

INSTITUTIONAL PERFORMANCE AND SOCIAL CAPITAL: AN APPLICATION TO THE LOCAL GOVERNMENT LEVEL

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ABSTRACT: *A large and growing body of research is devoted to the effects of social capital on institutional performance. This literature reveals that societies characterized by higher levels of social capital tend to achieve superior performance. Still, enquiries to date predominantly concentrate on country-level data or large sub-national units. The primary purpose of this article is to extend the empirical work to the local government level, while retaining the use of objective data to gauge institutional performance. This use of local data has the advantage of increasing the data set available and provides a more stringent test of the effect of social capital because social capital is likely to vary less at lower levels of government. The results—based on an empirical analysis of 305 Flemish municipalities in 2000—support the view that social capital leads to government (out)performance also at the local level of government.*

In recent years, substantial academic interest in social capital has developed. Although the exact definition and measurement remain elusive, it is by now widely acknowledged that the presence of dense networks of formal and informal associations and the accompanying norms of generalized trust and reciprocity represent the core of the social capital concept. Importantly, just as human and physical capital, social capital has been brought forward as an important resource available to societies. It has an important influence on the performance of societies at the economic, social, and political levels. Societies high in social capital are expected to outperform those low in social capital. The reason is that social capital allows people to overcome collective action problems more effectively and at lower cost, resulting in a better overall performance.

Putnam's (1993) *Making Democracy Work* has propelled the issue of social capital to the front stage of the social sciences. In this work, he has shown how the regional governments in the more trusting, more civic-minded northern and central parts of Italy provide public services more effectively than those in the less trusting, less civic south. In the decade following the publication of this work, a myriad of studies have tested

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Putnam's hypothesis that social capital has a beneficial effect on (institutional) performance. These studies analyze data from many different countries, concentrate on diverse indicators of performance, and generally provide support for the beneficial influence of social capital. One constant in this rapidly expanding literature, however, is the focus on the country, state, or regional level. Little attention has been given to local governments. Nonetheless, as argued by Rice and Sumberg (1997), these offer another interesting locale of study. A move to the local government level not only entails an increase of the data set under analysis but also provides a more stringent test of the social capital hypothesis in that the variation in social capital is likely to be less pervasive at lower levels of government (Rice, 2001). Research at a lower level of government is thus a welcome supplement to cross-national and regional analyses. Yet, to the best of our knowledge, only two studies have analyzed the link between social capital and institutional performance at the local government level (Cusack, 1999; Rice, 2001). Both have found that higher levels of social capital lead to an improved subjective approval of government performance.

In this article, we use data on Flemish municipalities and clearly confront the question whether social capital also significantly affects performance at lower levels of government. Moreover, we extend the previous work on social capital in two important ways. First, we concentrate explicitly on its effect on the quality of the municipality's financial management (proxied by the fiscal surplus). The reason for this focus on the municipality's "fiscal balance" as our measure of performance is that it taps directly into the desire for sound financial management and the aversion to fiscal deficits in the electorate (Niskanen, 1979; Peltzman, 1992).¹ Also, prudent financial management constitutes a crucial part of the (local) government's functioning (and its ability to build and/or remain a thriving society in the future). Second, in contrast to previous local-level analyses by Cusack (1999) and Rice (2001), we employ objective indicators of local government performance. This avoids the difficulty that social capital might affect the subjective assessment of government performance—confounding inferences from the analysis—a potential pitfall of which Rice (2001) was clearly aware.

The remainder of this article is structured as follows. A brief description of the social capital concept and a rationalization of its effect on institutional performance are given in the first section, which also reviews previous empirical results. The next section addresses our own analysis, which examines whether the quality of financial management in Flemish municipalities is related to the level of social capital within its population. Before describing the results, this section first explains our indicator of social capital and discusses the particularities of the model and the estimation methodology. The last section concludes.

SOCIAL CAPITAL

Despite growing academic interest, one of the prime weaknesses of the social capital concept is the absence of consensus on how to measure it. Yet, given the large heterogeneity concerning the definition of social capital, most scholars recognize three core components: generalized trust, norms of reciprocity, and networks. Social capital is therefore understood as both a *structural* phenomenon (social networks) and a *cultural* or *attitudinal* phenomenon (social norms and trust) (Hooghe & Stolle, 2003). Moreover, because social capital refers to the characteristics of communities, it is also an aggregate concept. Putnam (1993), for example, has clearly postulated social capital as a property of communities, and Newton (2001) has remarked ". . . if social capital is anything, it is a societal not an individual property, and should be studied as a social or collective phenomenon, not at the individual level" (p. 207). Both these aspects—the existence of

three core components and the need to view it as an aggregate concept—will become main features when defining our social capital index. In this section, we first consider the arguments brought forward in the literature to explain social capital's influence on government performance. Then, we take a brief look at previous empirical work examining this relation.

The Social Capital Thesis to Explain Government Performance

The fascination of scholars in the development of social capital is motivated by their interest in the positive connection between social capital and collective societal outcomes (Billiet & Cambré, 1999). Social capital is indeed an important resource available to societies—next to human and physical capital—and is argued to have a beneficial influence on various economic, social, and political phenomena. The reasons for this positive association are, in general, not well understood. Nonetheless, with respect to its effect on institutional—or government—performance (which is also the main focus of this article), several elements have been brought forward.²

First, social capital improves performance “to the extent that it makes citizens sophisticated consumers of politics” (Boix & Posner, 1998, p. 690). This assumes that politicians desire to please voters (as this increases their likelihood of re-election) and that voters recognize and punish underperformance. The thesis builds on the finding that participation in community associations increases political awareness by providing the opportunity to discuss political affairs (e.g., Scheufele, Nisbet, Brossard, & Nisbet, 2004), such that social capital is likely to increase the public's monitoring ability. Moreover, because of increased levels of trust in societies high in social capital, “voters can more easily overcome the collective action problem in monitoring officials” (Knack, 2002, p. 273). Both elements imply that citizens become more active and effective in demanding good government when social capital is higher. This increases the effort of officials and leads to better performance. Note, however, that the populace should have homogeneous preferences. When this is not the case, conflicting demands may reduce performance (Olson, 1982).

Second, social capital contributes to a society in which “habits of cooperation, solidarity and public-spiritedness” between people are facilitated (Putnam, 1993, pp. 89–90). It generates a commitment within individuals to make their society work and increases their willingness to make necessary compromises. This is likely to benefit performance through reducing transaction costs and disseminating knowledge, hence providing positive externalities (Casey, 2004). Three related aspects can here be distinguished. First, where citizens expect others to comply with regulations, the government is relieved from spending resources on enforcing compliance. This allows these resources to be used for more productive purposes, such that performance is enhanced (Boix & Posner, 1998). Second, a greater ease of cooperation among politicians and bureaucrats reduces the possibility of gridlock in decision-making and is therefore likely to lead to a higher quality of governance (Boix & Posner, 1998; Knack, 2002). Finally, social capital might change the nature of people's preferences from particularistic (or selfish) toward more community-oriented concerns (Boix & Posner, 1998). Therefore, citizens in societies high in social capital may be more interested in the “common good,” in helping each other's advancement rather than gaining benefits at the expense of others. This should increase the quality of government performance from the view of society as a whole (e.g., by attenuating common pool problems; see Weingast, Shepsle, & Johnson, 1981).³

Exploring the Literature

Much attention in empirical work has been given to the influence of social capital on the economic development of societies and the performance of their institutions. This is mainly due to Putnam's *Making Democracy Work* (1993) where he has shown that the difference in the efficiency of regional governments in Italy—the northern ones being much more efficient than those in the south—results from the discrepancy in the levels of social capital in both parts of the country. These differences are argued to have historical roots as far back as the early Middle Ages. As such, Putnam (1993) has suggested that turning inefficient government institutions into well-performing ones is—at the very least—challenging. However, in his later volume *Bowling Alone* (2000), social capital is argued to be less exogenous and fixed than assumed in his Italian study. Indeed, Putnam in his later book argued that the level of social capital in the United States during the postwar period first witnessed a rapid increase up to the mid-1960s but has been in steady decline ever since. Nevertheless, in line with the Italian findings, social capital is still found to be an important determinant of institutional success *across* the American states.

Reactions to Putnam's work have been spirited and entail scrutinizing his main thesis on a wide array of subjects. The existence and maintenance of social capital in a society have been shown to increase the success of schools and their pupils (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997) and to lower incidences of social problems such as teen pregnancy (Putnam, 2001), delinquency (Hagan, Merkens, & Boehnke, 1995), mortality rates (Wilkinson, 1996), and the prevalence of fatal illnesses such as coronary heart disease (Kawachi, Kennedy, Lochner, & Prothrow-Smith, 1997; Szreter & Woolcock, 2004). A significant number of studies also discuss social capital's effect on "economic" outcomes, which is arguably more in line with the original subject matter in Putnam's books. Although some of these follow Putnam in creating a relatively inclusive "factor" of institutional performance (Casey, 2004; Milner & Ersson, 2000; Serra, 1999), others concentrate rather on one aspect within the array of possible "economic" performance measures. These include, but are not limited to, studies on the determinants of economic growth (Inglehart, 1997; Knack & Keefer, 1997; Whiteley, 2000; Zak & Knack, 2001), unemployment (Freitag, 2000), corruption (Bjørnskov, 2003; Uslaner, 2001), and the perception of and/or satisfaction with government performance (Cusack, 1999; Knack, 2002; Rice, 2001).

Thus far, most of the macro-level research on the effects of social capital uses data on countries or large sub-national units such as states, provinces, or regions. Few scholars have followed the suggestion of Rice and Sumberg (1997, p. 113) that "municipalities offer another locale for study." Indeed, to the best of our knowledge, only two studies have made attempts to extend the research field to the local government level. Cusack's (1999) analyses survey data on citizen's satisfaction with local government performance in 30 German local governments. Measuring social capital as "the degree of trust to be found among the elites within each community" (Cusack, 1999, p. 17), he has found that social capital leads to a significantly higher level of satisfaction with local government performance. Rice (2001) studies survey data on the quality of municipal government—measured by citizen's judgments concerning the responsiveness of the government to complaints and the quality of the services it provides—in 114 Iowa communities. Hence, his study, as well as Cusack's (1999) research, is based on subjective performance measures. The index of social capital in this study is based on five questions about interpersonal trust, civic engagement, and social networks. The results show that social capital is strongly and positively related to government responsiveness and service quality.

ANALYSIS

Our primary objective is to enquire into the relationship between social capital and institutional performance in Flemish municipalities. As mentioned previously, extending the empirical analysis to the local government level provides an interesting addition to previous work. First, it provides a more stringent test of the social capital hypothesis because the variation in social capital is probably less pervasive at lower levels of government. This is especially the case for the Flemish municipalities, as these small geographical units share to some extent common economic, social, and political contexts. This limits variation in the elements that influence the generation of social capital (and therefore variation in the level of social capital).⁴ Moreover, moving to a lower level of government provides a means to significantly increase the data set under analysis. Whereas previous aggregate-level cross-sectional studies are mostly based on some 50 observations (due to the availability of reliable data at the country level or the limited number of states or regions within a country), our analysis is based on a cross-section of 305 of the 308 Flemish municipalities (using data for the fiscal year 2000).⁵ In contrast to previous studies at the local level (Cusack, 1999; Rice, 2001), we employ a larger data set, study local governments with a parliamentary system, and concentrate on an objective measure of government performance rather than subjective citizen satisfaction data. The latter avoids the potential pitfall that the subjective assessment of government performance may be affected by the level of social capital (confounding inferences from the analysis).

Measuring Social Capital

Basically, two approaches can be discerned in the conceptualization of social capital as a characteristic of communities. In the first, social capital is defined using aggregate-level data on, say, the density of voluntary organizations or rates of political participation. The second strategy relies on aggregated individual-level survey data. As data availability precludes the inclusion of survey-based indices at the municipal level, we follow the former approach in our analysis and use only macro-indicators for the measurement of social capital. Specifically, three different indicators are used.

Our first indicator of social capital measures *associational life*. We include this variable, as a wide interlocking web of formal organizations refers to a high level of social capital. Voluntary associations are seen as creators of social capital because of their socialization effects on democratic and cooperative values and norms. Moreover, the trust and norms of reciprocity that people generate in associations are spread over the whole community, encompassing citizens who are not equally active in associational life (Stolle, 2000). We use a wide variety of organizations (per capita) in each municipality to measure the density of associational activity. Besides sports clubs, this measure also includes associations of retired people, women's associations, associations of parents, and the like (Bloso, 2004; Lauwerysen & Colpaert, 2004).⁶

In correspondence with Casey (2004), Costa and Kahn (2003), Putnam (2000), and Serra (1999), we use *electoral turnout* in the 2000 municipal elections as a second indicator of social capital. This is measured as the number of votes cast on Election Day (valid as well as invalid) divided by the number of registered voters. It refers to civic involvement and participation in public affairs. Voting is compulsory in Belgium. Still, this compulsory character is to a large extent "symbolic" as penalization is virtually nonexistent in practice.⁷ Moreover, turnout rates ranged from 87.95 to 98.46% in the election under study and thus show significant variation between the Flemish municipalities. This lack of

prosecution and the significant variation in actual turnout rates allow us to interpret high turnout levels as signaling an engagement toward the “common good” (and thus a high level of social capital) (see also Overbye, 1995). The extent of associational life and electoral turnout are indicators that cover the structural component of social capital.

Fukuyama (1995), Inglehart (1997), and Putnam (1993) have suggested that social norms, but in particular trust among citizens, establish the cultural aspects of social capital. As Delhey and Newton (2004) have shown that distrust accompanies conflict, the crime rate can be conceived as an indicator for the level of generalized trust within a municipality and thus as an objective proxy for the attitudinal (or cultural) component of social capital. Hence, and thereby following Rice and Sumberg (1997), the *crime rate* per capita in each municipality is used as our third indicator of social capital. Clearly, as crime in societies will lower citizens’ respect and trust in one another, low crime rates are expected to be indicative of a high level of social capital.

The above three indicators are expected to be measuring a similar underlying concept (i.e., social capital). Hence, we combine them into a single index through a factor analysis using Principal Component Analysis (PCA) as the method of extraction. This mitigates the influence of idiosyncratic measurement error within each of the variables and maximizes the likelihood of measuring the underlying concept more precisely. Thus, even though the individual indicators of social capital are arguably less than ideal and their choice might be criticized, the component retrieved from the PCA analysis “probably measures social capital better than any single indicator” (Bjørnskov, 2003, p. 7; see also Knack, 2002; Rice & Sumberg, 1997). The results of the PCA are summarized in Table 1.

It is clear from Table 1 that the absolute value of the component loadings of all three indicators is above the critical value of 0.35 (Pennings, Keman, & Kleinnijenhuis, 1999). Hence, each of the elements loads powerfully onto one underlying component extracted from the data. Note also that with the use of all three indicators into one principal component, our index of social capital comprises both structural aspects (i.e., is associational life and political involvement) and a cultural aspect (i.e., the crime rate as a proxy for trust). Hence, our social capital index takes account of the dual nature of the concept.⁸

Empirical Model

Flemish municipalities provide an ideal setting to analyze the effects of social capital on government performance, as they have a wide-ranging autonomy when it concerns their policy. This autonomy is a fundamental characteristic of Belgian local governments. In fact, article 162 of the Belgian constitution states that municipal councils can take any initiative that is not prohibited explicitly by central legislation. Specifically, Flemish local

TABLE 1
Social Capital Component

Component measure	Component loading
Electoral turnout	0.84
Crime rate	−0.75
Associational life	0.60
Eigenvalue	1.62
Percentage variance	54.08

governments have a wide-ranging independence in setting local tax rates and introducing new taxes while, at the expenditure side, they face important responsibilities concerning education, police services, social protection, and infrastructure (i.e., local roads and parks).

The dependent variable in our analysis equals the difference in total government revenues and total expenditures during the fiscal year 2000 (excluding investment-related financial flows). The resulting continuous variable, which will be referred to as the “surplus” in the remainder of this article, ranges from a negative value (deficit) to a positive value (surplus). Also, to adjust the value of the surplus for the size of the municipality’s budget, we divide the surplus by total municipal revenues. Hence, our dependent variable is the municipality’s surplus for the fiscal year 2000 as a share of total revenues. This focus on one aspect of government performance rather than analyzing a catch-all performance measure follows the example of, among others, Wilkinson (1996), Inglehart (1997), and Bjørnskov (2003). We concentrate on the quality of financial management or, more particularly, on the local government’s ability to achieve a positive financial result, as this taps into the desire for prudent financial management and the aversion for fiscal deficits in the electorate (Niskanen, 1979; Peltzman, 1992). Moreover, financial management constitutes a crucial part of the (local) government’s functioning and good performance in this area is at the basis of (future) well-being. Fiscal surpluses are likely to foster high levels of “fiscal slack,” which points to increases in “a government’s financial options and flexibility in managing risk and uncertainty” (Hendrick, 2004, p. 83). Hence, higher surpluses (or, equivalently, lower deficits) are regarded as better government performance.⁹

As argued in Section 1, we expect higher levels of social capital, as defined in the previous section, to lead to better government performance. However, while estimating the effect of social capital on government performance, it is imperative to control for the possible importance of rival explanations. Hence, we include a number of socioeconomic and political control variables in the model (descriptive statistics for all variables are provided in Table 2). First, we include a lagged dependent variable to account for the slow adjustment in budget outcomes (be these positive or negative). Municipalities facing budgetary difficulties—for whatever reason—are not expected to magically resolve these. Similarly, a municipality with a positive financial outcome in one year is more

TABLE 2

Descriptive Statistics

Variable	<i>M</i>	<i>SD</i>	Min	Max
Surplus	7.155	8.783	−15.084	34.426
Lagged surplus	4.633	6.834	−19.032	27.342
Lagged public debt	127.444	52.070	26.991	433.973
Income	11.136	1.479	7.402	15.771
Income inequality	95.891	10.355	69.500	132.500
Unemployment	1.704	0.641	0.528	4.530
Population size	9.556	0.708	6.871	13.009
Cost efficiency	0.705	0.167	0.306	1
Government fragmentation	1.579	0.604	1	4.481
Ideological fragmentation	0.562	0.808	0	2.890
Ideological position	5.008	0.589	2.7	6.1
Social capital	−0.001	0.987	−3.354	3.359

likely to keep this up in the following years. We therefore expect a positive coefficient estimate, reflecting this interdependence in the presence (or absence) of fiscal strain over time. Second, we include the lagged level of long-term local public debt—also defined as a share of total municipal revenues. This variable measures the strain that past (mainly investment) decisions impose on a municipality's finances. Although loans are often an important instrument to spread the costs of an investment over its (economic) lifetime, high indebtedness increases the burden of interest and amortization on the present budget. As this makes it more difficult to achieve a financial equilibrium or surplus, we expect a negative effect of the lagged level of long-term local public debt.

Third, we introduce the per capita taxable income (in €1,000). On the one hand, this variable gauges the demand for public goods. Income is expected to have a negative effect on the fiscal surplus if public goods are "normal" goods, because public expenditures then positively relate to income. On the other hand, high-income citizens provide the municipality with the possibility of raising more revenue (i.e., a higher tax base), and high-income citizens might be "more effective in demanding more efficient government" (Knack, 2002, p. 777). The interplay of both effects makes the expected outcome for this variable ambiguous. We also include income inequality, measured by the ratio of the interquartile difference in income to the median value. We expect a positive effect on the fiscal surplus due to the nature of local income taxes. These are a surcharge on the progressive federal income tax and made up more than 45% of local tax revenues in 2000. Therefore, they are the single most important source of tax revenue for the Flemish municipalities. The progressive nature of the income tax implies that higher revenues are obtained in municipalities with a more unequal distribution of income, *ceteris paribus*. The reason is that the additional revenue obtained from richer citizens (compared with the average citizen) exceeds the lower revenues from poorer citizens. In other words, "*from a pure budgetary point of view, income inequality is therefore a 'good thing' for a jurisdiction*" (Ashworth, Geys, & Heyndels, 2003, p. 176, emphasis in original).

Unemployment, defined as the percentage of the total municipal population that is unemployed, is expected to have a negative impact on the local budget for two reasons. First, municipal revenues from, say, income taxation are likely to be lower if a larger share of the population is unemployed. Second, as the unemployed are more likely to turn to local welfare agencies for financial assistance, higher unemployment tends to increase the expenditure side of the municipality's budget. Population size is also included in our model and equals the number of inhabitants in the municipality (the natural logarithm controls for the highly skewed distribution of this variable). It is included to capture demand side effects from larger municipalities, as these are likely to have higher demands for public expenditures (also due to their tourist and center functions). Nonetheless, as with income, a larger population reflects a higher tax base. This might allow the municipality to keep its finances in order despite higher expenditure demands. Hence, the sign of this variable's coefficient is theoretically ambiguous.

As a final socioeconomic variable, we include the cost efficiency of local government activities to measure the influence of (internal) government characteristics on its performance. Efficiently run municipalities are able to do more with a given amount of revenues or spend less on a given amount of output. Hence, it can be expected that higher efficiency leads to better financial results. The cost efficiency data are obtained through a nonparametric Data Envelopment Analysis (assuming variable returns to scale) relating total municipal expenditures for the fiscal year 2000 to levels of subsistence grant beneficiaries, students in primary schools, surface of recreational facilities, population size, and the fraction of elderly in that same year (De Borger & Kerstens, 1996; Vanden Eeckhaut, Tulkens, & Jamar, 1993).¹⁰ Higher values point to more efficient municipalities.

Besides socioeconomic controls, we introduce three political control variables. Each of these focuses on an important characteristic of the local government ruling in the year 2000 (and which was elected in 1994). The first feature is the level of government fragmentation. This refers to the extent to which power is dispersed among different parties and is measured by the “effective” number of parties in the governing coalition.¹¹ A vast literature has suggested that when more parties share power, conflicts between these “veto-players” are likely to generate indecisiveness and gridlock (Alesina & Drazen, 1991; Tsebelis, 1995). In line with the *Weak Government Hypothesis*—which states that fragmented (or weak) governments will run higher budget deficits (Roubini & Sachs, 1989)—we expect the budgetary surplus to be lower when more parties take part in the ruling coalition.¹² Interestingly, a similar gridlock effect may arise when the coalition partners are ideologically dispersed (Tsebelis, 1995; Volkerink & de Haan, 2001). Indeed, it is at least conceivable that leftist parties are more likely to reach consensus among each other than with a right-wing party. To capture this effect, we include a measure for the ideological fragmentation of the governing coalition. This is measured as the standard deviation of the ideological positions of the coalition partners (Volkerink & de Haan, 2001).¹³ We expect a higher degree of ideological fragmentation to lead to lower budget surpluses.

Finally, it is often argued that left-wing politicians are more in favor of government intervention, whereas those of right-wing orthodoxy more fiercely support the workings of the market (Hibbs, 1977; Tavares, 2004). This generally accepted idea would lead to higher expenditure levels under left-wing governments. When left-wing governments also increase revenue levels to compensate for their more pronounced spendthrift, the fiscal balance would be left unaffected. However, raising revenues is usually less popular with the electorate. Thus, the higher expenditures generally associated with the political left might lead to lower budget surpluses. We measure the government’s ideological position by the weighed average ideological position of all government parties.¹⁴ Given that higher values point to a more right-wing ideology, we anticipate a positive coefficient for this variable.

Methodological Issues

Before presenting our estimation results, two important methodological issues must be raised. First, the explanation of institutional performance by the prominence of social capital may face problems of “reverse causality” (Bjørnskov, 2003; Knack & Keefer, 1997; Rice, 2001; Rice & Sumberg, 1997). Indeed, it is possible that high levels of social capital lead to better government performance, but that better performance also increases trust in the government (and social capital more generally). Hence, it is not always clear in what direction the flow of causality runs when interpreting the (positive) correlation between social capital and institutional performance. This problem is, however, much less severe in our data set. The reason is that the dependent variable of our model (i.e., the fiscal surplus in period t) is (at best) only observed by the municipalities’ inhabitants in the following fiscal year. At that time, it cannot be expected to influence the level of social capital in period t . Given this temporal ordering of the dependent and the main independent variables, possible problems of reverse causality are minimized in our setting.

Second, some debate has arisen over the question whether social capital should be considered as exogenous or endogenous when using it to explain economic or institutional performance. Considering social capital as endogenous leads to the question of where this commodity derives from and sees it as an element subject to change in the short term (e.g.,

depending on past economic or institutional performance). Considering it as exogenous implies we take the level of social capital as fixed in (at least) the short and medium term. The question concerning the exogeneity or endogeneity of social capital has most forcefully been raised by Jackman and Miller (1998). They have evaluated the recent stream of social capital studies and found that these often stray “considerably from the original treatment of social capital (associated with Granovetter [1973] and Coleman [1990]), which casts it as *endogenous*” (Jackman & Miller, 1998, p. 47, emphasis added). In fact, most recent studies suggest that “social capital reflects enduring cultural norms . . . [that] serve as the key *exogenous* factor in generating economic and governmental performance” (Jackman & Miller, 1998, p. 48, emphasis added).

Clearly, one cannot consider a variable to be both constant *and* subject to change in the short term—both approaches are logically incompatible. The question, however, is not of purely theoretical importance. It also poses potentially serious difficulties in econometric applications. Specifically, treating endogenous variables as exogenous could lead to biased estimation results and incorrect inferences (Verbeek, 2004). It is thus important to give due consideration to this issue in the empirical specification of the model.

Empirical Results

Our empirical analysis is based on data from 305 of the 308 Flemish municipalities (for the year 2000). As mentioned in the previous section, the possible endogeneity of social capital may lead to biased estimation results when using plain ordinary least squares (OLS) estimation. Hence, we test for the exogeneity of social capital using the standard Hausman (1978) test. The null hypothesis that social capital is exogenous and that OLS would yield consistent estimates is rejected (although marginally) at conventional confidence levels; $\chi^2(1) = 4.208$, $p < .05$. To overcome the endogeneity bias in OLS estimation, we therefore treat social capital as an endogenous variable and employ two-stage least squares (2SLS) regression techniques.

Specifically, we instrument for social capital through a number of variables that have been suggested in previous work: through population mobility (i.e., in- and outward migration as percentage of total population), percentage of the population over 65 and percentage of non-Belgian nationality (Alesina & La Ferrara, 2000; Breda, Schoenmaekers, & van Geel, 2003; Costa & Kahn, 2003; Glaeser, 2001). A Hansen *J* test for over-identifying restrictions corroborates the appropriateness of these instruments; $\chi^2(2) = 0.05$, $p = .975$. Also, each of the instruments is statistically significant and of the expected sign in the first-stage regression—further emphasizing their validity (full results available on request).

The results of the analysis are summarized in Table 3. In this table, we first present the preferred 2SLS regression results in columns (1) and (2). The findings presented in column (2) were obtained by excluding all statistically insignificant variables to make a more efficient model (although leaving the diagnostic tests uncompromised). The diagnostic tests—reported in the bottom row of the table—confirm the suitability of this estimation technique (see *supra*). In columns (3) and (4), we present the results from a standard OLS regression estimation. Note that these estimations do not control for the endogeneity of social capital (which, given the marginal rejection of social capital's exogeneity, may have only a limited bearing on the results) and that these results are merely intended for comparison with the 2SLS results.

First, it is clear that the model's overall performance is very good. The variables in the model explain some 57% of the variation in the budget surplus and are jointly significant

TABLE 3

Estimation Results

Variables	(1) 2SLS	(2) 2SLS	(3) OLS	(4) OLS
Intercept	10.178* (1.75)	7.836*** (3.17)	15.515*** (2.74)	17.196*** (4.23)
Lagged surplus	0.622*** (7.50)	0.623*** (7.61)	0.629*** (7.32)	0.632*** (7.49)
Lagged public debt	-0.032*** (-4.34)	-0.032*** (-4.27)	-0.030*** (-4.30)	-0.030*** (-4.28)
Income	-0.504 (-1.31)	—	-0.781** (-2.16)	-0.601** (-2.49)
Income inequality	0.041 (0.76)	—	0.038 (0.70)	—
Unemployment	-1.902*** (-2.62)	-1.816*** (-3.13)	-2.189*** (-3.14)	-2.385*** (-3.73)
Population size	-1.354* (-1.91)	-1.487** (-2.04)	-2.096*** (-2.96)	-2.174*** (-3.08)
Cost efficiency	10.925*** (4.33)	11.459*** (4.71)	10.860*** (4.25)	11.096*** (4.48)
Government fragmentation	-0.366 (-0.70)	—	-0.458 (-0.86)	—
Ideological fragmentation	-0.873* (-1.78)	-0.941** (-2.55)	-0.821* (-1.76)	-0.782* (-1.88)
Ideological position	0.025 (0.04)	—	0.094 (0.15)	—
Social capital	1.985*** (2.72)	2.247*** (3.46)	0.763* (1.83)	0.763* (1.83)
<i>N</i>	305	305	305	305
<i>R</i> ²	56.87	56.10	57.92	57.77
<i>F</i> (full model)	30.82***	40.42***	32.73***	42.13***
BPH test	0.739	1.021	2.94*	3.37*
Hausman	4.208**	5.885**		
Hansen <i>J</i> test	0.05	0.27		
<i>F</i> (instruments)	31.04***	45.09***		

Note. *t* Statistics based on White heteroskedasticity-consistent standard errors between brackets; two-tailed: * significant at 10%, ** at 5%, and *** at 1%. *F* (full model) shows the joint significance of all variables in the model. BPH test: the null hypothesis of homoskedastic disturbances (based on Pagan & Hall [1983] for 2SLS and Breusch & Pagan [1979] for OLS model) is tested. Hausman regards the null hypothesis that social capital is exogenous. Hansen *J* test reports on the null hypothesis that the instruments used for social capital are valid. Finally, *F* (instruments) indicates the joint significance of the instruments in the first-stage regression.

at beyond the 99% confidence level (as indicated by the *F* test at the bottom of Table 2). To start the discussion of the results with the central variable—social capital—we observe that the level of social capital significantly affects the budget surplus in Flemish municipalities. This is the case in both the OLS and the 2SLS regressions, although the effect is much stronger in the preferred 2SLS estimation. This implies that, even though the endogeneity of social capital (slightly) affects the estimation results, it does not meaningfully affect the inferences from the analysis. The parameter estimates carry the expected positive sign such that higher levels of social capital lead to higher budget surpluses (or, equivalently, lower deficits). This supports the view that social capital has a positive impact on the quality of financial management and is in line with social capital's beneficial effect on institutional performance found in previous empirical work (on a wide variety of

performance measures). The size of the coefficients indicates that an increase of social capital with one standard deviation improves the municipality's budgetary surplus with approximately 2–2.25% of total revenues. The effect is thus not only of strong statistical significance but also of considerable "economic" importance. We can therefore conclude that the positive influence of social capital can be generalized to lower levels of government and to the financial management by the government.¹⁵

Turning to the other variables in the model, it can be seen that these generally behave as expected. The lagged dependent variable has a statistically significant positive coefficient. This reveals the intertemporal dependence of budgetary policy at the municipal level where budgetary health (or lack thereof) persists over time. Particularly, the parameter estimates indicate that a surplus equal to 1% of total revenues in one fiscal year leads to a surplus of approximately 0.62% during the next fiscal year. The lagged level of local public indebtedness has a significant negative effect on the present fiscal balance. Higher levels of debt clearly impose a considerable burden on the financial management of the municipality and make it harder to obtain a fiscal equilibrium (or surplus). A move from the minimal to the maximal level of indebtedness would reduce the surplus by more than 12 percentage points, *ceteris paribus*.

Both the level of per capita income and the inequality in income levels fail to have a statistically significant effect on the fiscal surplus.¹⁶ Unemployment has a strong depressing effect on the municipality's surplus. As the share of unemployed in the population increases, rising expenditures (e.g., on social welfare benefits) and falling revenues (e.g., lower income tax revenue) weigh down on the municipality's financial position. Also, we find that larger municipalities tend to have lower budget surpluses (or higher deficits). The demand side effects from larger municipalities thus apparently outweigh the effects from the higher tax base associated with larger populations. With respect to the last socio-economic control variable in the model, we find a strong and positive relation between the size of the surplus and cost efficiency.¹⁷ More efficient municipalities are able to do more with a given amount of revenues (or spend less on a given amount of output) and tend to have a brighter balance at the end of the fiscal year.

The political variables included in the model have less explanatory power. The effective number of parties in the government has the expected negative sign but fails to reach statistical significance at conventional levels. Government fragmentation thus appears to have little effect on the fiscal balance in Flemish municipalities. Nonetheless, we find some evidence that governments of more mixed ideological composition have difficulties in maintaining a sound financial management. Indeed, surpluses are lower, *ceteris paribus*, in municipalities where the ideological fragmentation of the government is higher. This is in line with theoretical expectations voiced in Tsebelis (1995) and Volkerink and de Haan (2001). Finally, the lack of significance for the ideological position of the government implies that, on average, left-wing governments do not run higher deficits than right-wing governments. To the extent that they have higher expenditure levels (although empirical evidence for such a relation appears inconclusive, see Imbeau, Pétry, & Lamara, 2001), they seem to compensate this by also having higher revenue levels.

CONCLUSION

The (recent) empirical literature on social capital has demonstrated that generalized trust, norms of reciprocity, and networks of civic engagement provide positive externalities to society, for example, through improved (institutional and socioeconomic) performance. Much of this evidence, however, is retrieved from studies regarding social capital

across countries or large sub-national units such as states or regions. In this article, we followed the recent extension of this line of research to the local government level. This is a valuable broadening of the research agenda, as lower levels of government usually show more limited variation in social capital, thus making its analysis a more stringent test of the hypothesis (Rice & Sumberg, 1997). Unlike previous local-level analyses of Putnam's hypothesis (Cusack, 1999; Rice, 2001), we retained the use of objective macro-level indicators for the measurement of both social capital and institutional performance. This avoids the potentially important difficulty that social capital might affect the subjective assessment of government performance (which could blur the inferences from the analysis).

Our analysis on data from 305 Flemish municipal governments demonstrates that social capital leads to a better quality of the government's financial management, even after controlling for various socioeconomic and political differences between the municipalities. This is consistent with evidence from higher levels of government and suggests that even a small amount of variation in social capital may significantly influence the performance of democratic governments. In addition, because our analysis indicates that social capital is an endogenous concept (and thus subject to change even in the short term), improving government institutions' performance through a development in the area's social capital is feasible. However, this obviously begs the question how the level of social capital within a community can be increased. Although the results from our analysis indicate that population mobility, age, and heterogeneity may have detrimental effects on the level of social capital, more research on the exact building blocks of social capital on the macro-level is clearly indispensable.

ENDNOTES

- 1 To avoid confusion, we note that the term "fiscal balance" has also been used to indicate "the extent to which a government is providing the appropriate level of goods and services" relative to the needs within the population (Hendrick, 2004, p. 96). In the remainder of this article, however, we focus on "fiscal balance" as the extent to which local governments manage to (at least) balance revenues and expenditures.
- 2 Some studies regarding "institutional" performance have focused on the importance of social capital at the firm level. They have analyzed the internal functioning and performance of (nonprofit) organizations and the creation of such organizations (Cohen & Prusak, 2001; Feeney, 1998; Saxton & Benson, 2005). This study, however, concentrates on the performance of local governments.
- 3 The latter argument, however, amounts to little more than the ad hoc inclusion of socially beneficial preferences associated with social capital. Such "modeling" is devoid of all predictive value, as any action can be explained by making the appropriate assumptions post hoc (Grossman & Helpman, 2001).
- 4 Note that this "similarity" argument may not hold for small geographical units in a larger setting such as the United States. Indeed, more variation in various socioeconomic traits may be expected across American cities than across the 50 American states. This may limit the applicability of our model to other countries. Hence, in future research, it would be interesting to analyze local-level data in other larger countries to evaluate our findings.
- 5 Missing data prevent the inclusion of the municipalities of Herstappe, Meeuwen-Gruitrode, and Drogenbos.
- 6 We lack data on informal contacts people may have. Still, we are not overly concerned by this absence. Although loose and amorphous networks of individuals who come together on a casual basis might

also facilitate civic attitudes and behaviors, the broadening of the social capital concept to include various types of social interaction might constitute a conceptual problem, as it becomes fuzzier and its relationship to performance less obvious (Stolle, 2003).

- 7 A recent survey among the 27 Belgian judicial areas indicates that nonvoters in the 2000 municipal elections were prosecuted in only two of these (Turnhout and Mechelen) and that exactly 391 individuals were prosecuted. Of 628,957 nonvoters, this implies a prosecution rate of 0.06% (Geys, 2004).
- 8 By merging indicators for both structural and cultural aspects of social capital into one index, we follow the main strand of the literature. We should note, however, that some authors indicate a need for caution about constructing social capital indices that mix indicators of social connectedness with indicators of generalized trust and reciprocity (Knack, 2002; Knack & Keefer, 1997; Newton, 1999). They rather argue that all the indicators should be kept apart and the relations between them treated as a matter of investigation.
- 9 Putnam (1993) also has included the quality of a region's financial management—measured as budget promptness—in his measure of institutional performance. Knack's (2002) measure of government performance comprises 35 criteria, with no less than 13 elements assessing the quality of financial management. These include the "structural balance between revenues and expenditures" (Knack, 2002, p. 775). Finally, Rice (2001, p. 385), although focusing on subjective measures of government performance, has argued that debt ratios and low expenditures levels "would be good [objective] indicators of government performance."
- 10 These data are calculated using the EMS program (version 1.3.0) by Hodger Scheel (University of Dortmund). Note that government efficiency has been regarded as a result of social capital (Putnam, 1993). If this were the case in the Flemish municipalities, our model would suffer from significant multicollinearity (making it harder to find significant effects on these variables). Nonetheless, and admittedly rather surprisingly, the correlation between social capital and our efficiency measure is weakly negative ($r = -.23$) and insignificant in a multivariate setting (results available on request). Hence, the inclusion of both variables in the same model should not pose any substantial collinearity problems.
- 11 The "effective" number of parties equals $1/\sum_{i=1}^n p_i^2$, with n the number of coalition partners and p_i the seat share of party i in the College of Mayors and Aldermen (Laakso & Taagepera, 1979).
- 12 The local councils consist of 7 to 55 seats (depending on the size of the municipality). To control a majority of the seats, coalition governments are often required. The size of these coalitions usually remains rather small (Table 2), such that the effect of government fragmentation is likely to be weak. We nonetheless include this variable as recent empirical evidence has shown that government fragmentation significantly affects the government's decision-making process in Flemish municipalities (e.g., Ashworth, Geys, & Heyndels, 2005, 2006).
- 13 In mathematical terms, ideological fragmentation or $IDFRAG = \sum_{i=1}^n [p_i(Complexion_i - ICG)^2]$, where p_i is the seat share of party i in the College of Mayors and Aldermen, *Complexion* refers to the ideological position of this party on a classic left-right scale (from 0 to 10) and *ICG* amounts to the weighted average ideological position of all government parties (see *infra*). The data concerning a party's ideological position were obtained from Deschouwer (1996). They are based on a self-placement survey asking presidents and spokesmen of the parties in the municipalities to locate their party on an ideological scale between 0 (left) and 10 (right). The figures range from 2.6 (Agalev) to 6.1 (VLD).
- 14 Using definitions for n , p_i , and *Complexion* as before (see endnote 13), the mathematical equation is as follows: $ICG = \sum_{i=1}^n (p_i \cdot Complexion_i)$.
- 15 To test the robustness of these findings to our measure of the government's (fiscal) performance, we repeated the analyses with two alternative dependent variables: the level of long-term local government

debts and the level of administrative overhead (both as a share of total municipal expenditures). The results indicate that social capital has a significant depressing effect on local public indebtedness and administrative overhead. These additional analyses thus corroborate the finding that social capital improves the government's financial performance (results available on request).

- 16 Note, however, that income is statistically significant in the OLS regression. This may point to the fact that (at least) part of the income effect is absorbed through its effect on social capital. This is supported by the results from the first-stage regression where it is shown that income has a strongly significant negative effect on social capital (results available on request). That is, the level of social capital is lower in municipalities with higher income levels.
- 17 Qualitatively similar results were obtained when assuming constant rather than variable returns to scale in the Data Envelopment Analysis through which the efficiency data were retrieved. Using the Free Disposal Hull methodology to assess efficiency (De Prins, Simar, & Tulkens, 1984) likewise made little difference to the estimation results.

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