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within settlements of Port
Moresby

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Improving access to land within the settlements of Port Moresby*

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Abstract

Improving access to land in the Pacific remains a difficult problem. This paper presents results from a field survey conducted in 12 randomly selected settlements in Port Moresby, the capital of Papua New Guinea, to investigate how settlers acquire land for housing. The analysis shows that several means for land acquisition is used; ranging from outright occupation (that is, land invasion) to purchase of use-rights from the customary landowners. The security of tenure on land held under customary title is maintained using mechanisms ranging from group occupation by members of a clan/tribe to the use of the traditional systems of reciprocation and token-exchange. Security of tenure on land held by the state, in contrast, is maintained through political patronage. Settlers fear eviction more from the state than the customary owners suggesting that ownership rights are relatively more secure on land held under customary title. The length of occupation is viewed by the settlers as cementing their ownership-rights to the occupied land. Similarly, some of the settlers have over-capitalised into permanent housing with the understanding that the State would have to compensate them for the improvements should they be evicted.

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1. Introduction

Improving secure and long-term access to land as a means to accelerating the pace of economic development is receiving widespread international attention. It has been repeatedly pointed out that the absence of formal title on land occupied by the millions of people living in urban squatter settlements has impeded development. The lack of secure title to land has dissuaded savings and investment by the settlers (Deininger, 2003). The lack of formal title has also raised the cost of credit to the poor (Feder et al, 1988) and taxed the transferability of their assets (Besley, 1995). The above-mentioned channels have sucked life out of often the only major asset of the poor, leading De Soto (2000) to label land without formal title as ‘dead capital’. The recognition of the drag insecure rights to property places on poverty reduction has led to land-titling programs in several developing and transition countries including Cambodia, Columbia, Egypt, Ghana, Honduras, the Philippines, South Africa, Turkey, and Vietnam (Galiani and Schargrotsky, 2006).¹ This land-titling wave, however, has as yet to reach the Pacific island nations.

The demand for land for housing within the urban centres of the Pacific islands has grown rapidly over the past half a century and this trend is likely to continue for the foreseeable future. In Papua New Guinea, for example, the population has been growing at an annual average of 2.7 percent for the decade to 2005. Some 87 percent of the population live within rural districts where access to basic services and employment opportunities remain poor. Settlements around the urban centres and the capital in particular, have grown rapidly over the past three decades (Koczberski et al, 2001). With only 3 percent of the total land area being alienated, the majority of the new settlements are on land held under customary title. While settlers without legal title on state land may be classified as squatters, those on land held under customary title have usufruct rights to their place of abode. The latter group have used

¹ The Economist, however, warns that: “Giving land titles to the poor is no silver bullet” (Economist, 2006: 62).

a combination of the modern and the traditional institutions to secure their rights of access to land for settlement. The presence of a market in houses built on this land is evidence that these institutions do indeed provide some degree of transferability of assets and that the underlying title to land, albeit informal, is more secure than that for settlers on state land.

The question posed here is as to whether the systems that have evolved thus far could be used, and possibly strengthened, to provide long term security for housing in these settlements. The diversity in the systems that have evolved between land owned by the state and that by customary owners, and that amongst the various customary owners themselves, is used to draw lessons on the feasible policy choices. On the former, a number of settlers claim their rights to state land on the basis of political patronage. This right, the settlers acknowledge, remains until their patrons remain in office. Settlers have, as a consequence, been far more active in national elections compared to the rest of the population. This was evident during the survey when the whole settlement of Erima was found to be away attending a political rally organised by the incumbent Governor for National Capital District (NCD) in the lead up to the by-elections in the district. A number of politicians continue to reward such participation including, through providing 'free' water, electricity and land.

Systems that have evolved within settlements on land held under customary title have ranged from explicit arrangements on purchase, sale, and rental of land and properties built on this land to nil payments and overt occupation without any compensation. On the latter, one group of landowners, while being unable to evict those settled on their land, have refrained from accepting any payments in fear of legitimising the claims of the settlers. The systems that have developed to date are far from complete or efficient in rationing land for housing, but they do offer many lessons on what could be done to progress this agenda. We exploit these differences to draw policy lessons on improving access to land for settler-housing in Port Moresby.

This paper makes a number of original contributions. First, it documents how institutions have evolved to cater for the rising demand for land for housing in the settlements of Port Moresby. In sharp contrast to ongoing efforts at land registration, we investigate the evolution of institutions at the household level that have had some success in providing long-term and secure access to land for settlement. Our ‘bottoms-up’ approach complements, rather than acts as a substitute, to the ongoing ‘top-down’ efforts at land surveys and land registration. Second, the study draws on data collected via a purpose-designed survey conducted in 12 randomly selected settlements covering a total of 441 households. Analysis of this data offers several insights into the functioning of settlements in Port Moresby. Third, the analysis reveals that institutions have evolved, and continue to do so, to fill at least some of the void left by formal systems in enabling access to land for housing. The incentives to acquire security to land for housing are significant to the settler. Furthermore, the landowner has similar incentives in ensuring that the value from their assets is maximised. The transactions, however, takes place in conditions of imperfect information on several dimensions including the murky rights of the purported owner and the capacity of the buyer to enforce his/her rights of settlement. Transactors, however, learn over time as news on past deals is readily shared within the community.

The rest of the paper is organised as follows. Section 2 provides a succinct summary on the linkages between property rights and development. Section 3 provides information on the settings for this analysis; namely, the settlements of Port Moresby, the capital of Papua New Guinea. Section 4 presents the methodology, data, and some of the preliminary findings from our analysis. Section 5 presents some of the policy implications while the conclusions brings the paper to a close.

2. Property rights and development

The lack of security to land has long been considered an obstacle to economic development. De Soto (2000), for example, notes that a market economy is “inconceivable” (page 147) without an integrated formal property system. He attributes migration of the poor from rural to urban areas as being due to a lack of their rights to own land and thus their inability to improve on their wellbeing. De Soto sees migrants as a source of entrepreneurship, labelling them the ‘noble pioneers’, in contrast to the common stereotyping as trespassers on unoccupied property. Providing migrants with land titles has consequently been seen as a means of unleashing their entrepreneurial potential and propelling them down a path of poverty reduction.

The broader literature attributes at least four distinct channels via which land-titling lowers poverty. First, having exclusive rights to a house has intrinsic value to the owner. This together with the ability to transfer it at will enable the householder to restrict those from family and clan to reside at their premises and feed off their income.² Second, possession of exclusive rights to a property affects the incentives to save and invest. A house, absent perfect factor markets, provides the householder the instrument to save and invest such as through ongoing improvements that are undertaken through sacrificing leisure time. Most of the houses in the settlements of Port Moresby, for example, are under continuous upgrading, and often undertaken with family and clan labour. An individual, unsure of his/her ability to reap the benefits of any investment in a long-term lumpy-asset such as housing, thus, is likely to under-invest when security to the asset is lacking. Furthermore, collective (over-crowded) living as is common in the settlements dissuades investment in the education of the siblings that in turn lowers the income potential of the following generation. Third, secure title to an immovable asset such as land or housing allows the owners to collateralise the asset to acquire

² Ownership includes a bundle of rights including the right to occupy, use, develop, sell, give, and exclude others from the property. Settlers rights expand over a subset of the above, seldom extending to being able to exclude the landowner from accessing his/her asset.

credit from the formal sector. This credit could be used to acquire capital and thus increase income via raising labour productivity. Fourth, secure title saves the household the expenses of providing security. Ownership rights to a house in the settlement are often maintained through continuous occupation; a lapse in occupation risks capture of the asset by others. The last explains why settlers coalesce around family and clan as this enables them to credibly commit to being able to ‘fight off’ an invasion. This may explain the over-crowded households and the dominance of male-headed households in several of the settlements in Port Moresby. The absence of secure title to land for housing, therefore, lowers the income of the household through reduced savings and investment whilst raising expenditure in maintaining ownership rights to the property. The cumulative effect of the above is higher poverty than what would prevail with secure rights to the property.

While secure rights to property may induce greater investment and thus growth in income, a higher income may equally induce a greater demand for secure property rights. The feedback between security of access to property and income, over time, leads to bifurcation of households into those with income and property versus others without the basic amenities of life. This makes the task of establishing the direction of causality between security of access to land and the level of poverty in any empirical work extremely difficult. The allocation of property rights across households, moreover, is not random but based on their capacities to acquire these rights and the intrinsic value they attach to this right. Controlling for these idiosyncratic differences between households in establishing causality between the two variables complicates the task even further.

There is, however, an emerging body of empirical evidence that supports the proposition that secure property rights is a necessary, albeit not a sufficient, condition for development. Galiani *et al*, 2006, for example, use survey level evidence from a poor suburb in Buenos Aires to show that families with land titles: “increased housing investment, reduced household

size, and improved the education of their children relative to the control group” (page 1). They show that having land title, in comparison to a control group that did not, raised the probability of having good quality walls by 40 percent and that of having good quality roofs by 47 percent. Their evidence in support of the proposition that secure property rights improves access to credit is weak, however. This may, as suggested in our work below, be due to the underlying insecurity of the formal title and thus the inability of the credit providers to reposes property on loan-default. Lanjouw and Levy (2002) use survey level evidence from Ecuador to show that: “the unconditional expected mean of titling a property is to raise its expected sale price by an estimated 23.5 percent” (page 1009). This evidence is consistent with the claim of Galiani *et al* who suggest that the benefit of entitling property flows via the: “slow channel of increased physical and human capital investment” (page 3). Thus, while entitlement may not open the door to formal credit channels, it does improve incentives for increased investment and savings.

Much of the research thus far has assumed that a property with formal title is secure and those without not. Our work suggests that such demarcation is artificial and settlers and landowners, knowing the value of secure property rights, negotiate some level of security that falls in between the binary extremes used in the literature. Settlers choose the longevity of their investment in houses depending on their perception of the degree of security to the land on which the building takes place. The dynamics of savings, investment, and continual exchange with the owner of the land settled upon and with neighbouring settlers influences the levels of ongoing investment. New settlers, therefore, may construct temporary (makeshift) shelter not only because they lack the means to build something more permanent but also as a first step in testing the security of their investment on the newly acquired piece of land for housing. The passage of time, at least in Port Moresby, has tilted the balance in favour of settlers with respect to their entitlement to the land built upon. Many of the long settled households now claim ownership rights to the land, suggesting that their now deceased

forbearers had served their dues to the original owners to have acquired these rights. These claims are more potent with respect to land held under customary title than that held under state ownership. This could at least partly be explained by the fact that the former is consistent with the traditional (pre-colonial) institutions of land acquisition.

Colonisation saw the introduction of land registration and use of legislative barriers to alienation of land. This followed concerns of the colonisers that the natives would lose their main (only) asset; thus land in-alienation was seen as being critical to preserving the 'native race' (Ward *et al*, 1995). The genesis of land registration and customary tenure was in post-colonial legislation that forbade outright sale of land or issue of title in the name of an individual. This ban, however, was envisaged to be temporary and maintained until: "the native race [was] ripe for a division of community rights among individuals" (ibid, page 207). The Minister for territories in the colonial era for Papua New Guinea announced that the indigenous people will decide on what to do with their land at their own choosing (Wright 2002). This led the colonial government to allow the development of a voluntary system of private property rights. The agricultural settlement schemes trialled during the 1950s and 1960s, for example, was an attempt to induce demand for private property rights. It was then suggested that a settler, once having successfully established himself, would have a positive demonstration effect on others. The anticipated increase in income was expected to stimulate demand for private property rights (Cheetham 1963). This, however, failed to materialise.

Restrictions on land acquisition introduced following colonisation, however, were in sharp contrast to the ancient practice of land-boundaries being determined by the military might of a tribe vis-à-vis its neighbours. Occupation and use rights to a particular piece of land in the prehistoric period, therefore, were both fluid and destructible (Sukuna as quoted in Ward, 1995; page 207). In-alienation introduced post colonisation, thus, froze the fluidity of usufruct rights to land and was germane to the notion of customary title (that is, outright

ownership in the name of the clan) in contemporary Papua New Guinea. Not surprisingly, concepts such as perpetual title to land and institutions to ensure that these rights were respected are absent from the traditional systems. The institutions that have evolved within settlements in Port Moresby, as shown later in the text, reflect the confluence of the traditional notions of land acquisition with their modern precepts of ownership. The newly conferred ownership rights, moreover, have got entrenched over time as any change from the status quo now creates winners and losers.

The traditional systems had evolved to cater for the demands of the individual without compromising the collective right of the family and the tribe. Clan members, for example, had, and continue to do so now, an understanding on the specific rights to a particular piece of land; a system is in place on the transfer of land across generations; and, land boundaries across clans and tribes are common knowledge and part of oral tradition. None of the above, however, is codified and the details of the above-mentioned transactions differ across tribes. Occasional disputes on land boundaries do take place, and have done so historically, but systems have evolved to resolve these when and if they occur. Furthermore, violence has been the last resort to resolving these disputes.

Land held under customary title has been successfully accessed for enterprise. The several large resource projects in Papua New Guinea, such as Ok Tedi mine in the interior Western Province, are cases in point. While resource projects such as mining and logging have proved successful in the most difficult of circumstances, their high returns have been adequate to defray the large transaction costs incurred in accessing land (and natural resources such as indigenous timber) that is held under customary title. Economic activities lacking the large rents of resource projects thus have failed to emerge in these environments. Newly arrived settlers into urban settings, moreover, lack the information, scale, and the means to acquire formal titles to land settled upon.

Proposals to facilitate access to communally owned land in the Pacific islands has drawn considerable political sensitivity. A World Bank sponsored 'land mobilisation' project in Papua New Guinea in 2001 drew protests in Port Moresby that led to the death of four university students, when police fired on the protestors. Sensitivities in relation to settlers benefiting from the owners of land held under customary title in Honiara is alleged to have been one of the sources of the four-year civil conflict in Solomon Islands that was brought to an end in July 2003 through the intervention of an Australian led military and police intervention. The failure of past attempts at titling land held under customary ownership continues to act as a drag on fresh attempts at progressing this agenda.

3. The Setting

Papua New Guinea is nation of 5.89 million people with the population growing at an annual rate of 2.03 percent (data for 2005 - the most recent available), and located in the South West Pacific and north of Australia. The World Bank reports purchasing power parity (that is, PPP) adjusted per capita income as of 2005 of US\$2370; an average life expectancy of 56 years; and an infant mortality rate for every 1000 live births of 68. With a population density of 13 people per square kilometre, PNG is a land abundant but highly fragmented nation. The people are divided into three major geographic regions; namely, the Highlands that encompass the interior mountainous region of the mainland, the coastal zones of the main island, and the smaller islands that comprise the nation. There are some 700 languages, defined as mutually unintelligible speech, in PNG which Cooter (1991) suggests is a reflection of historical isolation of the individual communities and thus their cultural heterogeneity. English is the official language while Pidgin, which is a combination of English, German, and indigenous vocabulary with a rudimentary grammar, is the *lingua-franca*. A meagre 13 percent of the total population resides in urban areas, thus there remains

significant potential for further growth in the urban population; kinship groups, moreover, remain pervasive, albeit variegated, within urban settings.³

Port Moresby, according to a national census conducted in 2000, had a population of 254,158 (PNG-National Statistics Office, 2002) and is located on the Gulf of Papua on the south-eastern coast of the island of New Guinea. The city acquires its name from Captain John Moresby of HMS *Basilisk*, the first European to have landed there, on the 20th of February 1883. Captain Moresby claimed the land for Britain, thus New Guinea became a British colony thence. Electricity was first supplied to the city in 1925 and piped water in 1941.

World War II saw the city turn into an important base for the Allied troops, with thousands of soldiers being stationed there, under the then colonial administration of Australia. The War-period also led to the evacuation of the resident (indigenous) Papuans away from the city and the enlistment of Papuan men from the surrounding regions as carriers for the troops.⁴ One (that is, Koki) of the 12 settlements surveyed, for example, was created during the war on land alienated by the colonial administration for the enlistees, while another (that of, Hohola) was used as an army gallery range.

Papua New Guinea gained independence from Australia on 26 September 1975 with Port Moresby becoming the capital of this newly created nation. The whole of the National Capital District (NCD), spanning a total land area of 240 km², is classified as urban and for the purposes of this paper, referred to as Port Moresby; its population increased by 226 percent in the two decades to 2000 from its 112 thousand in 1980; implying an annual average growth rate of the population of the city of 4 percent. The (crude) population density as of the

³ The data is sourced from the World Development Indicators at: <http://devdata.worldbank.org/dataonline/>; accessed on 13 September 2006.

⁴ The historical information on Port Moresby has been accessed from http://en.wikipedia.org/wiki/Port_Moresby, accessed on 13 September 2006.

2000 census of Port Moresby was 1,059 persons per km².⁵ For the two decades to 2000, the fastest growing areas in terms of population were the outer settlements with Laloki/Napanapa growing at an annual average rate of 12 percent while the Town/Hanuabada experienced the lowest rate of growth of its population at 2.6 percent.

Some 58 percent of the 2000-population of the NCD were made up of migrants, with more than 90 percent of them having migrated from the other provinces over the past decade. Amongst the migrants, some 56 percent were males and a half of all migrants were in the 25 to 29 year age cohort. As of the 2000 census, the figures for NCD for residents who were born outside the district were 118,680; for those enumerated in other provinces but born in the NCD was 41,556; implying a net migration to the NCD of 77,124. The major source of migrants to the NCD by province and with the numbers in parenthesis was: Central (21,810); Eastern Highlands (13,356); Gulf (12,208); and Chimbu (10,060). The major destination for those born in the NCD was: Central (19,182); Morobe (4,504); and, Eastern Highlands (1,452). Some 30 percent of the inter-provincial migrants remained in the NCD for 0 to 4 years with another 25 percent staying for between 5 to 9 years. Labour force participation rates for males and females as of 2000 were 60 and 34 percent, respectively; of these 21 percent of the males and 13 percent of the females were unemployed.⁶ This data shows a significant churning of the NCD population; with an increasing number of young male arriving into the district, possibly in search of income earning opportunities. Most of these new arrivals, as shown later, move into the settlements.

We have three snapshots on the growth of settlements between 1945 and 2000. There were six villages but no settlements in 1945 (see Map 1). The 1980 census enumerated 34

⁵ Port Moresby is deemed not to have any arable land, thus figures for physiological population density can not be presented.

⁶ NSO defines a person over 10 years of age in private dwellings as unemployed if the individual over the reference period was either actively looking for work or was waiting to start a job. It does not include those engaged in the subsistence sector.

settlements with a total population of 11,270. The 2000 census, in contrast, recorded a total of 55 settlements housing a total population of 53,390. While on average, a new settlement got established each year for the twenty years to 2000, settlement population grew by 7.8 percent (that is, close to twice the rate of the NCD average) within this period. Our survey of March to June 2006 suggests that this process of expansion is far from over: existing settlements are expanding while new ones are also appearing, with one taking shape just behind the premises of the National Research Institute. At the above-mentioned rate, settlement population in NCD will double every nine years while that for the NCD as a whole will take twice as long.

4. Methodology and data

The data for the analysis that follows is derived from a survey of 441 households within a dozen randomly selected settlements in Port Moresby. This data was collected via a purpose-designed household survey. We have drawn on the 2000 national census for the National Capital District which enumerates 54 settlements ranging in population size from 35 for Kialova to 5,927 for Nine Mile. The census data that we have provides us with settlement-level details as per census unit with the name of the settlement, the location in the form of its latitude and longitude, the number of households, the population, and a breakdown of the last by gender.⁷

The decision rule for selecting a settlement for the survey comprised of the following steps. First, the settlements were grouped into three classes: those that were built on customary land (CL); those built on state land (SL); and, a third group comprising those built on land having a mixture of the above-mentioned (SCL). The data on ownership of land as per settlement was sourced from the National Capital District Commission (see Map 1). Next, settlements with less than 5 percent of the total number of households in the respective groupings were

⁷ We are grateful to Bryant Allen for helping us access this data.

dropped from the subsequent selection process. This was done to avoid narrowing down the selection process to a few households only. Some 12 settlements with a total population of 6486 spanning across 1163 households, for example, are built on CL. Of these, six settlements had less than 58 households (the 5 percent threshold) and thus were dropped from the subsequent selection process. Four of the remaining 6 settlements were randomly selected, and from each of these, 10 percent of the households were again randomly selected for interviews.⁸ The above process led to the selection of 71 households settled on land held under customary title for interview. A similar process was used to select six settlements on state land that led to a total of 338 households being selected for interview. Finally, two settlements on land owned both by the state and customary landowners were selected, that led to a total of 32 households for interview. A summary of settlement characteristics is presented in table 1 below.

Table 1: Summary data on settlement characteristics

Settlement Name	Land type	Year first settled	Population (2000 census)	Number of households	Number of households interviewed
Koki	SL	1952	4939	450	45
Saraga	SL	1960	2243	446	45
9-mile	SL	1970	5927	922	91
Erima	SL	1970	4063	673	67
Gorden ridge	SL	1975	2702	441	44
8-mile	SL	1982	2683	458	46
Gorobe	SCL	1967	1070	128	13
Hohola	SCL	1981	1015	188	19
Savaka Bundi	CL	1971	970	154	15
Popondetta	CL	1972	799	140	14
Vadavada	CL	1977	2048	363	36
Taurama	CL	1990	447	62	6
TOTAL			28906		441

Notes: CL, SL, and SCL denote land owned by customary owners, the State, and a mixture of the two, respectively. Data sourced from 441 completed survey questionnaires. Settlements arranged by type of land and first year settled.

The rigorous sampling methodology chosen was to enable us to draw inferences on the population parameters on the basis of the analysis undertaken for the sample of households

⁸ The number of households interviewed in 9-Mile fell short by one of the 10 percent threshold. The interviewers encountered problems whilst interviewing this household.

interviewed. The sample characteristics were cross checked with the available population parameters to ensure that the selection process did not introduce biases. The available comparisons provide reasons for optimism on this front. Males constitute some 55.2 percent of the total NCD settlement population; our sample gives a corresponding figure of 55.4 percent. The number of people per household for the total NCD population is 6.4 while the corresponding figure for the sample, as provided in the Census data, is 6.0.

Two interviewers from the National Research Institute conducted the surveys. Prior arrangements were made with the community elders from each of the selected settlements to enable the interviewers to conduct these surveys. Each household sampled was asked to designate a person most knowledgeable of their circumstances; the household head was invariably nominated. A short questionnaire was then administered with the responses filled out on a hard copy in full view of the interviewee. Questions were asked on household characteristics, including the age, occupation, provincial origin, and year settled for the household head; and those relating to access to basic services, the type of dwelling and costs of improvements, and the perceptions of security to land on which the household has settled on. Notes were also taken on views expressed regarding the arrangements in place between the settler and the landowner with respect to payments of rents and any rights to the land settled upon. A summary of the main findings from the survey is provided next.

5. Some preliminary findings

The first settler within our sample of 441 interviews was from Koki who settled there in 1952 (see table 1). State land, on the whole, was settled on before land held under customary title. Settlement on state land commenced in the immediate aftermath of the Second World War, probably following the initial movements induced by the war where able bodied men were recruited as carries from the neighbouring regions. The majority of these settlers were from the Central Province and remain so until today (see Table 2 on provincial origin of the

settlers). Saraga came second on this count with one of our interviewees first having settled there in 1960. In terms of composition, a third of the settlers are again from the Central Province, but Simbu comes close second on this count as some 27 percent of the residents noted this as their province of birth. Gordon Ridge was the last settlement to be formed on state land with settlements first appearing on land held under customary title from the early 1970s.

The provincial origin of the household head and the extent of churning within the settlement population are shown in Table 2. Gorobe, first settled around the mid-sixties, has more than half (that is, 54 percent) of its household heads originating from the Gulf Province; another 23 percent were from Central Province; with the remaining from Madang and Western Provinces. The distribution of people from the various provinces across the settlements is far from uniform: if anything, the data suggests that people from a given province have a strong tendency to coagulate within the settlements; this observation seems to hold even within the spatial confines of a single settlement.

The early migrants into the NCD were from the surrounding provinces with settlers from the Highlands coming later in the period. This is particularly evident from the figures for Hohola shown in table 2: this settlement came into being in the early 1980s and is comprised of household heads from Eastern Highland Province (EHP), Enga Province, and Southern Highlands Province (SHP), with households from each in nearly equal proportion. The Highlands-wave has been equally strong in 8-Mile (settled in the early 1980s) where those from Enga Province comprise 37 percent; Taurama (settled in the early 1980s) with a third made up of people from Simbu (and another third from Gulf); Vavada with those from Simbu and EHP making up 39 and 33 percent, respectively; and, Erima (established in the early 1970s) where those from EHP comprise more than half the population.

Table 3: Household characteristics

Settlement Name	Male headed hhlds (percent)	Average age of hhd head (years)	Hhld head with no education (%)	Average number of persons per hhd	Average number of dependents/hhld	Average hhd monthly income (Kina)	Percent hhd head self employed
8-mile	93%	39	13%	8	3	545	54%
9-mile	93%	42	11%	9	3	658	64%
Erima	81%	43	31%	10	3	830	61%
Gorden ridge	73%	42	24%	8	3	735	35%
Koki	89%	40	9%	17	6	1739	33%
Saraga	91%	39	11%	9	3	537	31%
Gorobe	100%	51	23%	8	3	390	62%
Hohola	95%	41	11%	11	5	1183	68%
Popondetta	86%	38	14%	10	4	548	53%
Savaka Bundi	73%	38	7%	9	3	392	33%
Taurama	100%	49	33%	5	2	210	83%
Vadavada	92%	41	31%	7	3	489	31%

Note: Hhld denotes households.

Data on the household characteristics of the settlers is shown in table 3. While there is considerable variability on all of the variables for which data has been collected, the common features of households within the settlements include: the fact that the majority of the households are headed by males of around 40 years of age; a significant proportion of these household heads are self employed; and, that these are generally large households comprising anything up to 48 individuals and 23 dependents.⁹ Household monthly income, as reported in the survey, ranged from K8,000, for a self employed contractor, to K100. The quality of this data, however, is suspect given that several household heads simply refused to answer this question. While the interview did not delve into the details of the specific activities the self-employed engaged in, similar field work has suggested that a significant proportion of the self-employed engaged in extra-legal activities. Levantis (1997) drawing on survey data, for example, reports that crime accounts for some 14.8 percent of the total urban workforce while prostitution alone accounts for some 13.6 percent of the female urban workforce. There is

⁹ Dependents include children less than 15 years, adults more than 65 years, and sick and disabled who are unable to independently support themselves. The number of individuals in a households in our interviewed sample is larger than in the census data, an issue that we suspect is due to the difference in how households have been defined in the two studies. The census data identifies citizen population living in private dwellings by relationship to the head of household. Relationships include spouse, own child, step/adopted child, other relative and non-relative. Our data relies on the household-head's own definition.

considerable anecdotal evidence to suggest that the crime statistics for the settlement could be even higher.

The settlements, however, are also hives of entrepreneurial activity. Every settlement had at least one store (tucker shop) with many having several in addition to tea houses, snooker-tables, poultry and piggery businesses, hairdressers, bottle shops, transport providers, rent collectors, mechanics, money lenders, carpenters, traditional healers, vegetable suppliers, and nearly every other imaginable service that the community is likely to demand. A number of permanent structures were seen with some having septic toilets, television antennas, electricity generators, and one specific case of a commercial centre valued (by the proprietor) at K300,000 built on land that did not have a formal title in the name of the investor. While a number of the settlements had rooms within the houses for rent, we came across only a single house that was on rent with the owner no longer being able to collect the rent. What surprised us most was that both land and houses were bought and sold within several settlements despite the lack of proper title to these properties and often without the consent or even knowledge of the landowners.

Table 4 provides summary data on access to utilities and sanitation facilities. While the permanent features within the homes varied considerably from some having the most modern of the conveniences, others lacked basic sanitation facilities. Just one of the 45 households surveyed in Saraga, for example, had access to a telephone while all of 15 households surveyed in Savaka-Bundi had telephone services. Access to water and electricity was better in comparison to telephone, except that 9 of the 15 families interviewed in Savaka-Bundi accessed their water from ground wells. Pits were the most common form of toilets with a handful of the households having septic systems with water-flush conveniences. Some two-thirds of the households in Taurama and 62 percent of those in Gorobe did not have toilets at all; 69 percent of households in Koki had raw sewage draining straight into the sea with a

quarter of the households there reporting that they did not have a toilet at all.¹⁰ The sample evidence points to the fact that sanitation is a serious issue in the settlements and in all likelihood a health disaster waiting to happen.

Table 4: Access to basic services

	Water (%)	Electricity (% yes)	Telephone	Toilet - pit (%)	None/Outside ^a (%)
8-mile	80%	22%	9%	83%	15%
9-mile	98%	67%	11%	68%	30%
Erima	91%	58%	1%	88%	1%
Gorden Ridge	73%	57%	22%	91%	2%
Gorobe	62%	62%	8%	31%	62%
Hohola	100%	74%	21%	31%	74%
Koki	100%	78%	44%	69%	24%
Popondetta	79%	43%	14%	64%	29%
Saraga	84%	60%	2%	89%	4%
Savaka Bundi	100%	100%	100%	93%	7%
Taurama	50%	17%	0%	33%	67%
Vadavada	97%	17%	0%	56%	41%

Note: ^a 'Outside' refers to use of the sea in the specific case of Koki. The difference between the last two columns is made up of nil responses and those reporting use of water-flush toilets hooked up to septic tanks.

The link, if any, between security of access to the land built upon and the level of investment in permanent housing had the most surprises. This is discussed next.

Security of tenure to land settled upon

Table 5 provides a summary on land transactions that have taken place, particularly with respect to providing greater security to housing in the settlements surveyed. The second column shows that anything between 11 to 71 percent of the households had acquired the land from the original owners; this in the case of state land was the Department of Lands and Physical Planning and that for land under customary title from those claiming to be the owners by customary law. The settlements on the state land are cases of outright land invasion. Those who did not acquire land from the original owners bought their land, often

¹⁰ Koki is built on water, thus those without toilets reported using the open sea/outside as the place for convenience.

with the improvements, from others. There is clear evidence of sale and purchase of houses despite the lack of a clear legal title to these properties.

Table 5: Land transactions details

Settlement Name	Percent acquired from original owner	Average cost of land (Kina)	Percent w/o legal title	Average value of improvements (Kina)	Properties for rent
8-mile	33%	n.a	67%	17500	No
9-mile	46%	7173	59%	23350	Yes
Erima	28%	2265	55%	15686	Yes
Gorden ridge	30%	2532	80%	23351	Yes
Gorobe	46%	100	100%	n.a	Yes
Hohola	58%	5000	89%	30694	Yes
Koki	11%	5250	84%	54145	Yes
Popondetta	71%	3000/30 per year	86%	44885	Yes
Saraga	69%	251	100%	9600	Yes
Savaka Bundi	13%	12500	93%	3867	Yes
Taurama	33%	n.a	67%	17500	No
Vadavada	31%	950	94%	6744	Yes

The price paid for land varied considerably between settlements. There was no clear and discernible differences in the price paid for land between the three land types. Similarly, there was no distinct demarcation in the level of investments made by the settlers between CL, SL, and SCL.¹¹ The price for land differed depending on the terrain, the size of the block, and the distance from the main road. In the cases of Gorobe and Popondetta settlements, the customary landowners offered a choice between two schemes to acquire land for housing: one that involved an upfront lump sum payment for the land; or another that entailed a smaller down payment with annual rents. In one specific case, the settler reported that he had bought beer worth K200 for the landowner and now contributes K10 each time the landowner comes with a request for bride price, funeral expenses, etc. The proportion of households without formal title to their blocks of land on which homes were built ranged from 55 percent in Erima to everyone interviewed not having a formal title in Gorobe and Saraga.

¹¹ This issue will be tested rigorously as part of future research.

There was considerable heterogeneity in terms of the arrangements in place across settlements built on customary land in terms of how land was accessed for housing. This ranged from a few cases of outright land invasion, where a pioneer identified an empty piece of land and built on it following which the members of his clan and tribe joined in, to others where explicit arrangements were made with the customary landowners to access their land for settlement. In the latter case, landowners have invariably disallowed sale of land, and placed restrictions on renting out of property but these transactions have taken place regardless and often without the knowledge of the landowners.

There were mechanisms developing to increase security of tenure within the settlements; this, however, has as yet a long way to go before the land market reaches full efficiency. Rooms within houses were available for rent in all except three settlements. With a lone exception, houses for rent were unavailable in the settlements. The reasons for this anomaly was made clear from the lone case (in Gorden Ridge) where the owner of the property was unable to collect rent after the settlers had moved in; he informed us that he did not have the powers to evict them either. Several household heads interviewed reported that they were 'care takers' of the property that was owned by a member of their immediate family. This is evidence in support of the proposition that continual occupation of a property is critical to maintaining ownership. Not surprisingly, houses were not available for rent in the settlements. Even in renting out a room, the capacity to be able to evict a non-complying tenant would be critical in acceding to this arrangement in the first place. Those renting rooms, therefore, had some family link to the household head.

Institutions were developing to provide greater security to the land being built upon.

Surprisingly, the forms of institutional evolution differed markedly between state-land and land held under customary title. In the case of the former (that is, state land), the settlers were a lot more active in national elections. Settlers in four of the six settlements (namely, 8-Mile,

9-Mile, Erima and Koki) established on state land attributed their security to land settled upon to national politicians who reportedly encouraged them to settle on the land in question. Most of these politicians have since left politics or died, but the settlers remain active in national elections which then provide them with ongoing security. A number of settlers reported that the state could evict them, thus their security very much rests on them being able to sustain strong political patronage. The politicians dependent on such support, however, have an incentive not to provide secure property rights as it may erode their electoral base.

Settlers on land held under customary title have also evolved arrangements that provide some level of security. Some have gone to the lengths of signing statutory declarations with the Commissioner of Oaths on their rights to settle on the land; others keep receipts for all payments made as evidence of their claim to the land. Popondetta settlement, where nearly a half of the settlers are from the Oro Province, has established an Oro Development Community (ODC) as an intermediary between the settlers and the customary landowners. The ODC mediates payments from the settlers to the landowners and keeps records of these. The settlers told us at the interviews that the landowners had refused to provide formal title to the land, but they held comfort in the fact that the ODC held all records on payments made and that the majority of the residents in the settlement were soldiers being able to resist any threats of eviction.

Settlers have had a clear tendency to coalesce around boundaries of the family, clan, tribe, province, profession, etc. These conglomerations that take place around multiple dimensions strengthen the claim of the settlers onto the land settled upon. The incentives for such grouping were strong in the pre-colonial era when occupation rights to any piece of land had to be defended with force and where personal security was provided via groupings of the nature observed in the settlements. Villages then, as they do now within rural districts, tended to comprise a cluster of houses built on hills or ridges for security. These incentives for

clustering remain, particularly in the settlements where the presence of the state is weak at best and where breakdown in law and order is a constant threat. Traditionally, a family's claim to a piece of land is strengthened by: "spilling blood on it, burying dead in it, planting permanent crops, or building a permanent house on it" (Cooter, 1991: 768), the last is particularly relevant in the urban settlements. The agglomeration around family, clan, and tribe, however, creates risks of inter-tribal conflicts by placing pseudo tribes living close to each other. These groupings, moreover, create contests between the settlers and the landowners in respect of their respective rights to the land settled upon. The uncertainty created by the above stunts investment in housing whilst inducing greater clustering around kin and clan.

The customary landowners, cognisant of the above, have resisted settlements on their land in so far as possible and have tried to control these whenever they have emerged. The rapidly rising NCD population with a fixed quantity of alienated land has, and will continue to, put pressure on customary-land for settlement. While a few of the customary landowners have been proactive in engaging with the settlers and putting in place arrangements for access to their land for compensation, others have refused to acknowledge the presence of settlers in fear that doing so will legitimise their claim to their land. For example, the landowners of Vavada have appointed a rent collector for them on a competitive basis who provides this service on an ongoing basis while those of Gorobe refuse any payments for fear of legitimising the claims of the settlers to their land.

Settlers from three settlements, namely, Gordon Ridge, Koki, and Saraga, reported that they paid customary owners for the land settled upon while records from the NCDC show this land to be owned by the state. This is a clear case where right of ownership of land has regressed from the state to those who claim to have customary rights to the land. The settlers, moreover, acknowledge these claims as evidenced by them paying rents to those claiming this

ownership. The customary rights in this particular case have successfully encroached on formal title with the absent state losing a valuable asset in the process. This, moreover, may not be an isolated case. A number of the settlers interviewed reported having a perception of greater security of tenure under the customary system given the arrangements in place and the fact that the customary owners lacked the might to use force to evict settlers from their land.

While arrangements may have evolved to provide greater security to settlements on state land, the systems in place is well short of providing the level of security demanded by the settlers. Several interviewees, for example, reported having applied for title while others reported that they were working towards getting legitimate claim to the land settled upon.

Acquiring individual title to a piece of land involves going through an elaborate legal process. In the case of state land, physical and survey plans have to be prepared and submitted to the land board for adjudication. A favourable decision on the above then entails the lodgement of an application to the Registrar of Titles for a title. This process is not only resource intensive but faces the risks of falling foul at any stage. For customary land, the only legal mechanism currently available for obtaining a formal title is through the Land Tenure Conversion Act (1963). It is important to note that most of the survey respondents expressed a clear wish to acquire greater security to the land and expressed a willingness to pay for such a right. This underpins the urgency to improve land administration for state land and the need to provide a legal framework that facilitates transactions on customary land.

The rising NCD population with the number of settlements, most of whom will be on customary land, points to the fact that the demand for land for housing will only increase over time. There is evidence of inter-tribal conflicts across settlements but those between settlers and customary landowners are as yet to emerge. Land disputes between settlers and landowners that have reached the courts have to date been adjudicated in favour of the

settlers, and particularly in favour of those who have lived there for long. The majority of the existing settlements, thus, are there to stay and with the passage of time likely to cement their claim to the land settled upon. Settlers in Koki, for example, lay their claim to the land on the grounds that their forefathers were settled there by the colonial administration and that they had paid their dues during the war. The policy question, therefore, is as to how to transgress this agenda by providing the settlers with the security that they demand whilst ensuring that the landowners are not short changed in the process. This issue is addressed next.

6. Policy implications

Our survey shows a whole range of systems that have evolved to cater for the demands of both the settlers and the landowners in providing greater security to land for settler-housing. The system of availing land for settlement, however, is far from complete. Insecurity of rights to land is encouraging conglomeration of settlers around points of common affinity; this however has social ramifications in a society with a long history of tribal conflicts. The insecure rights to property are forcing settlers to continually occupy their property to maintain a claim on it. Renting of houses, moreover, is severely curtailed thus increasing the pressure on rents. The survey results show a lack of sanitation facilities in a significant proportion of settler-houses; this poses a health risk to the wider community. Furthermore, the lack of security limits the ability of the landowners to effectively utilise their assets and places them at risk of losing their land that has been settled upon. The question addressed here is as to whether the market for secure access to land for housing could be improved. We argue in the affirmative.

In trying to address this question, we consider the best of the mechanisms that have evolved to date. We start with the assumption that the settlers in Port Moresby are there to stay; that they can be a resource for growth of production; and, that schemes can be designed for mutual benefit to the settlers and the landowners. The policy challenge, therefore, is one of

unshackling the entrepreneurial potential of the settlers and the value of the land settled upon for the benefit of their owners to raise income in a manner that is acceptable to both parties. A simple entitling process, however, would not achieve much; particularly where customary rights are already well entrenched. Entitling in such a climate will be counterproductive as it will increase insecurity by creating a parallel system of rights. This is already the case in the three settlements where the rights conferred by the formal title have regressed to those of the traditional system. Our tact to improving security to land settled upon involves helping the systems that are already working to providing even greater security to the land settled upon. This process, by its very nature, involves picking a few of the successful schemes and fostering their evolution towards meeting the demands for greater security. This is consistent with Cooter's (1991) conception of customary practice shaping common law of property in PNG; our evidence suggests that this is realistic in the case of Port Moresby settlements.

The formation of intermediaries within the settlements modelled on the Oro Development Community provides a useful start in formalising arrangements in place between the settlers and the landowners. These intermediaries could be asked to take on the responsibilities of ensuring that the land settled upon conforms to the needs of the planning authorities, particularly in terms of having the provisions for supply of basic infrastructure. Records kept in the form of receipts could then be used to provide for title to property should this be acceptable to the landowners. A formally constituted body for the settlement would then be in a position to negotiate with the landowners for access to greater security for land settled upon. The National Capital District Commission (NCDC) has a role in seeding such a process.

Any plans submitted for entitling would need to have the approval of the landowners and the city planners. The NCDC could facilitate such a transition by ensuring that the cost of acquiring title to the land settled upon are kept low to induce participation. The transfer of the

land, however, has to take place at market prices to deter land invasion. The proceeds of the sale of land could then be used to pay the landowners with any remaining balance invested in improving access to basic services in the settlement. NCDC could incorporate municipal government levies and property taxes to fund ongoing infrastructure provisions to the entitled settlements. The above, if done transparently, will increase the legitimacy of the levies and create the demand for better accountability in how these funds are used.

The initial step would be a pilot scheme of land titling following an extensive public campaign that informs all of the stakeholders of the need for the above. Calls could then be made for interests from the stakeholders in progressing down the path to entitling land that has already been settled upon. It is most unlikely that all the settlements and every landowner will agree to the above all at once. This is all the better as it will provide the policy space for experimentation. It will give the authorities time to learn as the system matures. A voluntary move down the path to entitlement of land, moreover, is the least threatening means of seeding this process. Starting such a process on long established state land such as Koki and Saraga could provide the lessons for those further down the queue.

7. Conclusion

Could land titling within the settlements of Port Moresby be an instrument of poverty reduction? If so, how could we seed such a program? The international evidence on the former provides considerable reason for optimism. Land mobilisation programs in Papua New Guinea, and the Pacific more generally, however, have had a poor record. In this paper, we have concentrated on the latter issue. Our analysis suggests that the pace of evolution of traditional institutions can be hastened to provide improved security to land used for settler-housing in Port Moresby. Such a system, if it is to be stable, has to be imbedded within the existing and evolving arrangements that have had at least some success in meeting the demands for greater security to land settled upon. Most importantly, voluntary participation

in an entitling scheme by the stakeholders can only be to the benefit to all of the participants in the exchange.

Indigenous institutions have evolved over time to enable access to land without formal title for houses in a number of settlements. These arrangements have provided adequate security to land for the construction of both permanent houses in a number of settlements and for the creation of a nascent market in houses built on such land. Investors have negotiated with landowners to reach a 'Coasian bargain', possibly leading to a better social outcome than one that would have prevailed otherwise. The transactions costs of such a bargain, the associated information costs, and the externalities of insecure property rights on the wider population, however, justify greater public efforts at making this market operate with greater efficiency. We ask if the systems already in place could be improved, possibly with the state playing a catalytic role, for the above. We argue in the affirmative, making a case that there indeed are some 'big bills left on the sidewalk' (Olson, 1991). Policies that facilitate and hasten the evolution of indigenous institutions that have to date had some success in availing land held under collective ownership for long-term housing within an urban planning setting have the potential to deliver large gains in social welfare.

Our analysis of survey data from a stratified sample of 441 households from settlements in Port Moresby reveals a number of pertinent lessons. First, settlers and customary owners of land settled on have developed institutions to make the market for long-term and secure access to land for housing within their settlements. The contrast between the customary owners on the one hand and Government on the other provides a number of distinct lessons. Second, land settled on that is owned by customary owners are perceived by the settlers as being more secure than that under state ownership. A number of settlements on state land were formed at the inducement of individual politicians who did so to consolidate and grow their own electoral base. The clan/tribe-based settlement population is partly due to the

above. The politicians having championed this course, however, are likely to lose from the provision of greater security to settlements from which they draw their support. Convincing these leaders of the value of greater security to land for settler-housing is thus a necessary step in progressing this agenda.

The differences in institutions that have developed on settlements built on state and customary land provide many lessons on what could be done in terms of policies to encourage improved and long-term access to land for housing in the settlements. On the one extreme, landowners have adopted a semi-formal practice of allowing access to their land for housing but with many caveats on what the settlers are permitted to do. At the other extreme, we see landowners in a nervous wreck, unable to evict the settlers while refusing to accept anything from them in fear of legitimising their claim to the land settled upon. Settlers, on their part, have kept receipts of all payments made and in a few cases have had statutory declarations prepared to formalise their claims on the land settled upon. The fuzzy rights of ownership and settlements across the two groups have left considerable room for debate, dispute, and murky deals. Many incidents have been reported where people pretending to be landowners have claimed rents from the settlers while equally as many genuine landowners have been chased out of the settlements as being the pretenders.

Even the best of the systems that have evolved to date are well short of providing the required degree of security to land for housing given that houses are unavailable for rent and the settlers are unable to use them as collateral for accessing credit from the formal sector. There is anecdotal evidence of money lenders within the settlements providing credit, but at rates that reflect the risks of such practices. Settlers fear eviction by the State more than that by

customary owners of land. This fear may be justified given the recent eviction of settlers from Mendi, the capital of Southern Highland Province.¹²

Settlers have proceeded on to 'breathing life' into their 'dead capital' by making arrangements with the landowners, building around family, tribe, and clan, and through keeping records of all payments made as formal proof of their legitimate claim to the land settled upon. While these claims cannot as yet be banked upon, they are proving to be of value in the informal transfer of their houses. The settlers coalesce around family and kinship groups to insure against forceful eviction and for reasons of personal safety. Such groupings pose risks of broader social conflicts and breakdown of law and order, however. Those on state land have remained active in national and local level politics to maintain the political patronage necessary to secure their rights to the land settled upon.

The above offers a number of policy options in facilitating the evolution of institutions for availing land for long-term housing. As a first step, accommodation of the 'best practice' informal mechanisms within the formal system would be a step in the right direction. The provision of information on the various systems that have evolved across the settlements and their costs and benefits could hasten the evolutionary process within settlements that are lagging on this front. The state may consider entitling land that has already been settled on but with full market prices so as to avoid inducing further land invasion. The details of such a proposal are well beyond the purview of this paper, but part of ongoing work.

The lessons from this study have applicability beyond Port Moresby and PNG. Settler communities have mushroomed around urban centres in Lae, Honiara, Port Vila, and Suva and the majority of these settlements are on land without a secure title. The lessons from Port

¹² The National newspaper of 19 September 2006 reports that soldiers are to move into the 120 houses owned by the National Housing Commission that were then occupied by illegal tenants.

Moresby would have applicability in these situations as well, even though we would like to test some of our ideas within Port Moresby first.

References

- Besley, T 1995. "Property rights and investment incentives: Theory and evidence from Ghana", *Journal of Political Economy* 103: 903-37.
- Cheetham, R., 193. ' The Development of Indigenous Agriculture, Land Settlement, and Rural Credit Facilities in Papua New Guinea', *The Papua New Guinea Agricultural Journal* 15 (3&4): 67-78.
- Cooter, R D 1991. "Inventing market property: the land courts of Papua New guinea", *Law and Society Review* 25(4): 759-801.
- Deininger, K 2003. *Land Policies for Growth and Poverty Reduction*, World Bank and Oxford University Press, Washington DC.
- De Soto, H 2000. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, New York, Basic Books.
- Economist, The 2006. "Giving land titles to the poor is no silver bullet, Economics Focus: The Mystery of capital deepens", *The Economist Magazine*, August 26, page 62.
- Feder, G; T Onchan; Y Chalamwong; and C Hongladarom 1988. *Land Policies and Farm-Productivity in Thailand*, Baltimore, John Hopkins University Press.
- Galiani, S and E Schargrotsky, 2006. "Property rights for the poor: Effects of land titling", accessed online at: <http://tinyurl.com/ndw69> accessed on 11 September, 2006.
- Goddard, M 2005. *The Unseen City: Anthropological perspectives on Port Moresby, Papua New Guinea*, Pandanus Books, The Australian National University.
- Koczberski, G, G. N. Curry, and J Connell 2001. "Full circle or spiralling out of control? State violence and the control of urbanisation in Papua New Guinea", *Urban Studies* 38(11): 2017-36.
- Lanjouw, J and L Philip 2002. "Untitled: A study of formal and informal property rights in Urban Ecuador", *Economic Journal* 112: 986-1019.

- Levantis, T 1997. "Urban unemployment in PNG: it is criminal", *Pacific Economic Bulletin* 12(2): 73-84.
- National Statistics Office 2002. *2000 National Census: National Capital District Report*, Port Moresby.
- Olson, Mancur Jnr 1996. "Distinguished lecture on economics in government - Big bills left on the sidewalk: Why some nations are rich and others poor", *Journal of Economic Perspectives* 10(2): 3-24.
- Powell, Phillip T 2005. "The development link between state legitimacy, property rights, and urban unemployment: Insights from the Pacific island states", mimeo, Indiana University
- Varley, Ann 2002. "Private or Public: Debating the Meaning of Tenure Legalization" *International Journal of Urban and Regional Research*, 2002, 26, 3, Sept, 449-461
- Ward, M. 1970. "Urbanisation—threat or promise?", *New Guinea*, 5(1), pp. 57–62.
- Ward, G and Kingston, 1995. *Land, Custom and Practice in the South Pacific*, Cambridge University Press, UK.
- Wright, H., 2002. "A Liberal 'Respect for Small Property' – Paul Hasluck and the Landless Proletariat in the Territory of Papua New Guinea, 1951-63", *Australian Historical Studies*. 33 (119): 55-72.

Table 2: Provincial origin by Settlement

	8-mile	Taurama	Savaka Bundi	Popondett a	Gorobe	Hohola	Vadavada	9-mile	Saraga	Erima	Koki	Golden ridge	Total/Prov ince
Central	2%	0%	0%	7%	23%	0%	28%	1%	33%	3%	96%	0%	76
EHP	15%	17%	20%	14%	0%	32%	33%	9%	13%	51%	0%	9%	83
ENB	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1
Enga	37%	0%	7%	14%	0%	26%	0%	25%	7%	6%	0%	19%	63
ESP	2%	0%	0%	7%	0%	0%	0%	3%	0%	3%	0%	0%	7
Gulf	0%	33%	47%	0%	54%	0%	0%	29%	9%	7%	2%	0%	52
Madang	0%	0%	0%	0%	8%	0%	0%	0%	0%	0%	0%	0%	1
MBP	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1
Morobe	4%	0%	0%	0%	8%	5%	0%	1%	4%	4%	0%	0%	10
Oro	2%	0%	0%	43%	0%	5%	0%	0%	7%	0%	0%	0%	11
SHP	11%	17%	27%	0%	0%	32%	0%	11%	0%	6%	0%	0%	30
Simbu	11%	33%	0%	14%	0%	0%	39%	12%	27%	12%	0%	63%	81
Western	2%	0%	0%	0%	8%	0%	0%	0%	0%	0%	0%	0%	2
WHP	11%	0%	0%	0%	0%	0%	0%	8%	0%	6%	0%	7%	19
WSP	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2
Total sample (no)	46	6	15	14	13	19	36	91	45	67	45	43	440

