

Government performance, social capital and ethnicity: understanding provincial development in Papua New Guinea

Robert Phillpot

What makes government work well? Strengthening government institutions has been a focus for aid donors in Papua New Guinea for more than a decade, but so far the results have been disappointing. Is Putnam's approach to social capital helpful in understanding the reasons for the poor performance of government institutions in Papua New Guinea? This study is a preliminary replication of Putnam's framework, but in a developing country characterised by strong social bonding along clan, tribal and linguistic lines. Early results suggest that the distinctive nature of social capital in Papua New Guinea—in particular the role of ethnicity—has had an impact on the effectiveness of provincial government.

Robert Phillpot is a PhD candidate in Development Administration at the National Centre for Development Studies, and an Associate of the State, Society and Governance in Melanesia Project at The Australian National University.

This article identifies ways to develop more effective government institutions in Papua New Guinea. The economy of Papua New Guinea has been well researched over recent years, but the relationship between its economic development strategies and its political and institutional processes is less well understood. Western policy advisers have often speculated about the ways in which socio-political and cultural factors can impact on government in Papua New Guinea. A key question is whether it is realistic to model government institutions

in developing countries along the same lines as similar institutions in Western countries.

It is often argued that the prospects for effective government depend on the level of economic and financial resources (see, for example, Israel 1987). It is clear that cultural, social and economic factors all affect the performance of government institutions, but Serra argues that the issue is not the amount of resources, but 'the existence of certain conditions for resources to be channeled effectively into priority goals' (Serra 1998:3).



Putnam (1993) provides evidence to support his argument that good governments are found where civil society is most developed. In recent years, political scientists have begun referring to society's confidence in its institutions as the stock of 'social capital'. For example, the United Nations Development Programme (UNDP) now recognises the importance of social capital and assesses it in terms of the 'features of social organisation—such as networks and values, including tolerance, inclusion, reciprocity, participation and trust—that facilitate coordination and cooperation for mutual benefit. Social capital inheres in the relations between and among actors' (UNDP 1997:35). Similarly, the World Bank assesses social capital by 'the informal rules, norms and long-term relationships which can explain differences in the nature and intensity of popular collective activity in different communities or nations' (World Bank 1997:114).

Social capital is therefore determined by two sets of issues: the norms, values and traditions which promote cooperation; and the networks, relationships and organisations that bring people together to solve common problems. This article adopts a broad view of social capital that includes the social and political environment shaping social structure and enabling norms to develop. Social capital is now generally regarded as being as important as human capital and natural resources and, 'despite limitations of proxy indicators for social capital, the patterns of results which emerge point to the importance of cross-cutting ties across social groups for engendering cooperation, trust and social and economic well-being and better government performance' (Narayan 1999:23).

The role of social capital as a characteristic of ethnic groups has recently attracted interest, but few studies focus on the impact of ethnic diversity on social capital and government performance. Bates

(1999) shows how ethnic identity can help to build trust, thereby increasing social capital between people in a given ethnic group, but that it can also reduce social capital in society by undermining trust between groups and reducing the effectiveness of political institutions.

Varshney (2001) has recently examined the impact of ethnic bonding, social capital and communal violence in India. He presents strong evidence that cross-ethnic linkages and membership of associations were a key element in promoting peaceful relations between Hindus and Muslims. He further argued for a distinction between social capital formation within ethnic groups ('bonding' social capital) and the form of cross-cutting civic engagement that takes place between groups ('bridging' social capital), which promotes ethnic peace.

This article attempts to disentangle the numerous issues relating to differences in provincial government performance in Papua New Guinea using Putnam's (1993) framework. A means of measuring provincial government performance and the stock of social capital in Papua New Guinea is investigated, highlighting the importance of ethnic fragmentation in terms of social capital.

Explanations for government performance

Putnam (1993) sought to explain the reasons for good government performance by analysing Italy's unique situation in 1970 when it created new governments for each region. These regions varied greatly from the standpoint of wealth, social structure and political leanings. The institutional performance of each region was measured by a composite index based on 12 elements, including promptness in adopting the budget approved by the regional assembly, the extent of legislative



innovation, provision of day-care centres and family clinics, industrial policy instruments, local health unit expenditures and bureaucratic responsiveness to citizens' queries. The degree of civicness in each region was measured by means of quantitative and qualitative indicators; in particular, voter turnout at referenda, lack of candidate preference voting in political elections, newspaper readership and density of sport and recreation associations.

Putnam posed the critical question of whether

...modernity is a cause of performance (perhaps one among several), whether performance is, in some way, a cause of modernity, whether both are influenced by a third factor (so that the association between the two is in some sense spurious) or whether the link between modernity and performance is even more complex (1993:86).

The statistical relationship between regional variations in institutional performance and differences in the degree of civicness were found to be more significant than in the case of socioeconomic variables. He concluded that 'some regions of Italy...are blessed with vibrant networks and norms of civic engagement, while others are cursed with vertically structured politics, a social life of fragmentation and isolation, and a culture of distrust. These differences in civic life turn out to play a key role in explaining institutional success' (Putnam 1993:15). Putnam further argued that

...it is enough to recognise that the performance of a regional government is somehow very closely related to the civic character of social and political life within the region. Regions with many civic associations, many newspaper readers, many issue-oriented voters, and few patron-client networks seem to nourish more effective governments (Putnam 1993:99).

Putnam found that it is not the degree of political participation that distinguishes 'civic' from 'uncivic' regions, but its character.

In particular, he found that political leaders in civic regions are readier to compromise than their counterparts in less civic regions, and that 'the least civic regions are the most subject to the ancient plague of political corruption' (Putnam 1993:102).

All of this is taken to suggest that an effective government-citizen relationship is the outcome of successful solutions to dilemmas of collective action. Norms of reciprocity and networks of civic engagement favour this outcome because they raise the costs of defection, facilitate information among people, reduce uncertainty and provide models for future cooperation. The spirit of confidence and trust throughout the whole community is enhanced.

Social capital and government performance

Is it possible to replicate Putnam's analysis in other countries to explain differences in institutional performance among governments with identical organisational forms? Measuring social capital is difficult. Several studies have identified proxies for social capital, using various types of qualitative and quantitative research methods. Serra (1998) examined the possibility of replicating Putnam's analysis in the context of the Indian states, constructing new indicators, analysing the relationship between social capital and Indian state performance.

Serra addressed the problems of measuring the degree of society's 'civicness' in India. She recognised that extensive participation of the masses in political life had been a notable feature in India since independence using figures on voter turnout as a measure of political participation. Data on membership of associations at the state level were limited to a number of associations constituted under government initiatives. Similarly, there was no comprehensive survey on newspaper readership, or on



access to media in general, which would indicate to what extent people were able to obtain information on issues relevant at the local or state level. A survey conducted by the Centre for the Study of Developing Societies (CSDS), the *1996 National Election Study Post-Poll Survey*, allowed a comparison of social capital across states. Although the survey was conceived as a post-poll survey, aimed at analysing voting patterns and changing political allegiance of the electorate, it also asked questions on social structures of participation and cooperation. In particular, 13 questions were relevant to the concept of social capital. They identified broadly two areas: the first on electors' views about their community, the role of elections and their representatives and officials; the second covering electors' participation in community and public affairs, membership in associations, extent of contact with public officials and media usage (Serra 1998:11).

Serra notes that, in the Indian context, poor performances were explained in terms of previous historical experiences (exploitative colonial domination), archaic productive relations in the countryside, lack of social change, ideology of the state in power, type of family systems, and so on. There might be a common root for the observed government inefficiency, bureaucratic corruption and inertia of the people in some Indian states but

...the question is whether this is at all similar to the one Putnam has found for Southern Italy, namely low mutual trust, absence of the conditions for individuals to pursue collective endeavours, lack of historical experience of cooperation—in summary, what Putnam calls a lack of 'social capital' is not clear (Serra 1998:8).

Tendler (1997) draws on cases of good performance by a state government in Brazil to show how people working in public agencies can be closely embedded in the communities they work with, and thereby create 'social capital'. Tendler also found

that 'civil society was not an unmitigated good. Important fractions of it perpetuated poor government, while others were pressuring effectively for better government' (Tendler 1997:157), demonstrating that civic associations play an important role in improving the performance of local government.

Narayan and Pritchett (1997), in a study of villages in rural Tanzania, found that households in villages with high levels of social capital (defined in terms of the degree of participation in village-level social organisations) have higher incomes per capita than do households in villages with low levels of social capital. Although no general conclusions could be drawn about the impact of social capital on government performance, the study points to a number of important linkages, including a positive association between social capital and the quality of local schooling. More recently, Narayan (1999) has analysed two aspects of social capital, namely 'cross-cutting ties,' and the interaction between informal and formal institutions. Narayan concludes that by applying the concept of social capital, a number of new policy approaches are suggested which 'can stem from civil society, the private sector, or the state and cover a wide range of fields' (Narayan 1999:43).

Several studies have focused on social capital as a central element in government performance, suggesting that social capital can be created to support political and economic development.

Provincial government in Papua New Guinea

World-wide strengthening of government institutions has been a focus for aid donors for more than a decade, but so far the results have been generally disappointing. However, there is now significant qualitative evidence to indicate that features such as the level of trust and norms of cooperation (that is,



social capital) crucially impinge on the effectiveness of government institutions. Is understanding of these issues relevant to understanding the reasons for the poor performance of such institutions in Papua New Guinea?

The provincial governments in Papua New Guinea have essentially identical institutional designs, therefore performance differences between provinces cannot be explained by this factor. Various reasons are given for the poor performance of provincial government in Papua New Guinea, including inappropriate design (for example, the revised Organic Law), a lack of economic and financial resources, low level of skills, and cultural impediments. Burton argues, for example, that

...many of the problems of provincial development...are traceable to cultural attitudes, not to absolute shortage of money, nor to intrinsically badly educated officials and politicians. Culture is praiseworthy—in village affairs. When it invades government, it leads wittingly to cronyism and nepotism, and unwittingly, to structural imbalances that may take years to correct (1998:175).

In Papua New Guinea there are significant economic differences between provinces. One might therefore expect that the wealthier provinces enjoy an advantage over their poorer counterparts in economic and financial resources. But it seems that the different levels of provincial government performance cannot be explained by their different levels of economic and human resources. Burton (1998) shows, for example, how Western Province—generally regarded as one of the worst performing provincial governments—has received substantial funding and, 'by 1992, only Enga, a far more populous mining province, edged out Western for the top spot in the provincial rankings of overall funding' (1998:160). A recent study found that Western Province

...is relatively wealthy compared to other provinces. But two dominant features of the provincial economy are a marked dualism and poor financial resource utilisation. The majority of the population is not significantly involved in the cash economy, receives few benefits from the province's income, and gets minimal service from government. These shortcomings are attributable more to poor administration and planning and a limited economic base than to a lack of financial resources (AusAID 2000:8).

Measuring government performance

In 1984 the PNG National Planning Office requested the PNG Institute of Applied Social and Economic Research (IASER) to conduct a study on spatial inequalities at the district level. This study delineated differences in socioeconomic development at the district level based on an initial list of 32 indicators (de Albuquerque and D'Sa 1986). The social indicators used for the study were derived primarily from the Provincial Data System and the 1980 National Population Census. The indicators were demographic, migration, economic, education, access and health. A development ranking for the provinces had previously been estimated by the same authors in an earlier analysis of spatial inequalities in Papua New Guinea.

In their study of provincial inequalities, de Albuquerque and D'Sa (1984) used 41 indicators, among them per capita value of cash crops produced, per capita domestic factor income, per capita expenditure for salaries of teachers and public servants, per capita value of all buildings completed during 1980, registered motor vehicles per 10,000 population, and road length per 1,000 population. In their 1986 study, the district scores were aggregated to the provincial level, revealing a favourable comparison



with the preliminary study. Provinces were ranked from 1 to 19 in descending order of development (Table 1).

An approach adopted by Axline (1986) in his study of provincial government in Papua New Guinea may also be applied to measure provincial performance. Axline examined the performance of provincial governments with regard to legislative activity, the capacity to extract and allocate resources, and the setting of provincial priorities. This study encompassed the broader policymaking process, from formulation to implementation, including

the elaboration of long-term goals and the day-to-day operation of the departments of the province. This approach is similar to that of Putnam, who examined all regional legislation in Italy from 1970 to 1984, with special emphasis on six regions, seeking to evaluate the regional legislative performance. Putnam's case studies of the six regions embraced social and economic planning to

...recreate the policy process from the demand side, follow it through the 'black box' of government, and trace its progress into the stage of administrative implementation and its final impact (Putnam 1993:191).

Axline was able to draw up a profile of provincial performance from which a general idea of the relative levels of provincial administrative capacity could be obtained across the five categories (Table 1). This enabled an analysis of the range of difference between the best and the worst performing provincial governments, and the kinds of problems posing the greatest obstacles to more effective provincial policy making. He concluded that it

...confirms the widely held perception that administrative capacity at the provincial level is very limited while at the same time there are marked differences among provincial governments (Axline 1986:171).

The best performing provincial governments were in the New Guinea Islands region and the worst were in the Southern (Papuan) region, however differences do not clearly follow regional lines. The performance of provincial governments in the Highlands region was mixed, with some better and some poorer examples in each (Axline 1986).

Axline's (1986) results are compared (in Figure 1) with the development rankings produced by de Albuquerque and D'Sa (1986), who found the most developed provinces were the outer island regions of New Ireland, New Britain, Bougainville and Manus, while the least developed regions

Table 1 Provincial development and performance ranking

	IASER	Axline
Western (West)	10	17
Gulf (Gulf)	9	13
Central (Cent)	6	6
Milne Bay (Mbay)	8	8
Oro (Oro)	7	19
Southern Highlands (SHP)	18	16
Enga (Enga)	19	18
Western Highlands (WHP)	13	15
Simbu (Smb)	12	14
Eastern Highlands (EHP)	16	3
Morobe (Mor)	17	2
Madang (Mad)	15	11
East Sepik (ESep)	11	5
Sandaun (Sand)	14	12
Manus (Man)	3	10
New Ireland (NIP)	4	7
East New Britain (ENB)	1	9
West New Britain (WNB)	5	4
Bougainville (Boug)	2	1

Sources: de Albuquerque, K. and D'Sa, E., 1986. *Spatial Inequalities in Papua New Guinea: a district level analysis*, Discussion Paper No. 49, Institute of Applied Social and Economic Research, Port Moresby; Axline, W.A., 1986. *Decentralisation and Development Policy: provincial government and the planning process in Papua New Guinea*, Monograph No 26, Institute of Applied Social and Economic Research, Port Moresby.



were the Highlands provinces of Enga and the Southern and Eastern Highlands. The correlation between them is very low (R -square = 0.1). This analysis suggests that some other factor, or factors, account for provincial development.

Measuring social capital in Papua New Guinea

Empirical studies differ in the way they attempt to measure social capital. Some have used the density of networks while others have used measures of trust. Others have combined a measure of network density with some proxies for assessing the strength of relevant norms. Krishna and Shrader (1999) argue that 'neither an exclusively networks-based nor an entirely norms-dependent measure suffices for scaling social capital' (1999:4). Putnam used horizontally organised networks to measure social capital in his analysis, and argued that vertical networks, no matter how dense or how important to its participants, could not sustain social trust and cooperation (Putnam 1993:173). More recent studies in other countries indicate that 'horizontally shaped networks do not necessarily reveal the presence of higher social capital' (Krishna and Shrader 1999:7). Because of the enormous uncertainties surrounding this issue, Krishna and Shrader expressed the view that

...what sorts of norms are associated with which types of networks cannot be assumed in advance but must be verified independently for each social context (1999:8).

Five indicators of social capital were tested in this study

- the quality of education
- the level of community knowledge about current events
- the number of women's community-based organisations operating in six provinces

- the number of women in local politics
- community participation in rugby league football clubs.

Social capital and education

Recent research shows an important relationship between social capital and education. In particular, it indicates that social capital is not only a critical input for education, but also a by-product. In addition to strengthening the human capital needed for economic development, social development and state accountability, education seems to foster social capital networks. It seems that social capital is produced through education in three ways: by students practising social capital skills, such as participation and reciprocity; by schools providing fora for community activity; and by students learning how to participate responsibly in their society.

Levels of educational attainment are widely linked to levels of economic development. However, financial resources alone do not guarantee positive educational outcomes for students. Considerable evidence shows that family, community and state involvement in education improves outcomes. Primary schools constitute a centre for social capital in rural areas of Papua New Guinea. While they are considered to be government institutions they are also funded in a large part by the community.

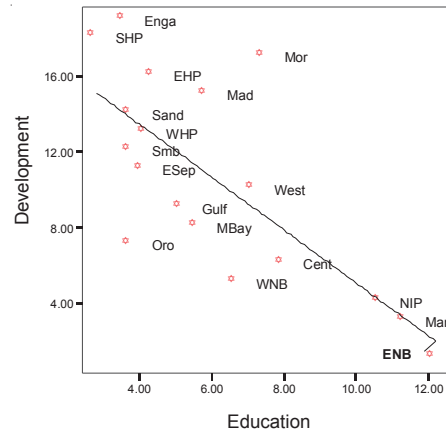
School-based research in both industrial and developing countries indicates that social capital plays an important role in creating effective schools. Francis et al. (1998) undertook a survey of 54 schools and communities across six zones in Nigeria. The research indicated that trust between parents and teachers, the effectiveness and involvement of the local parents and teachers association, and the support and effectiveness of the governmental administration were key components in producing effective schools. It was concluded that the changing relationship between school and community



is reflected in the decline of involvement in building educational capacity. They found that the school environments in the study were not conducive to learning.

For Papua New Guinea the percentage of the population that has completed year 10 is used to provide an indicator of the relative levels of 'educational quality' achieved in each province, and the statistical relationship between provincial development (the dependent variable) and the quality of education (independent variable) is shown in Figure 2 (the regression line is downward sloping because development performance is ranked from 1 to 19). The Pearson correlation, $r = -0.735$, $p < 0.01$, indicates a statistically significant association between the two variables, such that a higher quality of education is associated with a higher level of development. The R-square coefficient is also shown because it indicates the proportion of the variance in one variable that is held in common with, or accounted for, by the other. In this case, the R-squared shows that 54 per cent of the variance in one

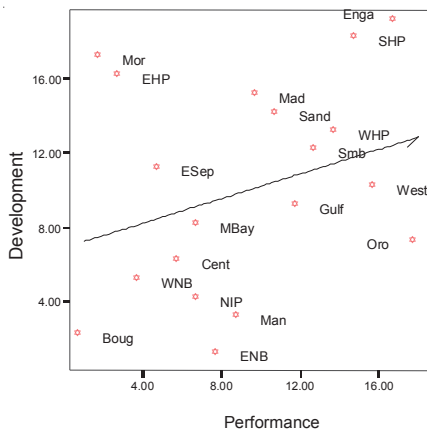
Figure 2 Provincial development and the quality of education



Note: R-square = 0.54.
Source: Author's calculations.

variable can be accounted for by the other. However, this result should be treated with some caution because the development indicator itself comprises a small educational component.

Figure 1 Provincial development and performance



Note: R-square = 0.10.
Source: Author's calculations.

Social capital and community awareness

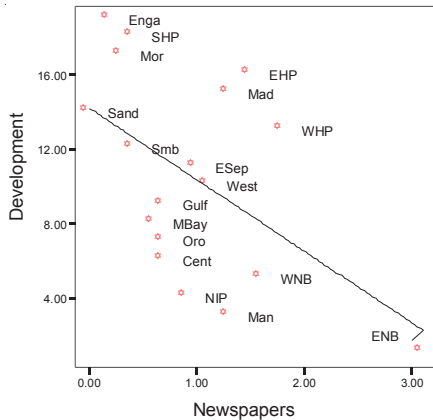
Another indicator of social capital is the community's awareness of current events. Data on communications is provided in the *Papua New Guinea Human Development Report 1998* because it is argued that communications

...play[s] an essential role in facilitating the process of economic and social development and promoting human development. Modes of communication such as print media, broadcast radio, television, video, postal services and telecommunication services are crucial in the dissemination of information and in linking remote locations to services (Papua New Guinea 1999:128).

The most common form of modern communication in Papua New Guinea is



Figure 3 Provincial development and newspaper readership



Note: R-squared = 0.27.
Source: Author's calculations.

the transistor radio. However, newspaper readership is also an important mode of communication, because of the role it plays in providing information and views on issues of community concern.

Figures 3 and 4 show statistically significant relationships between provincial development and newspaper readership ($r = -0.520, p < 0.05$) and for radio ($r = -0.751, p < 0.01$).

Social capital and community-based organisations

The *Papua New Guinea Human Development Report 1998* highlights the role of village organisations in contributing to a positive social environment.

[C]hurches and local government councils provide structures for mediating disputes between individuals, clans and tribes to maintain peace and stability within communities. The service agencies, such as health care centres, schools and churches, are instrumental in organising villages to

plan and coordinate activities (Papua New Guinea 1999:47).

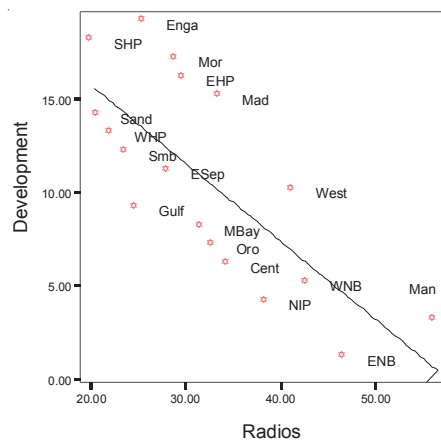
In particular, there is an important role played by community-based groups for women. These groups engage in a range of activities that provide income-earning opportunities, non-formal skills training, and literacy and awareness training. The number of women's groups was estimated using the number of census units that have women's groups, as reported in the Village Services database (Papua New Guinea 1999:60).

Figure 5 shows the statistical relationship between government performance and the density of women's associations for the selected provinces. The Pearson correlation in this case is $r = -0.705$ indicating a fairly strong association, however due to the small sample it is difficult to draw any conclusions.

Social capital and women in politics

The role of women in local-level politics may also provide an indication of the stock of social capital in a community. At the national level, participation is very low, with

Figure 4 Provincial development and radios



Note: R-square = 0.56.
Source: Author's calculations.



currently only one woman member of the national parliament. However, at the local level women's participation is higher, which may be partly attributable the Organic Law's requirement for female representation in local-level government.

Figure 6 shows the relationship between provincial development and the number of women in local politics where $r = -0.481$, $p < 0.05$, which is statistically significant.

Participation in rugby league

Table 2 presents data on the number of rugby league clubs and the numbers of participating players in each of the provinces for the period 1998 to 2001. Rugby league is probably the country's most popular sport. Putnam found that apart from labour unions, 'sports clubs are by far the most common sort of secondary association among Italians' (Putnam 1993:91). He found a strong correlation between sports club membership and regional performance. Partial correlation analysis may be used to

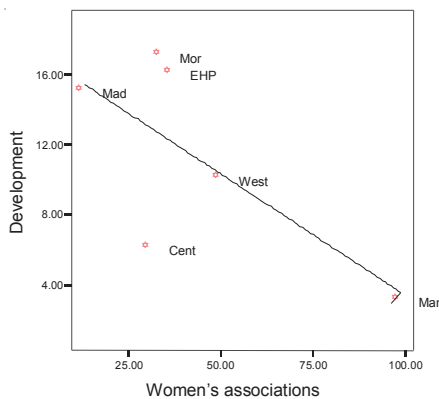
investigate the relationship between the number of clubs and players with the level of provincial development, while controlling for population. There is a medium-sized negative partial correlation between the level of provincial development and the number of players ($r = -0.30$, $n = 15$, $p < 0.01$).

Table 3 shows the combined correlation coefficients between each of these social capital indicators. With the exception of the women's associational and political indicators, most of these variables are inter-correlated.

Ethnicity, politics and social capital

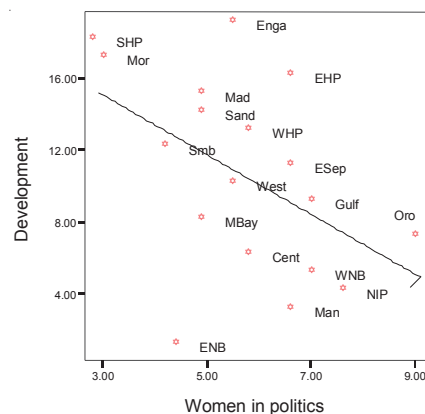
Putnam's analysis provides strong evidence that 'social capital' embodied in norms and networks of civic engagement are a precondition for effective government. Putnam outlines three ways in which social capital underpins good government. First, trust has a positive impact on social life, illustrated by how networks of civic engagement foster

Figure 5 Provincial development and women's associations



Note: R-square = 0.50.
Source: Author's calculations.

Figure 6 Provincial development and women in politics



Note: R-square = 0.23.
Source: Author's calculations.



solid norms of generalised reciprocity. Second, civic networks also further coordination and communication and magnify information about the trustworthiness of other members. Third, since past collaboration successes are embodied in these networks, they can serve as 'cultural templates' for future collaboration. The electoral system is a fundamental institution of democratic government and, since independence, community participation in PNG elections has been high. However, has this relatively high level of participation contributed to development of 'bridging' social capital?

In Papua New Guinea the national parliament is elected on a first-past-the-post

voting system, where the candidate with the highest number of votes is elected. There is also no limit to the number of candidates. The electoral process has been well documented and, in particular, a number of studies of elections in Papua New Guinea have shown how it is possible for a candidate to divide the electorate's vote along tribe or clan lines by encouraging representatives of each group to stand. Candidates therefore concentrate on mobilising the vote of their own clan group, but

...the phenomenon of localised support has come in for all sorts of formulations, as observers and commentators have struggled to identify just what aspects

Table 2 Papua New Guinea: participation in rugby league football clubs, by province

Province	Number of clubs	Number of players	Total population
Western	26	750	152,679
Gulf	15	345	105,050
Central	7	186	183,153
NCD	14	1,127	252,469
Milne Bay	4	159	209,054
Oro	6	227	132,714
Southern Highlands	40	1,189	544,352
Enga	7	231	289,299
Western Highlands	35	1,404	439,085
Simbu	18	373	258,776
Eastern Highlands	28	873	429,480
Morobe	20	820	536,917
Madang	7	205	362,805
East Sepik	6	220	341,583
Sandaun	4	158	185,790
Manus	-	-	43,589
New Ireland	6	325	118,148
East New Britain	8	450	220,035
West New Britain	18	664	184,838
Bougainville	8	397	141,161

Sources: PNG Rugby Football League Inc, PNG National Statistical Office, 2001. *2000 National Census of Population and Housing—Papua New Guinea—Preliminary Figures*, National Statistical Office, Port Moresby.



Table 3 Combined correlation coefficients of social capital

	Development rank	Educational qual.	Women's assoc.	Newspapers	Radio	Women in politics
Development rank						
Pearson correlation	1.000	-0.735**	-0.705	-0.520*	-0.751**	-0.481*
Sig. (2-tailed)	.	0.001	0.118	0.027	0.000	0.044
N	19	18	6	18	18	18
Educational qualifications						
Pearson correlation	-0.735**	1.000	0.801	0.543*	0.847**	0.082
Sig. (2-tailed)	0.001	.	0.056	0.020	0.000	0.747
N	18	18	6	18	18	18
Women's associations						
Pearson correlation	-0.705	0.801	1.000	0.229	0.899*	0.466
Sig. (2-tailed)	0.118	0.056	.	0.662	0.015	0.351
N	6	6	6	6	6	6
Newspapers						
Pearson correlation	-0.520*	0.543*	0.229	1.000	0.565*	0.142
Sig. (2-tailed)	0.027	0.020	0.662	.	0.015	0.573
N	18	18	6	18	18	18
Radio						
Pearson correlation	-0.751**	0.847**	0.899*	0.565*	1.000	0.305
Sig. (2-tailed)	0.000	0.000	0.015	0.015	.	0.219
N	18	18	6	18	18	18
Women in politics						
Pearson correlation	-0.481*	0.082	0.466	0.142	0.305	1.000
Sig. (2-tailed)	0.044	0.747	0.351	0.573	0.219	.
N	18	18	6	18	18	18

* Correlation is significant at the 0.01 level (2-tailed test).

** Correlation is significant at the 0.05 level (2-tailed test).

Source: Author's calculations.

of the political economy and culture appear to lead so inexorably to it. While some formulations are non-committal, most harbour implicit hypotheses on the causes of the phenomenon. There are formulations which suggest that kinship factors, or linguistic solidarity, or the church, or social involvement, or hope of material benefits for the community may be the basis of localised support (Saffu 1996:16).

For the 1987 elections, Saffu (1989) surveyed people's attitudes to voting, obtaining interviews from 1,127 voters in 17 provinces and the National Capital District.

To identify what factors determine voting choice, Saffu asked two similar questions: one referring retrospectively to the 1982 election, the other prospectively to the forthcoming 1987 election. The retrospective question, asked of those who said they had voted in 1982, was: 'What was it that you liked about the candidate you voted for in 1982?' The forward-looking question about voting intentions was: 'What is it that you will look for in the candidate you will be voting for in 1987?' He found that

...personal attributes of candidates, their perceived leadership qualities



and ability to bring development to the area, both assessed personally at close quarters by electors, are the most significant explanatory variables (Saffu 1996:15).

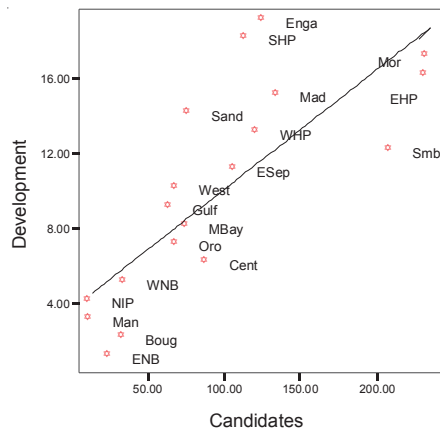
The very localised nature of the voting process has therefore contributed to the 'tribalised' nature of the political system, and in some provinces to a low level of 'bridging' social capital. Where political and social issues may be significant, they are usually local-level issues. Candidates focus on mobilising local support, whether it is clan, tribal, or whatever and therefore various kinds of 'inducements' (money, gifts, beer and so on) have become significant in the electoral contest. Despite some electoral reforms there appears to have been very little change in this approach to electioneering in Papua New Guinea, as was strongly evident in the 2002 national elections.

The use of the first-past-the-post voting system in Papua New Guinea seems to have exacerbated these phenomena and led to 'vote-splitting' tactics. More than 3,000

candidates nominated for the 2002 national elections—around 800 more than nominated for the 1997 poll, already a record. Vote-splitting tactics further divided and polarised clan and other groups at the local level. This seems to be most apparent in the Highlands where the region's 40 electorates (35 open and 5 provincial) were contested by 1,104 candidates (*The National*, 17 April 2002). In contrast, the Islands region appeared to have the lowest number of candidates, with East New Britain the least with 42 candidates for 5 seats. In the Papua region, Gulf Province had 103 candidates competing for only three seats (*Post Courier*, 16 April 2002).

For the 1997 national elections the relationship between provincial development and the number of candidates standing is very strong, at $r = 0.774$ (Figure 7). Analysis of the 1992 national results was strikingly similar, suggesting that a higher level of provincial development is associated with fewer candidates standing. A likely explanation is that a large number of candidates have a negative effect on social capital—in turn negatively impacting on provincial development.

Figure 7 Provincial development and number of election candidates (open electorates), 1997



Note: R-square = 0.60.
Source: Author's calculations.

How important is social capital in Papua New Guinea?

At issue here is the relative importance of social capital as compared with other independent variables. Multiple regression results are interpreted as telling us how much of the variance in the dependent variable (that is, provincial development) can be explained by the independent variables. A model was tested to evaluate the extent to which social capital, land area, ethnic fragmentation and domestic factor income (DFI) influence provincial development. The measure for social capital combines the various indicators outlined above. Land area is the total land area for each of the provinces, and ethnic fragmentation is an estimate of ethnic



diversity for each province. DFI is the real domestic factor income per capita in 1996 for each province, and includes formal, non-formal, and subsistence components (Papua New Guinea 1999). DFI is not included in the provincial development indicator. Social capital makes the largest contribution to explaining the variance in provincial performance (beta = 0.325). Land area makes the largest contribution of the other variables tested (beta = 0.262). The next is DFI, followed by ethnic fragmentation (Table 4). The beta weight for social capital tells us the

in Papua New Guinea. Many reasons have been given for the poor performance of provinces in Papua New Guinea, but arguably the most important are inappropriate institutional design, the lack of economic and financial resources and other 'socio-cultural' explanations. Most attempts to reform provincial governments have focused on institutional structures and on the provision of financial resources, but very little attention has been given to the role of social capital. Clearly, the nature of social capital in Papua New Guinea,

Table 4 Multiple regression model coefficients

	Unstandardised coefficients (beta)	Standard error	Standardised coefficients (beta)	t	Significance
Constant	7.638	4.380		1.744	0.107
Total social capital	0.00482	0.005	0.325	0.984	0.345
Fragmentation	-2.074	18.493	-0.035	-0.112	0.913
Land area	0.000068	-	0.262	0.672	0.514
DFI	-0.00254	0.007	-0.157	-0.386	0.706

Source: Author's calculations.

magnitude of the change made in the level of provincial development by making a one-unit change in social capital, while keeping all other variables constant. Although the available data are not comprehensive (explaining why the statistical significance of the coefficients is not strong), these results suggest that social capital is a better predictor of the level of provincial development than any of the other variables tested.

Conclusion

This article analysed the feasibility and the validity of measuring social capital and identifying its role in explaining differentials in economic development between provinces

probably the most ethnically fragmented country in the world, poses some unique problems. It seems that ethnic groups can both generate benefits and inflict costs on societies, and it can be demonstrated that ethnic fragmentation affects the performance of political institutions.

The model outlined suggests that higher degrees of ethnic fragmentation impede the development of social capital, leading to lower development levels, even where provincial governments are performing relatively effectively. In communities with effective government and high levels of 'bridging' social capital, development is more likely. Alternatively, when a society's social capital inheres mainly in primary social groups, disconnected from one



another, it is more likely that powerful groups will dominate government, to the exclusion of other groups, and development will be slower.

This research has investigated the relationship between provincial development and a number of independent variables as indicators of social capital in Papua New Guinea. However, the question remains: under what conditions is it plausible to infer that an observed relationship is a causal one? Clearly more research is required on the nature of social capital in Papua New Guinea, and especially the importance of ethnicity. More in-depth analysis of local political organisations in the provinces are necessary to ascertain the importance of ethnicity for trust in government, and in what specific ways 'strengthening social capital' will be an appropriate course of action to improve provincial development.

References

- Australian Agency for International Development (AusAID), 2000. *Western Province, Papua New Guinea: development status and prospects*, AusAID, Canberra.
- Axline, W.A., 1986. *Decentralisation and Development Policy: provincial government and the planning process in Papua New Guinea*, Monograph No. 26, Institute of Applied Social and Economic Research, Port Moresby.
- , 1993. *Governance in Papua New Guinea: approaches to institutional reform*, Discussion Paper No. 58, Institute of National Affairs, Port Moresby.
- Bates, R., 1999. *Ethnicity, capital formation, and conflict*, Social Capital Initiative Working Paper No. 12, World Bank, Washington, DC.
- Burton, J., 1998. 'Mining and maladministration in Papua New Guinea', in P. Larmour (ed.), *Governance and Reform in the South Pacific*, National Centre for Development Studies, The Australian National University, Canberra:154–82.
- de Albuquerque, K. and D'Sa, E., 1984. *Spatial inequalities in Papua New Guinea: a provincial level analysis*, Institute of Applied Social and Economic Research, Port Moresby (unpublished).
- , 1986. *Spatial Inequalities in Papua New Guinea: a district level analysis*, Discussion Paper No. 49, Institute of Applied Social and Economic Research, Port Moresby.
- Francis, P., Adelabu, M.A., Agi, S.P.I., Ogoh Alubo, S. and Owoicho Akbo, G., 1998. *Hard Lessons: primary school, community and social capital in Nigeria*, World Bank Technical Paper No. 420, World Bank, Washington, DC.
- Israel, A., 1987. *Institutional Development: incentives to performance*, John Hopkins University Press, Baltimore.
- Krishna, A and Shrader, E., 1999. *Social capital assessment tool*, Paper for the Conference on Social Capital and Poverty Reduction, World Bank, Washington, DC (unpublished).
- Narayan, D., 1999. *Bonds and Bridges: social capital and poverty*, Policy Research Working Paper No. 2167, World Bank, Washington, DC.
- Narayan, D. and Pritchett, L., 1997. *Cents and Sociability: household income and social capital in rural Tanzania*, Policy Research Working Paper No. 1796, World Bank, Washington, DC.
- Papua New Guinea, 1999. *Papua New Guinea Human Development Report 1998*, PNG Office of National Planning, Port Moresby.
- Papua New Guinea, National Statistical Office, 2001. *2000 National Census of Population and Housing—Papua New Guinea—Preliminary Figures*, National Statistical Office, Port Moresby.



- Putnam, R.D., 1993. *Making Democracy Work: civic traditions in modern Italy*, Princeton University Press, Princeton.
- Saffu, Y., 1989. 'Survey evidence on electoral behaviour in Papua New Guinea', in M. Oliver (ed.), *Eleksin: the 1987 national election in Papua New Guinea*, University of Papua New Guinea, Port Moresby:15–35.
- , 1996. 'Continuity and change in PNG electoral politics', in Y. Saffu (ed.), *The 1992 Papua New Guinea Election: change and continuity in electoral politics*, Political and Social Change Monograph 23, The Australian National University, Canberra:1–41.
- Serra, R., 1998. *Putnam in India: is social capital a meaningful and measurable concept at Indian state level?*, IDS Working Paper No. 92, University of Sussex.
- Tendler, J., 1997. *Good Government in the Tropics*, Johns Hopkins University Press, Baltimore.
- Turner, M. and Hulme, D., 1997. *Governance, Administration and Development: making the state work*, Kumarian Press, Bloomfield.
- United Nations Development Programme (UNDP), 1997. *Governance for Sustainable Human Development*, UNDP, New York.
- Varshney, A., 2001. 'Ethnic conflict and civil society: India and beyond,' *World Politics*, 53(3):362–98.
- World Bank, 1997. *The State in a Changing World: world development report*, Oxford University Press, New York.