"MAKING DEMOCRACY WORK" IN PAPUA NEW GUINEA

Social Capital and Provincial Development in an Ethnically Fragmented Society

Benjamin Reilly and Robert Phillpot

The past decade has seen an explosion of interest in the concept of "social capital"—the term used to describe the complex relationship of norms, reciprocity, and civic engagement that together are thought to promote trust and sustain societal cooperation. Increasingly, academic studies have posited social capital as the "missing link" to explain variations in government performance, both within and between countries. A classic example is the work of Robert Putnam. In *Making Democracy Work,* Putnam examined differences in provincial performance between northern and southern Italy, concluding that good government is found where social capital and civil society are most developed.[1] In their absence, he wrote, "the outlook for collective action appears bleak," and Hobbesian patterns of lawlessness, mistrust, weak government, and stunted economic growth become likely outcomes.[2] More recently, in *Bowling Alone*, Putnam turned his focus to the United States, arguing that declining civic engagement is a bellwether for

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1. Robert D. Putnam, *Making Democracy Work: Civic Traditions in Modern Italy* (Princeton: Princeton University Press, 1993).

2. Ibid., p. 183.

fraying social relations and, in turn, deteriorating economic and political performance.[3]

The focus on collective action and networks of close engagement raises the question of how social capital functions in divided societies where ascriptive forms of identification, such as ethnicity, represent a fundamental social cleavage. In this article, we attempt to answer this question by replicating Putnam's study of social capital and government performance in the ethnically fragmented, tribally based Asia-Pacific state of Papua New Guinea, a country that in many ways could not be more different than Italy. Nonetheless, Papua New Guinea is one of the few post-colonial states to have maintained an unbroken record of democracy, having held competitive national elections since 1964. If, as Putnam claims, social capital is the key to "making democracy work," we would expect this rare case of a successful post-colonial democracy to provide some evidence of this link.

Even more striking than its democratic record, however, is that Papua New Guinea has combined ongoing democracy with extremely high levels of ethnolinguistic heterogeneity and, in some regions, ethnic violence. In ethnolinguistic terms, Papua New Guinea is probably the most fragmented society in the world, being home to over 800 separate languages and thousands of small, competitive micro-ethnic polities. However, the level of societal heterogeneity within Papua New Guinea varies widely, with some regions being relatively homogenous and others, especially in the Highlands areas, being exceptionally fragmented. So, a second reason for looking at Papua New Guinea is that it enables us to test various theories about the impact on social capital of ethnic fragmentation in a situation of considerable regional variation.

Finally, Papua New Guinea is of special interest for testing Putnam's theories because of substantial variations in the performance of its own provincial governments. In *Making Democracy Work*, Putnam made use of a quasi-experiment begun in 1970, when Italy created 20 new regional governments. Methodologically, this enabled the impact of institutional factors to be held constant against other variables when testing differences in regional performance. In 1976, Papua New Guinea effectively replicated the Italian regional experiment by creating 19 provincial governments, featuring almost identical institutional structures, in order to devolve power across the country.[4] The Papua New Guinea case thus allows us to recreate Putnam's study in condi-

3. Robert D. Putnam, *The Collapse and Revival of American Community* (New York: Simon & Schuster, 2000).

4. However, there were some variations in terms of the executive, legislative, and franchise arrangements in different provinces. See R. J. May and Anthony J. Regan, eds., *Political Decentralisation in a New State: The Experience of Provincial Government in Papua New Guinea* (Bathurst, New South Wales: Crawford House, 1997).

tions of enormous social diversity and Third World living standards, and specifically to examine the link between government performance, social capital, and ethnicity in a highly fragmented society.

The "Crucial Case" of Papua New Guinea

Because of its unusual combination of democratic continuity with low levels of development and high levels of ethnic diversity, Papua New Guinea functions as what Harry Eckstein called a "crucial case study" for examining the relationship between ethnic fragmentation, government performance, and social capital.[5] Papua New Guinea comprises roughly half of the world's second-largest island, New Guinea, and about 600 smaller islands, sharing its western border with the Indonesian province of Irian Jaya/West Papua. With a population of just over five million, its social structure represents an extreme case of ethnic heterogeneity. More languages are spoken in Papua New Guinea alone than in all of Africa. At last count there were 852 known languages in Papua New Guinea, about one-fifth of the world's total. With no common history of statehood, "its people are fragmented into hundreds of often mutually antipathetic ethnic groupings," with little in the way of a common national identity, despite strong elite-level nationalist rhetoric at times.[6]

The base units of this social melange are known as "clans"— ascriptive extended family networks that are the primary, and sometimes the only, unit of political and social loyalty.[7] Considering the lack of overt racial distinction between them, the depth of cleavages between clan groups is striking, and can be partly explained by two related factors: geography and language. Papua New Guinea has some of the world's most dramatic terrain, with a vast range of mountains and valleys running though the middle of the mainland ("the Highlands"), and an extensive arc of populated volcanic islands off the coast—all of which create severe difficulties in terms of isolation, access, and transport. Traditionally, while few groups were entirely isolated, and most had "ally" clans with which they conducted trade and marriage, relations between many were characterized as much by hostility as by cooperation. Particularly in the Highlands, the site of Papua New Guinea's most fluid, aggressive, and competitive micro-societies, traditional contact often took the

5. See Harry Eckstein, *Regarding Politics: Essays on Political Theory, Stability and Change* (Berkeley: University of California Press, 1992), pp. 117–76.

6. David Hegarty, "The Political Parties," in *Development and Dependency: The Political Economy of Papua New Guinea*, eds. Azeem Amarshi, Kenneth Good, and Rex Mortimer (Melbourne: Oxford University Press, 1979), p. 188.

7. See Ian Hogbin, "Anthropological Definitions," in *The Encyclopedia of Papua and New Guinea*, ed. Peter Ryan (Clayton, Victoria: Melbourne University Press in association with the University of Papua New Guinea, 1973), p. 23.

form of intermittent tribal warfare between clan groups, a phenomenon that, as we shall see, is again on the rise today.[8]

This isolation and hostility of traditional society created a multiplicity of micro-ethnic communities. Levine writes that

> [i]f ethnic communities are understood to be groups possessing a distinctive language, custom and memories—traits that give its members a sense of unity and cause them to distinguish themselves (and be distinguished by) others—then Papua New Guinea may have more than one thousand such ethnic groups within its borders.[9]

In fact, in terms of ethnopolitical units, 1,000 is almost certainly too low an estimate: some scholars, for example, claim that Papua New Guinea has more than 10,000 micro-societies.[10] Whatever the real figure (which depends to a large extent on how an "ethnic group" is defined), there is also a great deal of regional variation in Papua New Guinea's ethnic structure. In the lowlands, the coastal plains and deltas of the south and north coasts, for example, the population of separate ethnolinguistic units can range from only a few hundred up to perhaps 20,000 speakers. By contrast, in the Highlands, Papua New Guinea's most populous region, language groups may number up to 150,000 or more members.[11]

As noted earlier, Papua New Guinea ranks high on most indicators of democratic consolidation, participation, and competitiveness. Despite many crises of governance in recent years, governments continue to be chosen by the ballot box, and there have been no less than nine peaceful changes of government since independence in 1975—an extremely high number compared to other developing world democracies. Reflecting on this record, Diamond has claimed that Papua New Guinea's "remarkably vibrant and resilient democratic system" makes it, with India, the most successful democracy of any of the "Asian" developing countries.[12] More recently, Diamond, Linz, and Lipset found that Papua New Guinea was one of a select group of five develop-

8. See Marie Reay, "Lawlessness in the Papua New Guinea Highlands," in *Melanesia: Beyond Diversity,* eds. R. J. May and Hank Nelson (Canberra: Research School of Pacific Studies, Australian National University, 1982), pp. 630–36.

9. Stephen Levine, "Culture and Conflict in Fiji, Papua New Guinea, Vanuatu, and the Federated States of Micronesia," in *Government Policies and Ethnic Relations in the Asia-Pacific*, eds. Michael E. Brown and Sumit Ganguly (Cambridge and London: Massachusetts Institute of Technology Press, 1997), p. 479.

10. James Griffin, "Papua New Guinea," in *Modern Asia: Problems and Politics,* eds. Rosemary Brissenden and James Griffin (Milton, Queensland: Jacaranda Press, 1974), p. 143.

11. Marie de Lepervanche, "Social Structure," in Ryan, ed., *The Encyclopedia of Papua and New Guinea*, p. 1065.

12. Larry Diamond, "Introduction: Persistence, Erosion, Breakdown and Renewal," in *Democracy in Developing Countries Volume Three: Asia*, eds. Larry Diamond, Juan Linz, and Seymour Martin Lipset (Boulder, Colo.: Lynne Rienner Publishers, 1989), p. 1.

ing countries that could be classified as stable democracies (the others were Venezuela, Costa Rica, India, and Botswana).[13] And in a similar formulation, Papua New Guinea is one of only four plural societies in the developing world that Arend Lijphart considers as "established" democracies (India, Mauritius, and Trinidad and Tobago being the others).[14]

Despite this, Papua New Guinea has had a difficult history since independence. It fares badly on many social and economic indicators, suffering high levels of unemployment and violent crime and low levels of literacy, education, and per capita GDP. Its ranking on the United Nations Human Development Index (a composite measure of socioeconomic indicators that includes information on health, education, and employment levels) is low, at 122 out of 162 countries.[15] Papua New Guinea has also experienced a number of secessionist movements—most notably a long-running civil war on the island of Bougainville. In fact, it was in large part to mollify the separatist aims of Bougainville and some of the other outer islands that the system of provincial government was adopted in 1976.[16]

Administratively, Papua New Guinea consists of 19 provinces, grouped into four main regions: Papua (comprising Central, Gulf, Milne Bay, Oro, and Western Provinces); "Mamose" or New Guinea (comprising East Sepik, Sandaun, Madang, and Morobe); the Islands (Bougainville, New Ireland, Manus, and East and West New Britain); and the Highlands (Enga, Simbu, and the Eastern, Southern, and Western Highlands)—(see Map 1). Each of these regions has different geographical and cultural characteristics and, in the case of Papua and New Guinea, different colonial backgrounds prior to the First World War. Between 1976 and 1995, each province had its own elected assembly and an executive council headed by a premier, and was constitutionally responsible for a range of specified powers. In 1995, however, there was a marked shift back toward centralization of power following the abolition of provincial governments in all provinces save Bougainville, where the provincial government system continues to operate under special arrangements.[17]

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13. Larry Diamond, Juan Linz, and Seymour Martin Lipset, "Introduction: What Makes for Democracy?" in *Politics in Developing Countries: Comparing Experiences with Democracy* (2nd edn.), eds. Larry Diamond, Juan Linz, and Seymour Martin Lipset (Boulder, Colo.: Lynne Rienner Publishers, 1995), p. 35.

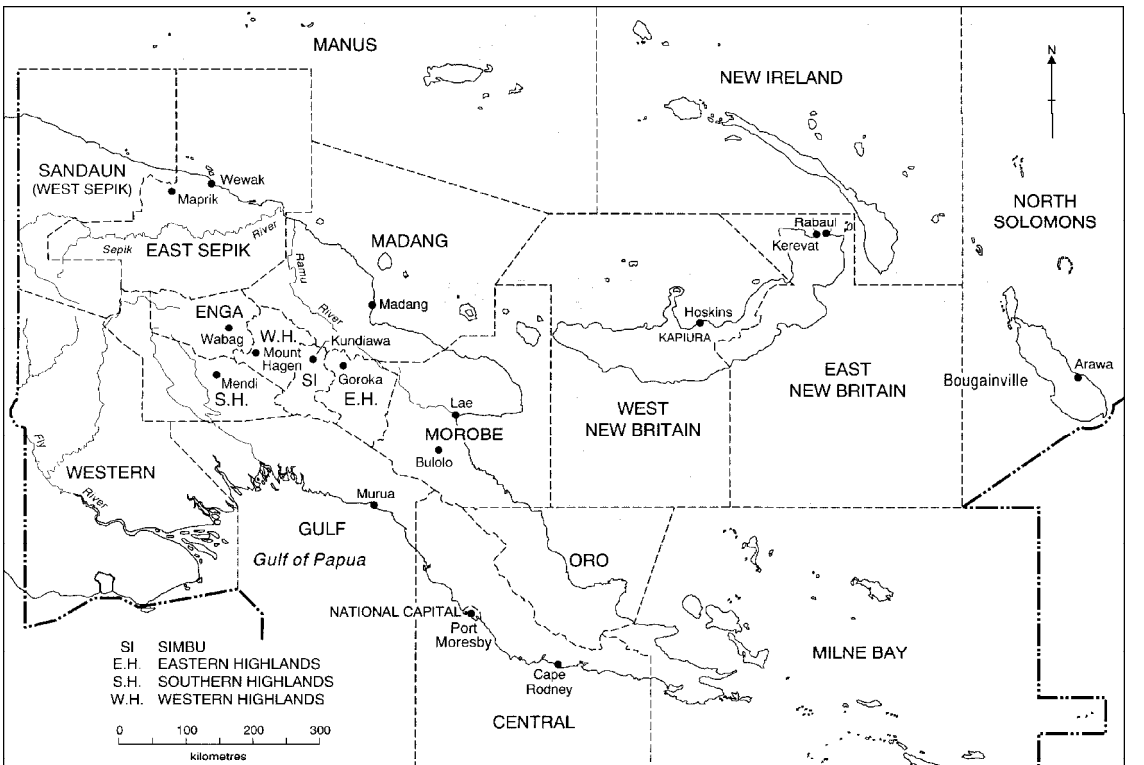
14. Arend Lijphart, *Patterns of Democracy: Government Forms and Performance in 36 Countries* (New Haven: Yale University Press, 1999). "Established democracies" are those countries with a population of more than 250,000 that have maintained continuous democracy for at least the past 20 years.

15. See United Nations Development Program, *Human Development Report 2001* (Oxford and New York: Oxford University Press, 2001).

16. See Ralph Premdas, "Secessionist Movements in Papua New Guinea," *Pacific Affairs* 50:1 (1977), pp. 64–85.

17. See May and Regan, *Political Decentralisation.*

MAP 1 *Papua New Guinea*



Over this 20-year period, there were very significant differences between provinces in both their economic performance and their overall levels of development, despite the near-identical composition of respective political institutions. This raises the same question that Putnam investigated in Italy: how do we account for these differences in provincial performance and development, given that the institutional package in question is essentially held constant across the different provinces?

To answer this, we employ several different indicators of provincial development and performance in Papua New Guinea. As an indicator of provincial *development*, we use data from a study on provincial inequalities by de Albuquerque and D'Sa that includes information on per capita domestic income, salaries of teachers and public servants, cash crops produced, value of all buildings completed during 1980, registered motor vehicles per 10,000 population, and road length per 1,000 population.[18] To measure provincial *performance*—i.e., the effectiveness of provincial government, as opposed to the overall development level of each province—we used a different study by Axline, which looked at the extent of legislative activity, the capacity to extract and allocate resources, and the setting of provincial priorities, including the elaboration of long-term goals and the day-to-day operation of the department of the province.[19]

The aggregate rankings of provincial performance using these measures are shown in Table 1, alongside the provincial development rankings. While there is some commonality between the two measures on a regional basis (the islands score well and some parts of the Highlands score poorly on both measures, for example), these similarities are outweighed by the differences—suggesting that government effectiveness alone does not account for differences in provincial development. Overall, there is little correlation between the two datasets.[20] We can only conclude, as did Putnam in Italy, that some other factor beyond government effectiveness is responsible for the marked differences in provincial development. One possible explanation for this disjuncture between provincial government performance and development is variation in the underlying social factors affecting development, such as social

18. See K. de Albuquerque and E. D'Sa, *Spatial Inequalities in Papua New Guinea: A District Level Analysis* (Port Moresby: Institute for Applied Economic and Social Research (IASER), Discussion Paper, no. 49, 1986). The social indicators used for the study were derived primarily from the Provincial Data System and the 1980 National Population Census.

19. W. Andrew Axline, *Governance in Papua New Guinea: Approaches to Institutional Reform (*Port Moresby: Institute of National Affairs, Discussion Paper, no. 58, 1993). Axline adopts five categories under which provincial government performance can be evaluated, namely: general planning, programming, and policymaking; coordination, cooperation, and communication; political cooperation and support; administration and management; and local and district affairs.

20. The Pearson correlation is .30, and not statistically significant.

TABLE 1 *Provincial Development and Performance Ranking*

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

SOURCES: K. de Albuquerque and E. D'Sa, *Spatial Inequalities in Papua New Guinea*; W. A. Axline, *Decentralisation and Development Policy: Provincial Government and the Planning Process in Papua New Guinea* (Boroko, Papua New Guinea: IASER, Monograph, no. 26, 1986).
NOTE: The original rankings have been reversed so that they run in descending order, rather than the ascending order of the originals.

capital and ethnic structure. The relationship between these factors and provincial development will now be examined.

Social Capital in Papua New Guinea

Around the world, empirical studies differ among themselves in the way they attempt to measure social capital. In his Italy book, Putnam used data on the density of horizontally organized associational networks such as sports clubs and singing groups as an indicator of social capital, arguing that vertical networks, no matter how dense or important, could not sustain trust and cooperation.[21] As an initial test of the correlates of social capital and provincial development in Papua New Guinea, we looked at five proxy indicators of social capital: the quality of education; the level of community knowledge about current events; the number of community-based organizations; the

21. Putnam, *Making Democracy Work*, p. 173.

number of women in local politics; and participation in sporting clubs. Measuring social capital in an under-developed country like Papua New Guinea is no easy task, and these were the most reliable, if limited, indicators of social capital that we could find.

Education, our first variable, is both an indicator of and a potential by-product of social capital formation.[22] In addition to strengthening the human capital needed for economic development, social harmony, and state accountability, school education itself seems to foster the development of social capital networks. Social capital is produced through education in three ways: by students practicing social capital skills, such as participation and reciprocity; by schools providing forums for community activity; and, through public education by students learning how to participate responsibly in their society. Not surprisingly, our data indicate a strong relationship between education and development. The percentage of the provincial population that has completed year 10 at school, for example, has a strong and statistically significant correlation with provincial development of $r = .735$, $p < .01$.

A second indicator of social capital is the community's awareness about current national events. Because of the ruggedness and inaccessibility of much of the country, transistor radios are the most common form of modern communication in Papua New Guinea, and "play an essential role in facilitating the process of economic and social development and promoting human development."[23] The relationship between provincial development and radio usage is a strong and statistically significant correlation of $r = .751$, $p < .01$. The same correlation for newspapers, which have a much more limited distribution, is again positive and significant, with $r = .520$, $p < .05$.

A third indicator of social capital is the presence of local associations such as women's organizations. The *Papua New Guinea Human Development Report 1998* highlights the role of village organizations in contributing to a positive social environment, and argues that "health care centres, schools and churches are instrumental in organising villages to plan and coordinate activities."[24] Community-based women's groups play a particularly important role in providing income-earning opportunities, non-formal skills development, and literacy and awareness training. The correlation between provincial development and the density of women's associations for the selected provinces

22. Research in both developed and developing countries indicates that social capital plays an important role in creating effective schools. See Paul Francis, M. A. Adelabu, S. P. I. Agi, S. Ogoh Alubo, and G. Owoicho Akbo, *Hard Lessons: Primary School, Community and Social Capital in Nigeria* (Washington, D.C.: World Bank Technical Paper 1–64, 1998).

23. Government of Papua New Guinea, *Papua New Guinea Human Development Report 1998* (Port Moresby: Office of National Planning, 1999), p. 128.

24. Ibid., p. 47.

is r = .705; however, due to the small sample, this is not statistically significant, making it difficult to draw any conclusions.[25]

An alternate measure is to look at the proportion of women in local-level politics, which may also provide some indication of the stock of social capital in a community. Participation at the national level is very low, with currently only one female member in the national parliament. However, at the local level, women's representation is higher—which can be partly attributed to a provision in the new *Organic Law on Provincial and Local-Level Government* that requires specified levels of women's representation in provincial executives. The correlation between provincial development and the number of women in local politics is r = .481, $p < .05$.

Finally, there is the issue of sporting club membership and participation, a factor identified by Putnam as a key indicator of social capital. In Papua New Guinea, rugby league football is the national sport and one of the most popular games, particularly in the Highlands areas, which have the highest concentration of rugby league clubs. We obtained data from the Papua New Guinea Rugby Football League on the numbers of participating players from each club in each of the provinces for the period 1998 to 2001. Controlling for population, we again found a positive correlation between provincial development and the number of players of r = .31, although again the result fell outside the conventional statistical significance mark (p = .23).

Table 2 shows the combined correlation coefficients between four of these social capital indicators. With the exception of the women's associational and political indicators, most of these variables are inter-correlated, with education quality, radio and newspaper penetration, and provincial development all strongly associated with each other.

Ethnic Diversity in Papua New Guinea

What about the impact of ethnic fragmentation on government performance in Papua New Guinea? As with social capital, measuring the degree of ethnolinguistic fragmentation in Papua New Guinea is no easy feat. The country's extraordinary level of clan, linguistic, and regional diversity creates real challenges in attempting to come up with any aggregate measure. In addition, "ethnicity" itself is a notoriously slippery concept, and ethnic identity in Papua New Guinea, as elsewhere, is generally accepted to be manifested as a mixture of both "primordial" and "constructed" factors. In other words, it is both an ascriptive phenomenon, based on traditional ties of clan, tribe, and language—a position often characterized in the scholarly literature as "pri-

25. The number of women's groups is estimated using the number of census units that have women's groups as reported in the Village Services database. See ibid., p. 60.

TABLE 2 *Correlations*

		DEVRANK	*EDUQUAL*	*WOMENS*	*NEWS*	*RADIO*	*WOMEN*
DEVRANK	Pearson Correlation	1.000	.735**	.705	.520*	.751**	.481*
	Sig. (2-tailed)		.001	.118	.027	.000	.044
	N	19	18	6	18	18	18
EDUQUAL	Pearson Correlation	.735**	1.000	.801	.543*	.847**	.082
	Sig. (2-tailed)	.001		.056	.020	.000	.747
	N	18	18	6	18	18	18
WOMENS	Pearson Correlation	.705	.801	1.000	.229	.899*	.466
	Sig. (2-tailed)	.118	.056		.662	.015	.351
	N	6	6	6	6	6	6
NEWS	Pearson Correlation	.520*	.543*	.229	1.000	.565*	.142
	Sig. (2-tailed)	.027	.020	.662		.015	.573
	N	18	18	6	18	18	18
RADIO	Pearson Correlation	.751**	.847**	.899*	.565*	1.000	.305
	Sig. (2-tailed)	.000	.000	.015	.015		.219
	N	18	18	6	18	18	18
WOMEN	Pearson Correlation	.481*	.082	.466	.142	.305	1.000
	Sig. (2-tailed)	.044	.747	.351	.573	.219	
	N	18	18	6	18	18	18

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

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

mordialism"[26]—as well as a constructed one of malleable or adaptive identities formed as a reaction to external pressures and incentives.[27] Many analyses of ethnicity in Papua New Guinea therefore emphasize the extent to which ethnic identities are both a salient feature of traditional society and also a reaction to colonial rule, modernization, and independence.[28]

Both traditional social relations and modern political entrepreneurship involve the mobilization and manipulation of such communities of identity. For example in the Highlands, where almost half the Papua New Guinea population lives, modernization, land pressure, and competition for resources has encouraged a "retribalization" of society in recent years as group affiliation is increasingly used to determine the distribution of public goods.[29] In some areas, electoral contests provide a substitute arena in which traditional clan rivalries and tribal conflicts can be fought out. Elections can also reinforce the salience of clan and tribal affiliations, particularly under the first-past-the-post electoral system.[30] As such, tribal groups are increasingly being mobilized, refashioned, or at times invented from scratch in response to the demands of state building.[31] Filer, for example, found that landholding disputes in areas as varied as Central Province and the Lihir Islands have seen some claimants invent clan identities in order to facilitate collective demands for compensation.[32]

Given this combination of primordial and instrumental forms of ethnic identity, it would seem appropriate to combine both of these phenomena into

26. The term primordialism is usually associated with Clifford Geertz, "The Integrative Revolution: Primordial Sentiments and Civil Politics in the New States," in *Old Societies and New States: The Quest for Modernity in Asia and Africa*, ed. Clifford Geertz (New York: Free Press, 1963). For a discussion of this typology in the scholarly literature, see Milton Esman, *Ethnic Politics* (Ithaca, NY: Cornell University Press, 1994), pp. 9–16.

27. There is a considerable literature on ethnicity and ethnic identity. See Crawford M. Young, *The Politics of Cultural Pluralism* (Madison, Wisc.: University of Wisconsin Press, 1976); Paul R. Brass, ed., *Ethnic Groups and the State* (London: Croom Helm, 1985); Donald L. Horowitz, *Ethnic Groups in Conflict* (Berkeley: University of California Press, 1985); Esman, *Ethnic Politics*.

28. See Ralph Premdas, "Ethnicity and Nation-Building: The Papua New Guinea Case," in *Ethnicity and Nation-Building in the Pacific*, ed. Michael Howard (Tokyo: United Nations University Press, 1989), p. 246.

29. See Andrew Strathern, "Violence and Political Change in Papua New Guinea," *Pacific Studies* 16:4 (1993), pp. 41–60.

30. Ben Reilly, "The Alternative Vote and Ethnic Accommodation: New Evidence from Papua New Guinea," *Electoral Studies* 16:1 (1997), pp. 1–11.

31. See R. Brian Ferguson and Neil L. Whitehead, *War in the Tribal Zone: Expanding States and Indigenous Warfare* (Santa Fe, N.M.: School of American Research Press, 1992).

32. Colin Filer, "Compensation, Rent and Power in Papua New Guinea," in *Compensation for Resource Development in Papua New Guinea*, ed. Susan Toft (Port Moresby and Canberra: Law Reform Commission of Papua New Guinea and Australian National University, 2000), pp. 167–68.

one aggregated index for the purposes of including it in our statistical analysis. Unfortunately, there are no reliable figures on the total number of politically relevant ethnic groups in Papua New Guinea. We have therefore attempted to construct our own index of ethnic diversity that captures both its "primordial" and "constructed" components. One indicator of the primordial component of ethnicity is the extent of linguistic diversity in each province. Outside the Highlands, the number of separate language groups provides a rough approximation of the number of self-conscious "ethnic" units in many cases. In the Highlands, however, discrete language groups of several hundred thousand speakers include many internal, non-linguistic, clan and tribal divisions, and hence do not provide a meaningful indicator of ethnic fragmentation.[33]

Examination of the relationship between provincial development and the number of language groups per province, excluding the Highlands, shows a correlation between provincial development and the number of languages of –.831, significant at the 0.01 level.[34] The more languages there are, the lower the overall level of provincial development: regression analysis suggests that almost 70% of the variation in provincial development levels can be explained by variations in the number of languages. In addition, there appears to be a clear causal direction at work: the most plausible interpretation of this result is that language multiplicity somehow impedes development, rather than development affecting linguistic structure. This suggests, on the face of it, a negative relationship between ethnolinguistic fragmentation and provincial development.

However, this model is limited to non-Highlands areas, rendering its explanatory value for all of Papua New Guinea limited. We need to find a way of including Highlands provinces in the equation. One way of doing this is to look at the number of candidates standing for election in Highlands seats, since in many areas, clans nominate and then block-vote for a particular candidate to represent their interests against those of rival groups. Under such conditions, the number of candidates standing for election therefore self-selects as a rough measure of ethnopolitical diversity. In many Highlands seats, candidates concentrate on mobilizing the vote of their own clan group, and clans spend much time and energy on deciding which candidate they will

33. In the Highlands province of Enga, for example, there is one main language but there are 162 "major clans," according to the electoral register. Because of this, we cannot use the number of languages as a measure of ethnic fragmentation in such provinces. Outside the Highlands, however, the number of languages constitutes a more meaningful aggregate measure of ethnopolitical fragmentation.

34. The number of language groups per province was compiled from Otto Nekitel, *Voices of Yesterday, Today and Tomorrow: Language, Culture and Identity* (New Delhi: UBS Publishers, 1998).

put forward for election.[35] Many studies of elections in Papua New Guinea have emphasized the enduring link between tribal affiliation and election candidature.[36] Indeed, one of the strongest reasons for using candidate numbers as an indicator of ethnic pluralism is that it helps capture the fluid, politically constructed nature of ethnic identity as well as its more primordial, ascriptive aspects.

This approach is not without its problems. For one thing, candidate numbers are not static, but increase from election to election. Despite careful anthropological accounts of clan groups negotiating candidature between themselves to maintain a strong block vote,[37] the link between clan groupings and candidature may not hold more generally. To test the validity of our approach, we therefore compared data on clan affiliation from the five open electorates in Enga, collected by the Papua New Guinea Electoral Commission, with the total number of candidates standing in each seat at election time. Enga is the only province for which such clan data is available, and because of the small sample of five electorates it can only give us a partial indication as to whether any relationship between clan and candidate numbers exists. That said, there is an extremely strong positive correlation between the number of clans and the number of candidates standing for election in each seat of $r = .881$, $p < .05$, using 1997 electoral data. If Enga is indicative of the other four Highlands provinces, then the number of candidates standing for election in each province should thus serve as a rough indicator of the relative number of politicized clan or ethnic groups in each province.

The phenomena of individual clan or tribal groups sponsoring their own candidates at elections have been a consistent theme in the study of Papua New Guinea elections. Premdas, for example, writes that "the general electoral pattern since the introduction of universal adult suffrage in 1964 and through subsequent elections . . . has underscored unequivocally that ethnic identity . . . is the foremost determinant of voter preference."[38] Analysis of the relationship between election candidature and provincial development at the national level, using data on candidate numbers from the 1997 election, shows a very strong negative correlation, $r = -.774$, between provincial development and the number of candidates standing. Analysis of the 1992 na-

35. See William Standish, "Papua New Guinea: The Search for Security in a Weak State," in *Papua New Guinea: Issues for Australian Security Planners*, ed. Alan Thompson (Canberra: Australian Defence Studies Center, Australian Defence Force Academy, 1994), p. 60.

36. See, for example, Yaw Saffu, ed., *The 1992 Papua New Guinea Election: Change and Continuity in Electoral Politics* (Canberra: Political and Social Change Monograph 23, Australian National University, 1996).

37. See, for example, John Burton, "Tribal Structure and Rural Ballot Box Counts in Hagen Open," in *Eleksin: The 1987 National Election in Papua New Guinea*, ed. Michael Oliver (Port Moresby: University of Papua New Guinea, 1989), p. 279.

38. Premdas, "Ethnicity and Nation-Building," p. 251.

tional results was similar, suggesting that—across all provinces—lower levels of provincial development are associated with more candidates standing for election. One explanation for this relationship may be that a larger number of candidates indicates a high level of ethnic fragmentation that, as with linguistic diversity, somehow impacts negatively on provincial development.

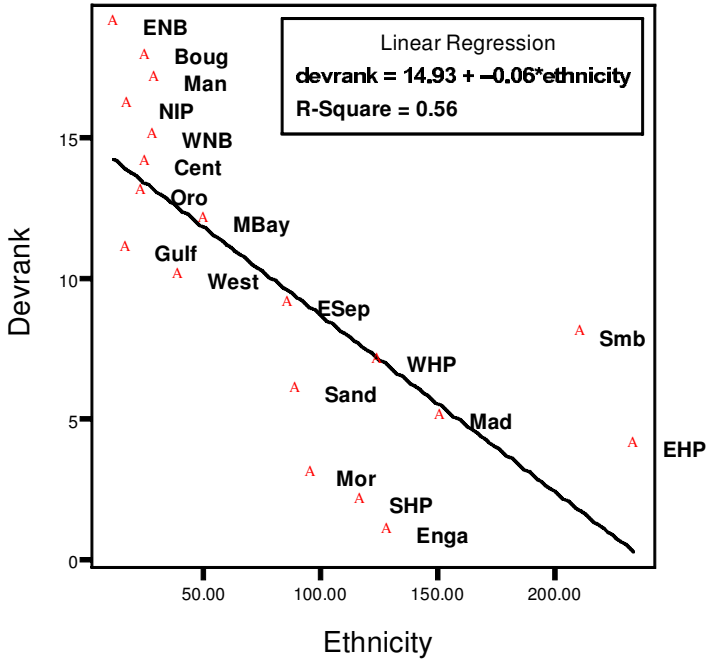
To recapitulate: we use the number of language groups in each province, a "primordial" indicator of ethnic affiliation, as a proxy indicator of the number of ethnic groups in non-Highlands areas. The number of candidates standing for election, a constructed or "instrumental" indicator of ethnicity, is used as a proxy indicator for the number of ethnic groups in each Highlands province. Independently, both of these indicators are each strongly (and negatively) related to provincial development. Together, they provide a crude but useful means of measuring the relative extent of ethnic fragmentation in each province.

We have therefore combined the two indicators into one index in order to test the relationship between provincial development and an aggregate measure of "ethnicity" for each province, with language groups being used for the 14 non-Highlands provinces, and candidates at the 1997 election being used for the five Highlands provinces (see Figure 1). Correlation analysis between provincial development and "ethnicity" produces a strong and statistically significant correlation between these variables of $r = -.748$, $p < .01$. This is the strongest relationship with provincial development of any of the correlation tests in which all provinces were included.

In addition to its strong negative relationship with provincial development, our aggregate measure of "ethnicity" also had significant negative correlations with the main indicators of social capital, being negatively related to educational quality ($-.568$, $p < .05$) and radio usage ($-.531$, $p < .05$). This suggests that ethnic fragmentation somehow impedes the development of social capital, perhaps by making cross-ethnic associational bonds and networks less likely, and hence affecting the development of norms of trust, cooperation, and reciprocity. Alternately and less plausibly, it is possible that social capital is itself affecting the more constructed, instrumental form of ethnic allegiance. Or perhaps the correlation between the two is spurious, and both are being driven by another underlying factor, such as resource endowment, population pressure, or land area.

To test whether this is the case, we developed a multiple regression model to evaluate the extent to which other "environmental" factors besides "ethnicity"—such as population, area, and land pressure—impact on provincial development. In addition to our "ethnicity" measure, three specific indicators are used: provincial population; the area of each province in square kilometers; and an index of rural disadvantage which measures arable land potential,

FIGURE 1: *Provincial Development and "Ethnicity"*



agricultural pressure, access to services, income from agriculture, and child malnutrition in each district, aggregated to the provincial level.[39] These variables have the advantage of measuring basic "environmental" restraints on development that are not included in the provincial development indicator.

The overall results are shown in Table 3 below, and indicate once again that the degree of ethnic diversity in a province is a better predictor of the level of provincial development than any of these other "environmental" variables. Overall, 85% of the variation in provincial development is explained by environmental factors, with population, the rural disadvantage index, and the "ethnicity" variable all having a significant impact. But of these, "ethnicity" has the largest Beta score of –.496. According to the model, a 10% decline in the level of ethnic fragmentation in a province should, other things being equal, result in an almost 5% rise in provincial development.

The robustness of the ethnicity variable in explaining differences in provincial development represents a challenge to many existing explanations of government performance in Papua New Guinea, which tend to concentrate on

39. This final variable draws from L. W. Hanson, B. J. Allen, R. M. Bourke, and T. J. McCarthy, *Papua New Guinea Rural Development Handbook* (Canberra: Australian National University, 2001).

TABLE 3 *Environmental Impacts on Provincial Development*

	Unstandardized Coefficients	*Standardized Coefficients*			
(Constant)	*B*	*Std. Err*	*Beta*	*t*	*Sig*
POP	−1.84E-	.000	−.421	−3.454	.004
LANDARE	−8.65E-	.000	−.033	−.250	.806
ETHNIC	−4.14E-	.011	−.496	−3.871	.002
RURAL	1.005	.328	.399	3.064	.008

NOTE: Dependent Variable: DEVRANK.

other factors such as resource endowment, geography, and history (particularly in regard to the smaller island provinces, which have also had a much longer history of contact with the outside world than the more recently contacted Highlands) to explain differentials in development levels. As Table 3 shows, our "ethnicity" variable is a more significant and robust explanator of variations in development than any of these more conventional explanations.

Explaining the Result

Our earlier analysis suggests that social capital is an important correlate of provincial development in Papua New Guinea. However, the development of social capital in Papua New Guinea is itself affected by societal divisions—both primordial and constructed—that manifest themselves as a form of ethnic group identity. Our model suggests that higher levels of ethnic fragmentation impede the development of social capital, which leads to lower development, even where provincial governments are performing relatively effectively. (Or, alternatively, the "constructed" component of ethnicity is somehow being affected by underlying differentials in social capital.) Either way, the role of the "ethnicity" variable is crucial: the more ethnically fragmented a province, the more likely it is to be underdeveloped, and each one-unit drop in the level of ethnic heterogeneity sees a rise of almost half a unit in development. How do we explain this result?

The starting point is to understand how ethnicity in societies like Papua New Guinea is used to mobilize population groups in the pursuit of economic gain. Ethnic identity in the contemporary world is intimately linked to the process of modernization, as "ethnic groups persist largely because of their capacity to extract goods and services from the modern sector and thereby

satisfy the demands of their members."[40] This can be a positive form of mobilization: for example, groups can work collectively to obtain resources such as schools and medical facilities, which they then have a vested interest in maintaining and developing. But group affiliation also has clear negative impacts. Take, for example, the way ethnicity affects the electoral process.

In Papua New Guinea, as in many other developing countries, electoral politics is primarily a competition for access to the state. In the Highlands province of Simbu, for example, "people have come to regard government as the major, or only, source of opportunity and finance. Having a friend in national government is seen as necessary for economic success. Election to office in the provincial assembly and parliament is keenly contested."[41] Nationally, elections are characterized by high levels of contestation (at an average of over 20 candidates standing in every seat), social mobilization, and popular participation, with very high rates of voter turnout. Social loyalty and political mobilization, which in other circumstances might both be considered to be positive features of social capital, are thus focused at the clan and tribal level rather than at broader associational bonds.

Because of this, the intense social mobilization that characterizes politics in Papua New Guinea has not resulted in high degrees of "civicness"—far from it. If anything, "popular participation in politics has strengthened the connection between politics and material benefits."[42] Aspiring candidates make (often optimistic) calculations of their electoral prospects based on the number of voters in their own clan or tribal group. Once elected, the expectation is that successful candidates will use their position to extract resources from the government and deliver them back to their supporters, but not necessarily to the electorate as a whole. Reviewing the situation in the early 1990s, Strathern found that "it was understood that politicians are in power to benefit themselves and their factions, and they concentrate on consolidating their existing power bases. As a result of armed conflict between groups, these bases had become more, rather than less, rigidly defined and a process of neotribalization was well under way."[43]

As a consequence, electoral violence—including "intimidation of electors and electoral officials, particularly through the use of weapons; murders; unauthorised road-blocks; [and] snatching of ballot papers and ballot

40. Robert Bates, "Modernization, Ethnic Competition, and the Rationality of Politics in Contemporary Africa," in *State Versus Ethnic Claims: African Policy Dilemmas*, eds. Donald Rothchild and Victor A. Olorunsola (Boulder, Colo.: Westview Press, 1983), p. 161.

41. Paula Brown, "The Simbu Election," in Oliver, *Eleksin*, p. 245.

42. Derek Woolner, *Papua New Guinea: 20 Years On* (Canberra: Parliamentary Library Research Service, 1995), p. 7.

43. Strathern, "Violence and Political Change," p. 48.

boxes"[44]—has risen at each election. Standish has described recent electoral contests in Simbu as "times of frenzied collective competition between dozens of candidates per electorate, each representing his group, offering inducements and making threats, with huge sums spent and much at stake."[45] In such a situation, each clan's candidate represents a potential financial and status windfall for the clan as a whole if he (or, very rarely, she) is elected. Each clan therefore has a strong "selective incentive," in the words of collective action theory, to enforce the voting contract within their own ranks and make sure that their candidate gains as many votes as possible. But to do this, they have to overcome the collective action problem endemic to all group politics.[46] Group leaders thus monitor and police their own block-voting choice, and ruthlessly sanction any deviations from this. From Simbu, Standish reported that

> [i]n many polling booths officials were coerced with weapons (axes, knives and pistols) to give out ballot papers in bulk and accept people blatantly voting ten or twenty times. . . . One intending voter was chased from a booth and stoned to death, and five were killed in post-election disturbances, including at least four for voting "the wrong way," that is, against the desire of their communities.[47]

While a cause of great concern, this type of "gunpoint democracy" is not, however, a dominant pattern across Papua New Guinea as a whole—at least, not yet.[48] Indeed, there are clear regional and structural trends to election violence in Papua New Guinea: it is in precisely those Highlands regions such as Enga, Simbu, and the Southern, Western, and Eastern Highlands Provinces where ethnic fragmentation is most pronounced, and indicators of provincial social capital least developed, that electoral violence is also a pronounced factor. Ominously, however, urban areas such as Papua New Guinea's main city, Port Moresby, are increasingly replicating these forms of negative social capital in an urban environment, via *raskol* gangs[49] and other collectivities formed along ethnic and cultural lines.

All of this has important implications for the debate on social capital. Tribal and clan groups and allegiances provide a powerful kind of "bonding" social capital, to the exclusion of almost everything else. In most of Papua

44. Electoral Commissioner, *Report to the Sixth Parliament on the 1997 National Election* (Port Moresby: Papua New Guinea Electoral Commission, 1997), p. 7.

45. Standish, "The Search for Security," p. 70.

46. See Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge, Mass: Harvard University Press, 1971).

47. Standish, "The Search for Security," pp. 70–71.

48. See Yaw Saffu, "Change and Continuity in Papua New Guinea Electoral Politics," in Saffu, ed., *The 1992 Papua New Guinea Election*, p. 41.

49. Derived from "rascals," typically groups of young men engaged in often violent criminal activity.

New Guinea's micro-societies, leadership is exercised by "big-men" who achieve their status through competition, not inheritance. The tribal authority exercised by a "big-man" is acquired and maintained through a two-way system of patronage and exchange with followers. As Standish notes, the "core of the 'big-man' theory is the open nature of the competition for leadership, which is achieved on merit rather than ascription."[50] As a result, most clans are horizontally structured, with only some coastal areas exhibiting vertically structured, "chiefly" forms of social organization.[51] But, because there are thousands of horizontally structured clan and tribal groupings competing with each other for resources and public goods, the putatively beneficial aspects of horizontally structured social relations for a healthy civil society are absent.

Instead, clans increasingly play the role of small, self-contained interest groups. By seeking to maximize their own interests, they inevitably and inexorably create a collective action dilemma for the country as a whole. The combined effect of many small ethnic groups acting to secure their own interests undermines the broader interests of society. Because time horizons are short, possible productive investments are curtailed. Energies are focused on short-term wealth extraction and distribution rather than long-term wealth creation. Rent-seeking—the "socially costly pursuit of wealth transfers"[52]—flourishes, as each tribal group attempts to monopolize any potential resource for its own ends. The result is that public goods are increasingly diverted toward the private enrichment of political entrepreneurs and the small ethnic interest groups they represent. Beneficial outcomes for society at large are overwhelmed by a collective action problem created by several thousand small ethnic collectives competing with each other for resources, prestige, and public goods.

Similarly, the "reciprocity" that lies at the heart of many discussions of social cooperation is present, but in a distorted form. Instead of the idea of abstract and indeterminate reciprocity—a "favor bank" of cooperation—such reciprocal activity in Papua New Guinea typically takes the form of the pervasive phenomenon of claims for compensation—"payback"—whereby any resource loss (from damaged land to a human life) can only be recompensed by a similar, and often greater, form of material or monetary compensation.[53] If not, revenge is the order of the day.

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50. Bill Standish, *The "Big-Man" Model Reconsidered: Power and Stratification in Chimbu* (Port Moresby: IASER Discussion Paper, no. 22, 1978), pp. 33–34.

51. See R. J. May, *(Re?)Discovering Chiefs: Traditional Authority and the Restructuring of Local-Level Government in Papua New Guinea* (Canberra: Regime Change and Regime Maintenance in Asia and the Pacific, Discussion Paper, no. 18, Australian National University, 1997).

52. Robert D. Tollison, "Rent Seeking," in *Perspectives on Public Choice: A Handbook*, ed. Dennis Mueller (New York: Cambridge University Press, 1997), p. 506.

53. See Toft, *Compensation for Resource Development*.

The Papua New Guinea case thus highlights the fact that there are "good" and "bad" forms of social capital, particularly when it comes to the interplay between social capital and ethnicity. Social capital has costs as well as benefits; it can be a liability as well as an asset. One particular example of negative social capital is the phenomenon of clan, tribal, or other forms of micro-ethnic group identity. Such groups typically evidence very high levels of internal social cohesion and trust, but at minimal levels of these same desirable qualities when it comes to their relations with other groups. In other words, they evidence "bonding" but not "bridging" forms of social capital. As the Papua New Guinea case suggests, the distinction between the two forms of social capital is absolutely crucial for making democracy work in ethnically diverse societies. Bonding social capital fortifies ethnic allegiances, reinforcing exclusionary attitudes and behavior. Bridging social capital promotes the formation of new links of cross-cutting behavior that, in theory, "bridge" these ethnic differences, creating the basis for new kinds of relationships that promote conflict management and help to break down tribal attachments.

In fragmented social settings like Papua New Guinea, "bridging" social capital is conspicuous by its absence, as is inter-societal trust. Rather, group allegiances are mobilized, monitored, and enforced in order to acquire and then monopolize control of actual and potential public goods. As a result, ethnic clashes have increased in recent years as elections have encouraged a "retribalization" of politics in which the commodification of the voting process has led to increasingly rigid ethnic group boundaries and a steep rise in inter-ethnic armed conflict.

However, ethnic violence remains predominantly a local-level phenomenon. At the national level, Papua New Guinea's multiplicity of ethnolinguistic groups means that some degree of interethnic cooperation and accommodation is usually unavoidable. One reason that Papua New Guinea has been able to maintain a system of continuous democracy at the national level is that no group has anything like the size or potential to act as a hegemon and dominate others, or to overthrow the incumbent regime. The result is that national politics is, by necessity, characterized by the products of this societal diversity—shifting alliances, cross-ethnic bargains, and diverse multiethnic coalitions—all of which have facilitated the continuity of formal democracy at the national level.[54] But because political leaders must service the needs of their tribal constituency rather than their electorate or the nation as a whole, the collective action dilemma affects government policy as well.

54. See Benjamin Reilly, "Democracy, Ethnic Fragmentation, and Internal Conflict: Confused Theories, Faulty Data, and the 'Crucial Case' of Papua New Guinea," *International Security* 25:3 (2000), pp. 162–185.

Papua New Guinea's national motto is "unity in diversity," and there is no doubt that it has achieved some remarkable successes in uniting thousands of small stateless societies into one fractious but ongoing state structure. But at the same time, in the words of former Prime Minister Paias Wingti, "this diversity is slowly strangling our nationhood."[55] Ethnic fragmentation, while ensuring the continuity of formal democracy at the national level, has undermined the development of social capital at the local level and effectively created a massive collective action problem. As a consequence, politics is characterised by intense zero-sum competition for a small and dwindling reward base, and life in some parts of Papua New Guinea has reverted to a Hobbesian struggle for meager resources.

Desperate though such a situation is, it is irrational for any one individual to attempt to forge a cooperative alternative under prevailing forms of clan-based social organization. Instead, the bleak logic of the collective action dilemma unwinds, as groups seeking to promote their own interests try to monopolize access to public goods and opportunities for rent-seeking by their group alone.[56] The fragmentation of Papua New Guinea society exacerbates this problem by creating a situation of many small clans operating effectively as interest groups, attempting to exploit any available public good for their membership. The result is grossly sub-optimal outcomes for the country as a whole.

55. Quoted in John Connell, *Papua New Guinea: The Struggle for Development* (London and New York: Routledge, 1997), p. 299.

56. See Olson, *The Logic of Collective Action.*