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A 'big-push' to curb crime in Papua New Guinea

Papua New Guinea is renowned for its crime against persons and property—an unenviable reputation to hold, and one at considerable cost to economic prosperity in the country. Direct financial costs incurred in crime control are estimated to amount to about 5 per cent of GDP (Table 1), but the more significant costs are in terms of lost employment and income-generating opportunities due to the bad image the country has amongst investors and tourists. Welfare costs in terms of fear and anxiety from the threat of crime and the pain and suffering of those who experience it, though significant, are difficult to quantify. Losses in productivity due to the inability to run night-shifts and make intensive use of capital has costs both in terms of lost current output and lower growth of GDP. In terms of endowments, Papua New Guinea is rich in fertile land on a per capita basis, in natural and marine resources in an international context, as well as in the form and scope of tourist attractions by comparison to other major regional tourist destinations such as Fiji and New Zealand. The lack of infrastructure and skills are often blamed for Papua New Guinea's poor economic performance, but these inadequacies are as much the result of the poor investment environment as any other reasons forwarded. If the domestic business environment is made conducive to investment by both local and foreign entrepreneurs, infrastructural developments will

Table 1: Estimates of direct losses due to crimes of larceny, 1995

	Direct losses[a] (Kina'000)	% of GDP
Thefts (transfers to criminals)	114,464	1.97
Private expenditure on security	49,602	0.86
Public expenditure on law enforcement	106,411	1.83
Total direct losses[b]	270,477	4.66

Source: Levantis, Theo 1997. The Labour market of Papua New Guinea: a study of its structure and policy implications, PhD Thesis, The Australian National University, Tables 3.4 and 3.5.
[a] The PNG currency is the Kina; one Kina is approximately equivalent to US$0.72. [b] Total direct losses exclude the value of direct losses by victims of vandalism or of violent crimes.

follow. This is not a 'chicken-and-egg' problem in that policy has a role in creating an environment conducive to private wealth creation. Public sector entrepreneurial activity is not an effective substitute given the dismal record of such past activities.[1] This paper explores policy options for crime control. But before doing so, what is the extent of Papua New Guinea's crime problem, and what are its economic consequences?

Extent and nature of crime in Papua New Guinea

Crime in Papua New Guinea is very disturbing in its brutality. Violent robberies, pay-back murders, and rape are much more frequent than in neighbouring countries in the Pacific and Asia. For example, the annual violent crime rate at 2,000 incidents per 100,000 population is ten times that of Australia and six times that of Fiji—the latter a Pacific island nation with a number of socioeconomic similarities to Papua New Guinea. The quantity of crime against property is also disturbing. Levantis (1997) estimates property crime in urban Papua New Guinea at 33,000 incidents per 100,000 population, double that of neighbouring Australia.[2]

Crime is a significant industry in Papua New Guinea in terms of urban employment, accounting for 15 per cent of urban employment (Levantis and Chand 1997).

Why the high crime rate in Papua New Guinea?

Crime in rural Papua New Guinea including that in the form of pay-back has some cultural dimensions,[3] but the robberies and other property crimes have economic motivations. For the latter category, it is appropriate to draw on the economic theory of crime to understand the issue and draw policy lessons from it (Becker 1968). From this viewpoint, there are two reasons for the high incidence of crime in Papua New Guinea: first, criminal activity is profitable for the individual, albeit at significant cost to society; and second, lack of employment opportunities together with the absence of a social safety net forces those without legitimate employment into illegitimate activity, with crime being a large part of the latter. These two reasons reinforce each other, in that criminal activity raises the costs of operation of businesses. This in turn reduces employment opportunities for a growing labour force; the vicious cycle continues.

Engagement in crime, given the opportunity costs, has significant returns—particularly for the unskilled unemployed. Clifford *et al*. (1984), in a study on the law and order problem in Papua New Guinea, note that crime is the business with the highest profits and the least risks. The following probabilities give substance to this claim. The probability of arrest for crimes of larceny is 3 per cent. The probability of conviction (following arrest) is 55 per cent. For the criminal there is still hope after conviction, with the probability of 'jumping jail' 50 per cent. Hence, the probability of sanction for crimes of larceny is less than one per cent! For the unemployed and unskilled the options are few other than to engage in illegitimate activity. Besides, there being no social security to fall back on, engagement in informal business is difficult for several reasons including the lack of skills, the high cost of setting up such business due to legal requirements and crime on the streets, and the difficulty of raising the necessary finance.

Attacking crime with a 'big push' of resources

Three complementary means of attacking the crime problem in Papua New Guinea are considered. First, labour market deregulation which allows wages to adjust to supply and demand will alleviate some of the unemployment. This is being done through labour market reforms, including wage deregulation. Second, relaxation of regulations restricting informal sector activity would allow this sector to grow, helping to draw labour out of crime. Given that the problem arises in large part from the under-employment in urban areas, the problem may also justify government expenditure on public labour-intensive projects. But this can only be a short-term strategy. Furthermore, surplus labour is only part of the problem. Third, effectiveness of law enforcement mechanisms has to be improved on all fronts—apprehension, conviction, and enforcement of sanctions. If an objective of the government is to reduce crime, then more resources will have to be devoted to these areas.

Organised crime in urban Papua New Guinea, Port Moresby in particular, has a sharp pyramidal structure (Harris 1988). The line workers who engage in theft and robbery do so on the instruction of their superiors. The employees in criminal organisations are highly specialised: those up the hierarchy engage in the disposal of items obtained by the line workers. The lower rungs of the crime industry ladder are characterised by easy entry and exit, so the bottom rung of the pyramid is

competitive. Alternative employment sources could entice workers out of the bottom rung, hence flattening the structure.

It is argued that outlays to curb crime have to be made in significant 'lumps' if a program of improved law enforcement is to be successful in achieving its goal. The current practice of increasing outlays in a piece-meal fashion may be ineffective in that forces within the economy gravitate towards a low equilibrium trap. Suppose the growth of business (both formal and informal) is the key to drawing labour from crime and hence to lowering of the organised-crime pyramid. However, the business sector is prevented from growing due to the high costs associated with crime. Consider a scenario where unemployment rises, say due to population growth with stagnant employment opportunities (see Levantis and Chand 1997). The increase in unemployment feeds into crime, which in turn will cause an increase in costs for businesses. This will further affect their viability and cause a contraction in the number of businesses which will again feed into unemployment and crime.

Consider a simple model to depict this predicament. In Figure 1 the number of firms (N) is plotted against the growth rate of firms ($\dot{N}$). Assume the existence of multiple-equilibria as shown. Outlays that push the economy beyond N^T number of firms (the T superscript is for threshold) will push the economy out of the low equilibrium trap, after which internal forces will cause the economy to gravitate to E_H, the high equilibrium where N_1 number of firms operate. As an example, putting a few more police on the street will make the businesses at the margin profitable, and hence attract a few fresh entrants. But these new entrants will only remain viable when the extra policing is present; the withdrawal of this outlay will cause the exit of the new firms and push the number of firms back to N_0.

The low equilibrium is a trap in that it requires a 'lumpy' allocation to enable the crossing of the threshold and hence movement to the high equilibrium, E_H. Murphy, Shleifer and Vishny (1989) describe an analogous application for industrialisation.

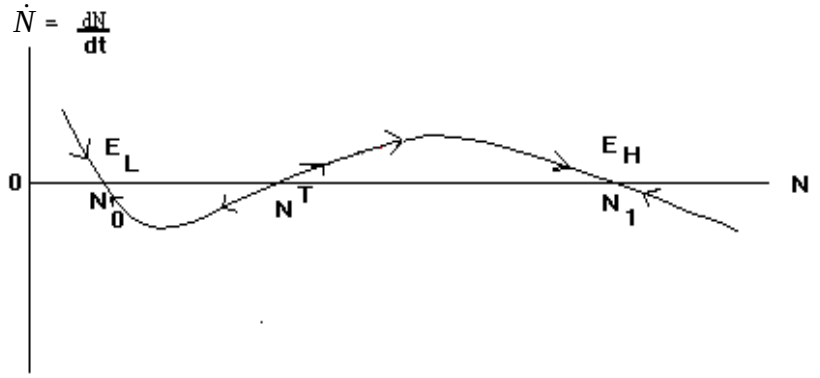
The threshold here acts as a trigger point beyond which the private marginal benefit of getting a potential criminal off the street is more than the cost. It is proposed that Papua New Guinea is currently in this low equilibrium trap.

The extent of expenditure required to reach the threshold is a negative function of the deterrence effect of crime. This threshold can be reached by raising crime deterrence and through encouraging private sector growth via direct incentives: the appropriate mix between these two will be determined by equalisation of the social returns from each. One means of overcoming the security problem could be to set aside specific areas where security was guaranteed by the public sector. This is in part an extension of the logic behind the concept of industrial states.[4] An alternate strategy may be to provide insurance against property damage and subsidies by the public sector for private provision of security services. Further to this, some coordination by the public sector to collect a nucleus of firms together may be necessary. The employment generated would have an externality on aggregate output beyond what is captured by the individual firm, justifying the coordination role of government.

Securing a crime-free future

An individual who engages in crime will not factor in the social implications of such activity. The role of the public sector to guard the common good, therefore, is supreme over the individual interest—hence the justification for intervention. The economic motivations for crime can be addressed using economic instruments. First, a social cost-benefit analysis has to be undertaken to determine the quantity of resources to be devoted to crime control to maximise social welfare for the population collectively. One such

Figure 1: **Growth and number of small businesses**



analysis, undertaken by Levantis and Chand (1997), suggests that outlays on crime control should be increased by 117 per cent, equivalent to 105 million kina in 1994 prices. Second, legitimate employment-creating activities should be encouraged. This can be done by relaxing regulations pertaining to the labour market and informal business. Third, public infrastructure including provision of location-specific public security should be considered to protect a nucleus of firms. This nucleus can then be allowed to grow by provision of public goods so that it expand into an employment generating industry. The formation of a large enough group of firms will generate the economies of scale for collective purchase of security, this however will not occur without coordination by the public sector. All of the above strategies would need to be pursued simultaneously, the exact mix chosen to equalise returns from marginal outlays on each.

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Notes

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[1] Cases of government failure in private enterprise in Papua New Guinea and the other Pacific island economies are common.

[2] Comparative data for Fiji are not available.

[3] Some pay-back crime originates from economic motivations such as those pertaining to disputes over property.

[4] That is, industrial estates provide economies of scale in the provision of social services; security provision in this context is one such public service necessary for growth of industry.

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