obligation that also motivates such behavior as voting, serving on juries, and paying taxes" (Couper et al., 1998). Census response is thus a reasonable proxy for civicminded attitudes and cooperation that are hypothesized to improve governmental performance.[4]

Census response rates for 1990 are available for all 50 states. The mean value is 74.2%, with a low of 62% (Alaska) and a high of 84.1% (Wisconsin). Census response is correlated at .43 (significant at .002) with the survey-based measure of trust.

[4] Note that no claim is being made that higher census response rates, however they are obtained, will necessarily improve governmental performance. Increasing census response by offering monetary payments would simply make it a less useful proxy for civic cooperation.

The third social capital variable measures the percentage of each state's residents who engaged in volunteer activity during the previous year, based on responses to the May 1989 Current Population Survey, conducted by the Census Bureau.[5] Data are available for all states but Hawaii and Nevada. Values average 23.1% and range from 13.9% (New York) to 38.9% (North Dakota). Volunteering is correlated with trust at .68 (significant at .0001) and with census response at .44 (significant at .002).

Each of the three social capital indicators was standardized to have a mean of 0 and a standard deviation of one. A social capital index was created by taking the mean of the three standardized variables. Cronbach's alpha for the index is .76. The index varies from a low value of –1.43 for Mississippi to a high value of 1.65 for North Dakota.

Values for volunteering were imputed for Hawaii and Nevada, and for trust for Hawaii and Alaska, using regressions of each social capital indicator on the others. As shown below, however, results are not sensitive to the inclusion of these states in the analysis.

5. Other Determinants of Government Performance

In testing the impact of social capital, the analysis controls for other potential determinants of state governmental performance. Higher-income citizens with better education may be more effective in demanding more efficient government. Income and education can also have "supply side" effects on government performance: a larger tax base might make it easier to offer higher salaries or to purchase an expensive computer

[5] The data were generously provided by Meg Haist. Jennings and Haist (2000) find that indexes of civic engagement and civic capital which incorporate this volunteering measure are negatively associated with

systems, while a more educated workforce provides a larger pool of talent from which government agencies can recruit. Therefore, the log of per capita income and percent of adults with a high school diploma are included in the regressions. Income ranges from a low of $17,471 (log=9.77) for Mississippi to a high of $33,189 (log=10.41) for Connecticut. High school graduates averages 76.3%, and ranges from 64.3% (Mississippi) to 86.6% (Alaska).

For given mean values of income and education, a larger population also provides a larger tax base and a larger pool of educated workers. For these reasons, the analysis also controls for the log of state population, which ranges from 13.08 for Wyoming (with a population of 480,000) to 17.27 for California (population of more than 31 million).

A larger population can also make governing more difficult, however, other things equal. As *Governing* (February 1999, p. 18) noted of California and New York, "neither can seem to finish its budget on time." Larger states tend to have more numerous and diverse interests--economic and otherwise--potentially making it more difficult to arrive at a consensus regarding taxation, expenditure, public investment, and human resource policies, as well as on the institutions and procedures used in formulating and implementing policies.[6] The net effect of population on government performance is ambiguous in light of these positive and negative effects.

The analysis also controls for two variables reflecting the potential for polarized preferences. Numerous theorists have argued that greater political and social cleavages

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rates of economic growth among the states.

[6] The analysis intentionally does not attempt to control for the various channels through which social capital and demographic factors may influence government performance (such as constitutional rules, voting participation, and the density and character of interest groups). Investigating which of these or other

make effective governance more difficult.[7] Racial heterogeneity is one such potential source of polarization. Racial heterogeneity is measured here as the percentage of a state's population which is African American, because the white-black difference is still the most salient racial division in most of the country. No state has an African- American majority, so a natural measure of heterogeneity is the relative size of this minority among the states. Data are available from the Census Bureau for 1996. The lowest value is Montana's 0.3%, and the highest is Mississippi's 35.9%.

Inequality is another potential source of polarization. Therefore, the analysis controls for the Gini coefficient of income inequality, which can in principle vary from 0 (perfect equality) to 100 (one family has all of a state's income). Data are from the Census Bureau, and reflect the distribution of family income in 1989. New Hampshire had the most egalitarian distribution of income with a Gini of 34.4, while Louisiana had the most unequal, with a Gini of 44.6. The mean value among the states was 39.5.

Interest group density and diversity could improve public sector performance through increasing government accountability. On the other hand, if the goals of these groups often conflict with efficiency, government efficiency could suffer where density of interest groups is greater. Diversity of interest representation might also signify greater polarization of interests and preferences, making governing more difficult. The net effect of interest density and diversity are therefore ambiguous.

Interest group density and diversity for 1990 are taken from Gray and Lowery (1996). "Density" is defined as the number of registered interest organizations in each

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variables mediate the relationship between social capital and government performance is left for future research.

state, and "diversity" is defined as a Herfindahl index of concentration based on the distribution of interest groups among ten categories of economic and social activity. Both density and diversity are greater, as expected, are significantly in states with larger economies. Therefore, these variables were adjusted by taking the deviation from values predicted from a regression of each on aggregate state income (per capita income multiplied by population).[8] However, results reported below are not sensitive to using the raw rather than adjusted values for density and diversity of interest groups.

Finally, a dummy is included to reflect the Governor's political party (Democrat=1 for the 17 states with Democratic governors). This variable controls for several possible influences. First, it could control for possible bias in the ratings associated with partisanship. For example, if the raters are themselves mostly Democrats, the ratings could tend to favor states administered by Democratic governors. Second, governors of one or the other party may have been more aggressive in implementing "reinventing government" reforms. Historically, Republicans in state and local governments were more associated with progressive reforms while Democrats, particularly in the South, were more associated with patronage. On the other hand, the identification of "reinventing government" initiatives with Vice-President Gore at the federal level may have encouraged similar initiatives by Democratic governors at the state level.

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[7] For example, Alesina and Drazen (1991). Also see the discussion in Putnam (1993: 116).

[8] Aggregate state income explains 9% of the variation in diversity (t-statistic = 2.13) and 46% of the variation in density (t-statistic = 6.37). Simply dividing the interest group variables by aggregate state income, as Gray and Lowery (1996) did for density, entails the very strong assumption that they increase proportionately with economic activity.

6. Results

The simple correlation of the social capita index with the overall performance grade from the Government Performance Project is .43 (significant at .002). Equation 1 of Table 2 presents strong evidence from a multivariate analysis that social capital is conducive to government performance. Controlling for the other determinants, the social capital index is positively and significantly associated with the quality of government. The coefficient of 1.21 indicates that a one-unit increase in the index (i.e. a 1-standard-deviation increase on average among the three index components) is associated with a more than 1-point increment in the performance scale, e.g. from a grade of B- to a grade of B. Figure 2 depicts this partial relationship between the social capital index and the government performance measure in a scatterplot.[9]

In contrast to the strong association with social capital, neither income nor education are significant determinants of government performance. Although income and education are correlated with each other at .41, their lack of significance is not attributable to multicollinearity: neither variable approaches significance even when the other variable is omitted from the regression.[10] Education is correlated with the social capita index at .47, but remains insignificant even when the social capital index is omitted from the regression. The weak impact of income and education on performance is consistent with Putnam's (1993: 98, 118) results for Italian regional governments.

[9] Because Figure 2 is a partial plot, the slope of the least-squares line shown in the figure equals the social capital index coefficient reported in equation 1.

[10] Income remains insignificant, and results on other variables are unaffected, if income is divided by a state cost of living index estimated for 1995 by Berry et al. (2000).

Population is positively and significantly associated with performance, consistent with the possibility of economies of scale in governing. Each standard-deviation increase in the log of population (1.01) is associated with an increase of two-thirds in the performance grade in equation 1.[11]

Percent African American population is positively associated with government performance. The coefficient in equation 1 implies that a rise of about 11 percentage points (about 1.5 standard deviations) in the African American population share is associated with a 1-point increment in the performance scale. These results suggest that racial polarization does not pose an obstacle to effective governing.[12]

Income inequality has the expected negative coefficient, but is significant at the .05 level only for a one-tailed test. Each 3-point rise in the Gini index of income inequality is associated with a 1-point drop in government performance.

Neither of the interest group variables is significant. This finding is consistent with the possibility that interest group density and diversity do not matter, but also with the possibility that each of these variables has both positive and negative effects that roughly offset each other.

The Democratic governor dummy is not significant. In results not shown in Table 2, other measures of partisanship are also not significant, including the Democratic share of state legislators, and the percent of voters who identify with the Democratic rather than the Republican party (measured by exit polling data for 1996 from Voter News Services)

[11] Using a very different measure of government performance, Rice and Sumberg (1997) also found that larger populations improve performance and that income and education have no effect.

[12] Because a larger African-American population always represents greater racial heterogeneity in the state data, it is impossible to disentangle the effects of heterogeneity from the effects of more African Americans.

Conceivably, it is not *which* party that controls government that matters for performance, but whether or not *either* party dominates. Polarized preferences and interests may be greater where states' populations are split roughly equally between supporting either of the two major parties. Where a single party controls the legislature and the governorship, necessary adjustments to fiscal crises may be more rapid (Poterba, 1994; Alt and Lowry, 1994). On the other hand, effective competition between two healthy and well-organized parties can help keep state government more accountable. Governments in one-party states (as in less democratic countries) may be more corrupt and less efficient. Empirical results (not shown in Table 2) testing several alternative measures indicated that the partisan balance is not a significant determinant of government performance. The partisan balance was measured as the absolute value of the difference in party identification between the Democrats and Republicans (from 1996 exit polls), by the absolute value of the difference in the Democratic and Republican share of state legislators' seats, by a dummy coded 1 for states with lower and upper chambers controlled by different parties, and by a dummy coded 1 when the Governor was of one party and at least one chamber was controlled by the other party. None of these variables turn out to be significant when added to equations 1 and 2, and their inclusion does not affect the results for the social capital variables.[13]

Results for the social capital index also prove robust to the inclusion of "political culture" variables. Inclusion of these "individualist," "moralist" and traditionalist" measures, using dummy variables based on classifications by Elazar (1966) or indexes

[13] Putnam (1993: 116-117) similarly found little evidence that the performance of regional governments in Italy was adversely affected by various measures of social or political fragmentation, polarization, or

constructed by Johnson (1976), does not contribute significantly to the explanation of cross-state differences in state government performance. Similarly, a dummy for ex-Confederate states is insignificant when added, and its inclusion does not affect the estimated relationship between government performance and social capital.

Equation 2 replicates the first equation, but omitting the three states (AK, HI, and NV) missing data on one or more of the components of the social capital index. Results are virtually identical to those obtained for the full sample.

Equation 3 replicates the first equation, but employing robust regression techniques that downweight the influence of outliers. The coefficient for the social capital index changes very little; although the standard error rises somewhat, the index is still significant at the .02 level.

Equations 4 and 5 differ from the first equation in using exogenous instruments for the social capital index. Conceivably, better-performing state governments produce more honest, trusting and trustworthy citizens with a better-developed sense of civic responsibility. If government does its job well, communities run more smoothly, with less crime and social strife, generating more trust and civic cooperation. To the extent that causation might run in this direction, from government performance to social capital, results for the social capital variables in equations 1-3 do not by themselves represent convincing support for the Putnam hypothesis.

Accordingly, equations 4 and 5 estimate the impact of social capital on government performance using two-stage least squares to correct for possible

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conflict.

endogeneity. Instruments used in equation 4 are percent homeowners[14] and percent of the population with Scandinavian ancestry.[15] These instruments are very effective in explaining cross-state differences in social capital in first-stage equations. The other right-hand-side variables in the model, in the absence of these instruments, explain 66% of the variation in the social capital index (see Table 3, equation 1). With the addition of the two instruments, 85% of the variation is explained (Table 3, equation 2). Both homeownership and percent Scandinavian ancestry are significant at the .001 level in these first-stage regressions. The instruments are also valid in the sense that they do not influence government performance independently of their effect on social capital, as evidenced by a p value of .65 in a test of overidentifying restrictions for the 2SLS regression.

In equation 4 of Table 2, the coefficient for the social capital index is very similar to those in the other equations, suggesting that there is little if any reverse causation from government performance to levels of social capital. If reverse causation biased the OLS coefficient for the social capital index upward, the coefficient estimated using 2SLS in equation 4 should be smaller than the coefficients estimated using OLS in equation 1.

Equation 5 of Table 2 reports 2SLS results in which religious composition of the states is used for an alternative set of instruments, instead of homeownership and Scandinavian ancestry. Putnam (2000: chapter 4) discusses the greater involvement of

[14] Data are for 1980, from the Census Bureau. Rates vary from New York's 48.6% to West Virginia's 73.6%. Using survey data, DiPasquale and Glaeser (1999) find empirical support for their hypothesis that homeownership encourages the formation of social capital.

[15] Data were kindly provided by Robert Putnam. Values range from 0.4% for West Virginia to 26% for North Dakota. Using survey data, Rice and Feldman (1997) show that interpersonal trust is strongly influenced by trust levels of one's country of ancestry. The Scandinavian nations have the highest level of trust, as measured by World Values Survey data (Knack and Keefer, 1997).

mainline Protestant churches in the wider civic community, relative to the greater emphasis on church-centered activities of evangelical Protestant, Catholic and other churches.[16] Using data from Bradley (1992) and denominational classifications from Green et al. (1996), "adherents" as a share of the state population[17] was calculated for mainline Protestant, evangelical/fundamentalist Protestant, African American Protestant,[18] Catholic, Eastern Orthodox, and Mormon churches. A seventh variable, from the same source, is an estimate of the number of Jewish Americans in each state. As expected, more mainline Protestants are strongly associated with a higher level of social capital (t-statistic = 7.8). A 17 percentage-point increase in mainline Protestants as a share of state population is associated with an increase of a full standard deviation in the social capital index. The religious composition variables explain most of the cross-state variation in the social capital index not already explained by the other righthand-side variables in the model (see equation 3 of Table 3). They also easily pass a test of overidentification, with a p value of .40. Finally, the part of social capital predicted by these exogeneous instruments is significantly associated with stronger government performance, as show in equation 5 of Table 2.

[16] Putnam (1993) and Verba et al. (1995) discuss the implications of Protestant-Catholic differences in hierarchical vs. congregational organization, lay participation in the clergy, and in congregation size for the acquisition of civic skills and interpersonal trust. Using cross-country data, La Porta et al. (1997) use religious composition to instrument for interpersonal trust, classifying the Catholic, Eastern Orthodox and Muslim religions as "hierarchical religions" with inimical effects on trust.

[17] Church "members" as well as "adherents" are enumerated in the data. However, there are no data on members of some churches (most notably Catholic), so adherents is used. The major drawback to using adherents is that the number of adherents of Catholic churches in Rhode Island constitutes 126% of the state's population.

[18] African-American Protestant refers to members of churches that are overwhelmingly African American; many African Americans attend churches of predominantly white Protestant denominations, and are included among the adherents of those denominations.

Equation 6 of Table 2 reports results that differ from equation 1 in using ordered logit instead of OLS. If differences among the grades are not equivalent in magnitude (for example, if the difference between a C- and C represents a larger gap in actual performance than the difference between a B- and B), ordered logit would be more appropriate than OLS, because it assumes only ordinal and not interval-level properties. The disadvantage of ordered logit is that the coefficients are much more difficult to interpret in terms of marginal effects on the dependent variable. Effects of the social capital variables on government performance prove robust to using ordered logit in equation 6. The only notable difference with the OLS results in equations 1 and 2 is that income inequality is now significant at the .05 level in a two-tailed test.

Table 4 presents OLS results for each of the five dimensions of governmental performance that are separately rated by the Government Performance Project. The social capital index is significantly associated with significantly improved performance in the areas of financial management (equation 1), capital management (equation 2), and information technology (equation 5). For human resources (equation 3), the social capital index is significant at the .09 level (two-tailed test). Social capital in unrelated to performance in the area of "managing for results" (equation 4).

Among the other regressors, income inequality appears to have particularly severe implications for financial management, consistent with literature linking social polarization to difficulties in responding to budget crises (Alt and Lowry, 1994; Alesina and Drazen, 1991; Berg and Sachs, 1988). Per capita income is significantly but negatively related to human resource performance – perhaps because it is easier to hire new employees, and to discipline and terminate unproductive workers, where low per

capita income makes government employment more attractive. The number of interest groups is positively and significantly related to performance in the areas of financial management and managing for results. The role of interest groups in keeping government accountable appears to outweigh any negative impacts on performance associated with special interest lobbying. Interest group diversity, however, is significantly and negatively associated with managing for results.

Equation 6 of Table 4 reports results for the Brudney et al. (1999) "reinventing government" index. The explanatory power of this regression (adjusted $R^2 = .20$) is weaker than for the overall Government Performance Project grade (adjusted $R^2 = .33$), perhaps because it measures only those reforms which were implemented during a particular four-year period, from 1990 to 1994. The social capital and population coefficients are significant, but only at the .07 level (for two-tailed tests). The reinventing government index has been standardized to have a mean of 0 and standard deviation of 1. The social capital coefficient thus indicates that a standard-deviation increase in the social capital index is associated with a rise of just over one third of a standard deviation in the reinventing government index. Among the other regressors, the number of interest groups is positively and significantly associated with implementation of reinventing government reforms.

7. Summary

This analysis of cross-states differences within the U.S. provides strong evidence for the Putnam hypothesis that levels of social capital influence governmental performance. These results are consistent with evidence provided by Putnam (1993) for

the Italian regions, by La Porta et al. (1997) and Knack and Keefer (1997) from cross-country data, and by Rice and Sumberg (1997) for the U.S. states (the latter using very different measures of government performance and social capital). Unlike most of those studies, this analysis corrects for the possibility of reverse causation from government performance to levels of social capital.[19]

Using an index based on interpersonal trust, census mail-in response rates, and volunteering, social capital is found to be a significant predictor of governmental performance, as assessed by the Government Performance Project of Governing magazine and the Maxwell School. Results are robust to the addition of numerous control variables, to consideration of the possibility of influential outlying values, to treating the performance ratings as ordinal rather than cardinal, and to corrections for possible endogeneity.

The impact of social capital on government performance demonstated in this paper, and in Putnam (1993), La Porta et al. (1997) and Knack and Keefer (1997), have potential relevance for less developed nations. The efficient delivery of public services can directly affect welfare, and good governance has been shown to be associated with higher rates of investment and growth in incomes (e.g. Knack and Keefer, 1995). However, there is a large gap between understanding the importance of social capital for development, and identifying interventions that are likely to build generalized trust and strong civic norms in less developed nations.

[19] Putnam presents evidence that differences in social capital across Italian regions are of long standing, and preceded differences in governmental performance that emerged only when important responsibilities were devolved to a newly created set of elected regional governments in the early 1970s.

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Table 1
Summary statistics

Variable	N	Mean	Std. dev.	Minimum	Maximum
Overall performance grade	50	7.6	1.8	3	11
Social capital index	50	0	.80	-1.43	1.66
Honesty perceptions (%)	48	66.8	4.4	54.0	74.5
Volunteering (%)	48	23.2	6.7	13.9	38.6
Census response (%)	50	74.2	4.7	62.0	84.1
Log per capita income, 1996	50	10.04	0.14	9.77	10.41
High school graduates, 1990 (%)	50	76.3	5.61	64.3	86.6
Log population, 1996	50	14.99	1.01	13.08	17.27
African American pop. (%)	50	9.9	9.4	0.3	35.9
Gini, income inequality, 1989	50	39.5	2.2	34.4	44.6
Interest groups, 1990	50	587	456	107	2969
Interest groups (residual)	50	0	336	-636	1933
Diversity of interest groups	50	.130	.009	.110	.151
Diversity (residual)	50	0	.009	-.018	.021
Democratic governor dummy	50	.34	.48	0	1
Scandinavian ancestry (%)	50	4.2	5.4	0.4	26.0
Homeownership %, 1980	50	66.6	5.4	48.6	73.6
Mainline Protestant (%)	50	12.1	7.2	1.6	36.5
Evangelical Protestant(%)	50	15.9	11.9	2.2	43.9
African-American Prot.(%)	50	3.3	3.7	.03	13.8
Catholic (%)	50	37.8	26.6	4.5	126.2
Eastern Orthodox (%)	50	.05	.15	0	.10
Mormon (%)	50	3.2	10.7	.14	71.8
Jewish (%)	50	1.3	1.9	0	10.2

Table 2
Determinants of State Governmental Performance (Overall Grade)

Equation	1	2	3	4	5	6
Method	OLS	OLS	Robust regression	2SLS	2SLS	Ordered Logit
Social capital index	1.210**	1.300**	1.122*	1.254*	1.477**	1.577**
	(0.333)	(0.370)	(0.481)	(0.629)	(0.536)	(0.565)
Log of per capita income, 1996	-1.337	-1.320	-1.787	-1.266	-0.910	-2.620
	(2.061)	(2.098)	(2.277)	(2.292)	(2.238)	(2.712)
High school diploma (percent)	0.021	0.015	0.009	0.020	0.015	0.034
	(0.063)	(0.064)	(0.061)	(0.059)	(0.059)	(0.076)
Log population, 1996	0.663*	0.660*	0.618	0.624	0.576	0.906*
	(0.255)	(0.279)	(0.326)	(0.327)	(0.320)	(0.390)
African American population (percent)	0.090**	0.089**	0.097**	0.091*	0.096**	0.140**
	(0.033)	(0.033)	(0.036)	(0.036)	(0.035)	(0.047)
Gini income inequality, 1990	-0.324	-0.311	-0.344	-0.313	-0.258	-0.509*
	(0.173)	(0.188)	(0.198)	(0.217)	(0.202)	(0.247)
Number of interest groups (residual)	.0006	.0005	.0005	.0006	.0005	.0007
	(.0007)	(.0007)	(.0007)	(.0007)	(.0007)	(.0009)
Diversity of interest groups (residual)	-15.485	-14.714	-11.593	-14.658	-10.687	-16.287
	(28.787)	(30.830)	(31.901)	(31.586)	(31.143)	(36.719)
Democratic governor (dummy)	0.098	0.175	0.185	0.115	0.197	0.117
	(0.678)	(0.744)	(0.545)	(0.547)	(0.535)	(0.725)
Constant	21.815	21.168	28.199	20.871	16.149	--
	(22.659)	(23.248)	(23.546)	(24.360)	(23.413)	
N	50	47	50	50	50	50
Adj. R^2/Pseudo R^2	.33	.29	--	.30	.33	.17
Mean dep. var.	7.6	7.7	7.6	7.6	7.6	7.6
SEE	1.5	1.5	--	1.5	1.5	--

Dependent variable is grade for overall state government performance. Robust standard errors are shown in parentheses. A * (**) indicates significance at .05 (.01) for 2-tailed tests. Note R^2 does not have its usual interpretation in 2SLS.

Table 3
First-stage regressions for Table 1, 2SLS equations 4 and 5
Dependent variable: Social capital index
(Standard errors in parentheses)

Equation	1	2	3
Homeownership		0.054** (0.015)	
Scandinavian ancestry		0.068** (0.012)	
Mainline Protestant			5.879** (0.749)
Evangelical Protestant			0.777 (0.878)
African-American Prot.			-14.294** (4.433)
Catholic			0.686 (0.360)
Eastern Orthodox			-96.528* (43.149)
Mormon			1.253* (0.537)
Jewish			-4.581 (3.952)
Log of per capita income	-1.597* (0.696)	0.168 (0.630)	-1.331* (0.614)
High school diploma	0.022 (0.019)	0.021 (0.063)	0.043** (0.013)
Log population, 1996	0.216* (0.100)	0.194** (0.072)	0.207** (0.057)
African American pop.	0.024* (0.011)	0.020* (0.008)	0.031 (0.017)
Gini income inequality	-0.245** (0.042)	-0.114* (0.044)	-0.138** (0.038)
Interest groups (residual)	.0003 (.0002)	-.0001 (.0002)	.00020 (.00014)
Interest diversity (resid.)	-11.092 (5.623)	-8.972 (7.061)	-11.092 (5.623)
Democratic governor	-17.929 (9.973)	-0.139 (0.121)	-0.099 (0.108)
Constant	21.177 (6.895)	-5.395 (7.630)	11.628 (6.275)
R^2	.66	.85	.92

Robust standard errors are shown in parentheses. A * (**) indicates significance at .05 (.01) for 2-tailed tests. Sample size is 50.

Table 4
Determinants of State Governmental Performance
5 Dimensions and "Reinventing Government" Index

Equation	1	2	3	4	5	6
Performance Dimension	Financial mgmt.	Capital mgmt.	Human resources	Managing for results	Information technology	Reinventing Government
Social capital index	0.829*	1.320**	1.163	0.297	1.717**	0.353
	(0.391)	(0.633)	(0.660)	(0.599)	(0.579)	(0.189)
Log of per capita	-2.273	2.549	-4.893**	-1.366	-0.265	-0.311
income, 1996	(2.269)	(3.042)	(1.656)	(2.913)	(2.899)	(1.507)
High school	-0.058	0.002	0.081	0.109	-0.048	0.042
diploma (percent)	(0.060)	(0.102)	(0.064)	(0.086)	(0.076)	(0.026)
Log population,	0.525	0.008	0.556	0.772	0.942*	0.309
1996	(0.318)	(0.339)	(0.281)	(0.391)	(0.379)	(0.166)
African American	0.086**	0.117**	0.098*	0.061	0.050	0.001
population (percent)	(0.031)	(0.052)	(0.038)	(0.046)	(0.042)	(0.022)
Gini income	-0.637**	-0.406	-0.195	-0.210	-0.234	0.107
inequality, 1990	(0.205)	(0.299)	(0.242)	(0.255)	(0.214)	(0.125)
Number of interest	.0017*	.0003	.0003	.0023**	-.0003	.0007*
groups (residual)	(.0007)	(.0008)	(.0007)	(.0008)	(.0008)	(.0003)
Diversity of interest	-45.259	-36.305	11.556	-72.327*	-0.268	-12.033
groups (residual)	(25.584)	(42.217)	(31.002)	(33.606)	(48.349)	(16.415)
Democratic	-0.332	-0.505	0.506	0.740	0.020	-0.262
governor (dummy)	(0.665)	(1.044)	(0.648)	(0.863)	(0.741)	(0.277)
Constant	52.395	-2.673	48.812	8.057	7.584	-8.867
	(24.622)	(31.564)	(18.079)	(29.575)	(30.548)	(16.272)
Adj. R^2/Pseudo R^2	.37	.19	.27	.19	.22	.20
Mean dep. var.	8.6	8.2	7.6	6.8	7.6	0
SEE	1.6	2.2	1.6	2.1	1.5	.89

Robust standard errors are shown in parentheses. A * (**) indicates significance at .05 (.01) for 2-tailed tests. Sample size is 50 in all regressions.

Figure 1

Distribution of Performance Grades

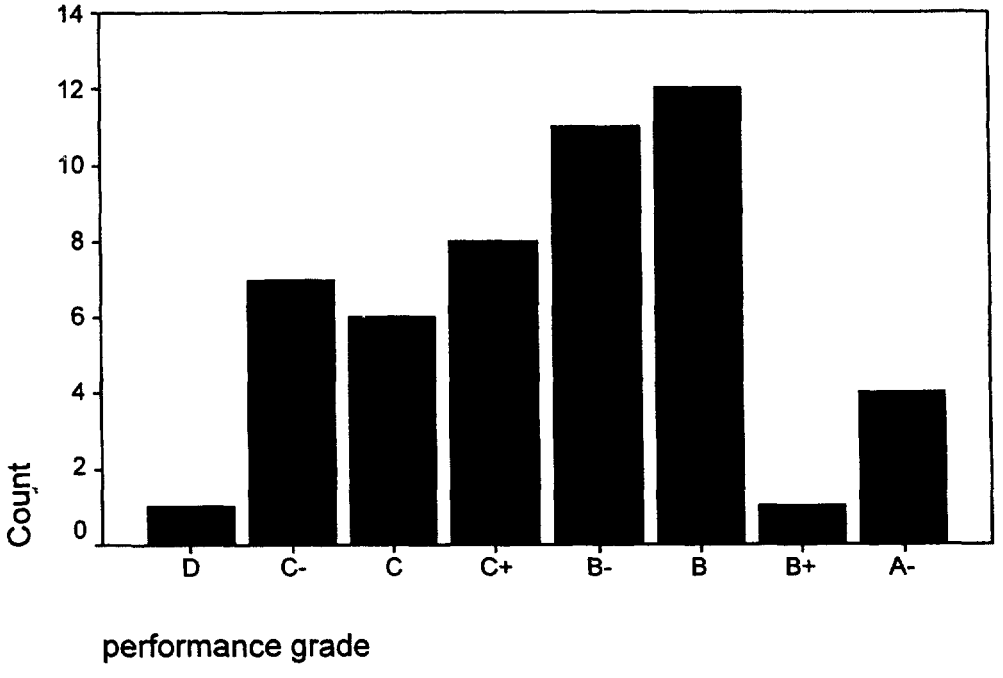
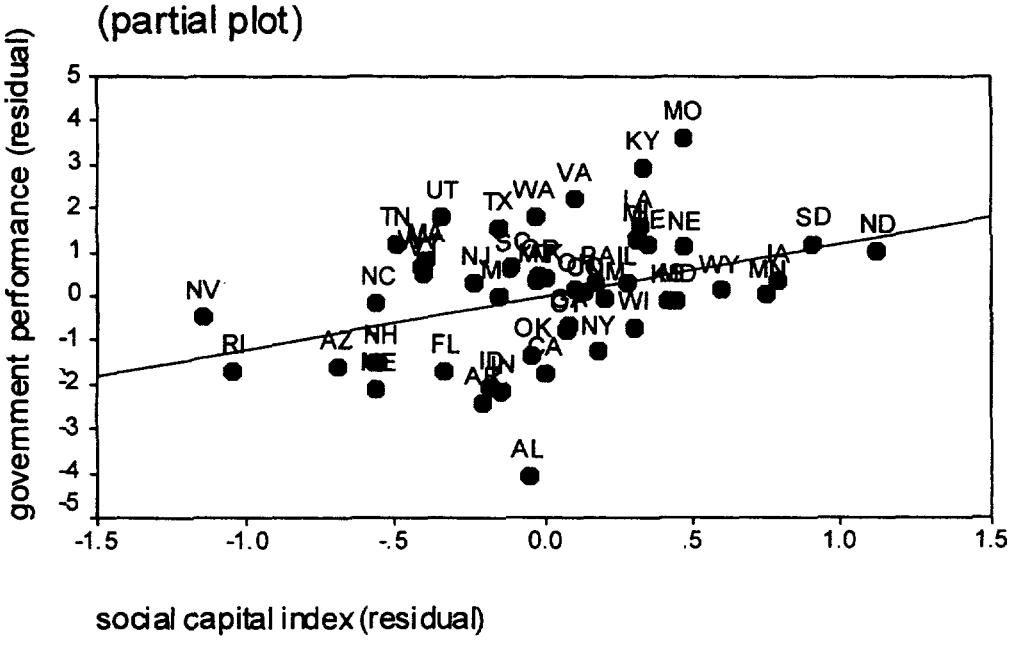


Figure 2

Social Capital & Government Performance



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