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a comment on the critique of Dr Ngo Van Lam

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a rejoinder

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Anthony Clunies Ross
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Introduction

Dr N.V. Lam has in a remarkably short time made a substantial contribution to the discussion of stabilization policy in Papua New Guinea. One could wish there were more independent analysts with as much time, energy, industry and experience as he has devoted to this study. This commentary is written not with a view to carping at the flaws in his edifice, but in order to carry on the dialogue which he has begun, and in particular to eradicate what I think are misunderstandings that may arise from his work.

However good and well-argued an academic economist's proposals, it is inevitable that not all will be immediately adopted or even subjected to detailed appraisal with a view to adoption. It is indeed the function of the academic economist with an interest in policy to offer more proposals than are likely to be adopted. He is not obliged to keep his mouth shut until he has made a full and exhaustive study of the administrative costs of, and political obstacles to, every otherwise sound idea. Similarly it is the function of the administrator to look sceptically on proposals which on certain grounds are appealing. It would be a pity, however, if the ammunition in the Lam armoury were to be simply ignored and to call forth no response in kind. This commentary is written in the hope of preserving the baby while discarding as much as possible of the bath-water. To be more specific it is written with a view to defending certain aspects of Papua New Guinea's policy as it has emerged over the last three to four years. These aspects are not attacked directly by Lam. But the reader may easily gain the impression that they are somewhat damaged by his assault, pock-marked, and spattered with blood drawn from the importer-retailers.

In what follows, Lam's four IASER Discussion Papers, Nos. 13, 15, 19 and 20, will be referred to respectively as 'Lam 1977a', 'Lam 1977b', 'Lam 1978a', and 'Lam 1978b', and the Post-Courier articles will be referred to by their dates.
To represent Lam's thesis I may perhaps overstate some of his points by reading too much into hints and obiter dicta. I hope that he will excuse this on the ground that we are concerned not with personalities but with issues. With that reservation I present the following as the main assertions of the Lam thesis.

**The Lam thesis**

1. Stabilization policy is less effective than it might be.
2. Upward revaluation of the exchange rate has had little effect in reducing inflation.
3. This is because importer-wholesaler-retailer margins have tended to rise as the true landed kina cost of imports falls.
4. These margins can not be effectively controlled by the existing price control machinery or by a procedure of price notification.
5. The best expedient for controlling them is through competition from a state trading corporation importing and distributing a few basic non-perishable and fairly standard commodities that play a large part in the consumer expenditure of poorer people.
6. This device might not only make it possible to reduce apparent margins on such goods but might also produce further real cuts in the cost of living by reducing inflated intra-firm transfer prices of imports and by diversifying sources of supply.
7. The present system of taxes and of stabilization levies on the export crops is less effective as a stabilization device than it might be made because the decision to remove and to restore the tax from time to time is an arbitrary administrative matter and may be delayed unduly, and because the tax does not rise in times of high commodity prices.
(8) It also produces less revenue over the price cycle than it might be made to produce and thus foregoes the opportunity to turn boom receipts into much-needed investment.

(9) The favoured solution is to make the export tax a proportion of the stabilization levy in the case of copra, coffee and cocoa, so that it is automatically removed, restored and raised or lowered, on precise criteria and is on average higher than at present.

(10) The provision that payments out of the Mineral Resources Stabilisation Fund should be based on long term estimates of the Fund's revenue, which in turn are based on the copper prices of the preceding twenty years, will lead to 'serious underestimates by the Board of the magnitude of resource flow to the MRSF during a commodity boom, and vice versa' (Lam 1978a:14).

(11) To overcome this, the rate of increase of payments out of the Fund might be related to the actual amount in the Fund at the end of the previous year.

(12) Since the kina is a hard currency, it will be more profitable for the Fund to invest its resources in kina-denominated securities than in those denominated in foreign currencies (Lam 1978a:14-16).

(13) Simple full indexation of wages and salaries by the Consumer Price Index is inequitable and will mean that inflation is allowed to worsen the relative position of the poor. This is because they spend a higher proportion of income on essentials and consumer-goods generally than the rich (Lam 1978a:10-11).

(14) Accordingly indexation of wages should be geared to the expenditure patterns of various income groups with more complete indexation rates for the poorer than for the rest. Tax rates and thresholds should simultaneously
be indexed to avoid fiscal drag and undue burdens on
the rich (Lam 1978a:11).

(15) Irregular exchange-rate variations lead to destabilizing
speculation that is harmful to the public sector
(Lam 1978b:10-11).

(16) The policy of exchange-rate appreciations has been a
mistake, and devaluation may well be necessary in an
export recession (Lam 1978b:18).

I shall deal with these points in order, using the first one
merely as an excuse for setting the stage.

(1) **Stabilization is not effective enough**

   Here my aim is not to dispute Lam's implied assertion but to ask
what a stabilization policy is about and why one should be necessary.

   Firstly the objective of a stabilization policy is to maintain
a steady level or rate of growth of economic activity in the modern
sector and in wage employment. This is necessary in order that
individual people's reasonable expectations should not be grossly
disappointed: so that, for example, people drawn into the wage economy
are not suddenly forced to leave it; so that public and private
spending plans do not have to be interrupted, with consequent waste.
From the viewpoint of human welfare the non-disappointment of
expectations is of very great importance. To achieve this in an
economy subject to external shocks or to fluctuations in private
investment, it is necessary to restrain spending when it would tend to
be higher than the trend value, in order to be able to support it when
it is below that value. The purpose of the restraint, in the Papua
New Guinea case at least, is to build up claims on the rest of the
world which can later be depleted in order to make it possible to
boost expenditure when it would otherwise be low. A balanced budget
from year to year would not and could not achieve this purpose because
the autonomous elements in demand are fluctuating. The reason for not
expanding with a balanced budget in times of export boom is not, in
Papua New Guinea, that this will to any great extent tend to inflate
prices through excess demand for domestic factors of production. It is principally that an annually balanced budget would not permit the building up of external reserves, which, if accumulated, could meet the excess demand for imports that would be entailed by holding production at its trend levels in an export recession.

Papua New Guinea is unusual, as far as I know, in having not only a target real rate of growth of public-sector spending designed to cover bad times as well as good but also a device or discipline (the Mineral Resources Stabilisation Fund) to insulate the budget from fluctuations in the most irregular of the important sources of revenue, mineral taxation. In addition Papua New Guinea has important stabilizing devices in the form of stabilization levies on the three main cash crops. Insofar as Dr Lam wants to increase the effectiveness of this system of stabilization (as by adding a progressive tax on cash crop receipts), I am with him. Insofar as he wants to whittle it down (as some of his criticisms might suggest), I am against him.

The second objective of a stabilization policy is to restrict the rate of growth of prices. No one likes inflation. It confuses us, disappoints our expectations, and makes it very difficult to budget either for a business or for a cash-dependent household. In order to stabilize prices in the face of world inflation, the Papua New Guinea government resorted to a device little used for this specific purpose in other countries: deliberate exchange-rate appreciation. This, one can only conclude, was due to a recognition that, in Papua New Guinea's trade situation and with wages to some extent indexed to prices and export-producers' net receipts stabilized in home-currency terms, such exchange-rate changes need have little if any direct effect on economic activity and limited or transient effects on income distribution and should affect chiefly

(i) the internal price level; and

(ii) the readiness of wealth holders to keep their money in Papua New Guinea.

The incompleteness or lagging of wage-indexation and the incompleteness of the stabilization of export producers' net receipts would still
allow of some effects on distribution and possibly on economic activity, but, since there is little import-competing industry or price-competitive export industry, the direct effects on economic activity of an exchange-rate appreciation of a few points are likely to be negligible.

In order to make possible the continued use of exchange-rate appreciation under a liberal foreign-trade regime it would be necessary to observe some rules of restraint on aggregate spending. If, but only if, an appreciation were allowed to expand the value in overseas currency terms of spending (or to reduce that of output, or to reduce the former less than the latter), its effect would be to reduce, ceteris paribus, the growth path of the country's international reserves. If the appreciation were to take place against stable world prices of imports, this would probably be its effect unless the government simultaneously were to reduce either public or private spending in kina terms. If, however, the rate of appreciation over the short term is less than or equal to the rate of inflation of import prices in foreign currency terms, then there is no reason to suppose that the result should be a drop in the growth path of the reserves even if no additional restriction were imposed on the kina value of spending. All that is needed is that appropriate rules on spending be observed. As already explained, Papua New Guinea has applied such rules, though they are rules that can be loosely characterized as balancing the budget over the export cycle rather than balancing it from year to year.

Given such rules, the use of appreciation to neutralize imported inflation (a) creates no difficulties for the Papua New Guinea economy; (b) seems likely a priori to reduce the rate of growth of prices; and (c) has the added advantage of establishing the reputation of the kina as a 'strong' currency more likely to rise than to fall in value against the currencies of at least some of the country's major trading and investment partners, so that those who would choose, on grounds of convenience and short-term advantage, to hold assets in kina or in forms readily exchangeable for kina do not hesitate for speculative reasons to do so.

To my mind the evidence supports the view that this combination of policies has enabled Papua New Guinea to reduce the inflation which it would otherwise have suffered and to avoid the balance of payments
problems which have beset so many other countries inside and outside the Third World and have led to such destructive countermeasures. A recent paper (Garnaut 1978) shows that, among several small Pacific economies (including Papua New Guinea) that import heavily from Australia, the inflation rate over a high-inflation period in the 1970s was strongly (and, except for New Zealand, almost perfectly) related in a negative sense to the currency’s degree of appreciation against the Australian dollar. So far as it goes, this evidence about the effect of the appreciations on inflation is exactly what we should expect on common sense grounds. The rate of inflation in Papua New Guinea has been much less than that in Australia, her principal supplier. Furthermore, a judicious application of these policies in the future may well have the same beneficent result.

Once again I am with Dr Lam insofar as he wants to make these policies more effective by ensuring that reductions in costs through revaluation are passed on to prices, but against him if he is challenging the general cast of such policies, implying for example that there should be no further appreciations or that the exchange rate should be depreciated.

(2), (3) **Upward revaluation of the exchange rate has had little effect in reducing inflation because margins have tended to rise as costs of imports have fallen**

This seems to be what Lam is at least strongly hinting on page 31 of Lam 1977a. It would be surprising if it were correct; it is contrary to the evidence of Garnaut (1978) already cited; and Lam’s evidence purporting to support it does not convincingly do so. This last is partly inevitable because some of the critical evidence needed for Lam’s argument was not available when he wrote. The kina was first appreciated against the Australian dollar in July 1976, but the import price index when he wrote did not extend beyond June of that year. Hence, one could not readily guess directly what the overall price rise of imported items would have been over the period of the revaluations of July and December 1976 if rates of margins over imports had, say, remained constant. Lam implies (1977a:31) that the food component of the Consumer Price Index would have fallen more than it
did (0.7 per cent) from the fourth quarter of 1976 to the first of 1977 if the 10 per cent appreciation of December 1976 had been fully passed on in retail prices. But it is impossible to say this unless one has some idea of what import price inflation in world currency terms was over the period and how soon any change in the kina cost of imports could be expected to be reflected in retail prices. Goods paid for at the new exchange rate might not enter the shops for three months, so that any price changes resulting from the December measures might not affect retail prices until say, mid-March, that is, five-sixths of the way through the March quarter. When he finds that 'retail prices' of major food imports were declining by about 0.6 per cent per quarter during the second half of 1976', an event which the simple reader might suppose to have something to do with the 5 per cent revaluation of the kina in July, Lam assures him that on the contrary this 'appears more likely to represent the continued trend of profit compression to comply with price control regulations, rather than a result of the kina revaluation'. This last assertion, besides being made without any argument or evidence, is confused in its logic. If the period were sufficient for the revaluation of July 1976 to affect the goods in the shops through most of the December quarter, and if the Australian-dollar landed prices of the major food imports had remained constant, then those landed prices in kina would necessarily have fallen by about 5 per cent. If the retail price reduction were in less than this proportion that would be evidence that gross rates of margins over landed prices had risen, not that they had been compressed. If margins are compressed, the revaluation must be 'more than 100 per cent effective' in controlling inflation. But in any case a crucial term is missing. Unless we have the import price index, we simply can not say what has happened to margins over import prices and whether the total effect of the exchange-rate change plus simultaneous margin change has or has not been to make inflation less than it would otherwise presumably have been.

A further tack of Lam's is equally inconclusive. In Post-Courier, 4 August 1978, p. 22, he argues that, because the Consumer Price Index (CPI) rose by 4.8 per cent in 1976 and by 5.6 per cent in 1977, while the rate of inflation in Australia was falling over those two years, 'it would appear that the pricing practices of the import wholesaling and retailing sector...tend to constitute a more important influence on
the behavior of retail prices than exchange rate revaluations'. This again simply attempts to conceal the absence of appropriate evidence. We would have to know what the Australian rate of inflation was, and not this with the importance of Australian goods and Australian content in the CPI basket, and with the rates of price inflation (in Australian-dollar terms) and the importance of imported goods from other countries, in order to estimate what the rise in the CPI would have been if the margins and local costs entering into the prices of goods in the CPI basket had remained a constant proportion of the relevant import prices. If we knew that, we should know whether there had been a percentage change in margins (and prices of other local components) which had served to neutralize the effect of the revaluations on the CPI. Unfortunately the figures for margins (Lam 1977a: 50-51) tell us nothing about the behaviour of margins over the period of the revaluations since they simply assume that those for the second half of 1976 are the same as those for the first.

It would not be at all surprising if the large retailers tended to compensate for variation in costs by varying rates of margins, tending in their own pricing to lag behind upward and downward variations in costs. However, the object of exchange-rate revaluation in Papua New Guinea is presumably not to produce sudden falls in price but to stabilize the king cost of imports over the fairly short term so that the forces tending to push costs up are counteracted more or less simultaneously by those tending to push them down. This may mean that a 'dirty float' upward or an upwardly 'crawling peg' against the Australian dollar is preferable to the discrete revaluations of 1976. But it means that a 10 per cent appreciation may be effective even if it does not lead to an immediate and substantial fall in price. Its work will be done if it obviates a rise, more especially as that rise is likely to lead to a further inflation of costs through wage-indexation.

(4) The trading margins on essentials can not be controlled
by existing price control machinery

Lam's figures on gross margins for particular controlled items (1977a:50, 51) do support his contention that the price controls of 1974 had not succeeded in compressing margins on essential foods in
major port towns to the degree intended. Unless there is some flaw in
the method, his conclusion on that point must stand. At the same time,
he himself supposes (in a sentence quoted above) that the price control
of 1974 had some effect in compressing margins. It seems reasonable to
assume that enforcement in some respects is inadequate, possibly
because of the difficulty in determining landed import prices. By
aggregating the margins on commodities into groups (1977a:47), Lam
very usefully enables the reader to judge for himself what has been
happening. My interpretation (not necessarily inconsistent with his)
is the following.

(i) Import prices of foods (especially the major foods)
were increasing relatively fast from late 1972 to
mid 1974 and relatively slowly thereafter until mid
1976 (Lam 1977a:49), while of clothing and
household goods the reverse was true.

(ii) The trading firms tend to compress percentage
margins on particular items when the import prices of
of those items are rising, and to expand the margins
when the import prices are falling or are stationary
after a preceding rapid rise; in other words, changes
in retail prices on particular items tend to lag
behind changes in their costs to the traders.

(iii) When induced by the above rule or by legislation to
cut margins on any class of items significantly, the
trading firms tend to raise margins on other items
in order to maintain an expected level of profit.

(iv) In a general inflation of costs, the trading firms,
in order to minimize buyer hostility, will tend to
compress margins on items of regular purchase such
as major foods, even if this means raising margins
on items of occasional purchase such as clothing and
transistor radios.
Propositions (ii), (iii) and (iv) seem consistent with the way we should expect firms (run by human beings) to behave; and propositions (i), (ii) and (iii), with or without (iv), seem to account for the general direction of margin changes presented by Lam (1977a:47) and summarized above, if we remember that new price controls were imposed on a number of items, mainly in the major food group, in mid 1974. What his table there shows is that margins on foods fell when food import prices were rising fastest (and fell most markedly on the major foods); that they thereafter remained stationary on the major foods (on most of which controls were imposed at that point) but rose on minor foods (which were uncontrolled). On clothing and household sundries, excluding kerosene, margins rose considerably to 1974, precisely when they were falling on foods and presumably to compensate, while again, when import prices of these items were rising much faster, that is from mid 1974 to (at least) mid 1975, the margins (as always in percentage terms) were compressed.

This story confirms Lam's view that price controls had some effect, even if they did not achieve their numerical targets. It also supports his view that, the more effective controls are in compressing margins on the items regulated, the more margins on other items will tend to rise. This is not necessarily an argument against price control on, or equivalent measures to limit the prices of, certain items. If those items comprise a specially large part of the budgets of the poor and a small part of the budgets of the rich, such controls or other measures will redistribute real income in favour of the poor.

(5), (6) The best expedient for controlling prices of essentials is a state trading corporation importing and distributing a few essential items.

There is no reason why a state trading corporation as proposed by Lam should not be workable, efficient and fully self-supporting, provided that

(i) it is clear that there is to be no element of subsidization;
(ii) competence in management is given priority over the demands (such as localization) of particular class interests;

(iii) the socio-economic objectives of the corporation are limited and precise;

(iv) at least for an initial period it confines itself to purveying non-perishable essentials in the towns.

It is possible that price reductions might be achieved in these items through a state trading corporation for each of the three reasons Lam sets out.

Cautionary notes, however, should be sounded on the following points.

(i) It might turn out that the margins over import prices denominated for price control purposes were simply not enough to cover costs (including a return on the social resources invested) when those items are traded alone. This would be an important discovery but might reduce the appeal of the device.

(ii) If the corporation did succeed in lowering the prices of essential goods, it is very likely that the trading firms would compensate by increasing margins on other items; as suggested above, this combination of events might still have its value in income redistribution but it might not have any net effect in lowering the Consumer Price Index.

(iii) If the corporation managed to lower prices of essentials by reducing margins or finding cheaper sources of supply or both, this would have a once-for-all effect on the prices of those goods; there is no reason to suppose a continuing downward pressure on the rate of inflation, even in the prices of those essentials, unless it so happened that prices in present source countries (mainly
Australia) rose faster than those from other source
countries in world-currency-equivalent terms.

(iv) Unlike the private trading firms, the state trading
corporation would have no items other than necessities
that might bear part of the burden of rises in the
import prices of necessities (in a period such as
1973–74); thus if the corporation stuck to fixed
percentage margins in such a period it might find it
was setting prices higher than the trading firms would
have set them under those conditions; this might mean
either that its presence would encourage the trading
firms to raise the prices of necessities or else that
they might force it to lower its prices so that it
failed for the time being to cover its costs.

None of these cautionary points is conclusive against the
usefulness of a Lam-type state trading corporation. If there are
cheaper, non-Australian sources of supply, or cheaper Australian
sources of supply, than those provided by the big three importer-
retailers, the advantages of tapping them would be manifest. A
study, or even continuing study, on this matter seems to be needed.

(7), (8), (9) Taxes on export cash crops should be made systematically
progressive in relation to crop prices and, in the
cases of the three major crops, set as a proportion
of the stabilization levies

This can be seen as a proposal to tighten stabilization, or
else as a move to mobilize further resources for development (or for
the approach to aid-independence), or as both. Lam has argued that
the rate could easily be set at a level which would be expected to
raise more revenue over the cycle from copra, cocoa and coffee than
the present 2.5 per cent tax (which is remitted under certain
circumstances). It could also be used to suppress total spending
during a boom (by the government's accumulating the excess proceeds of
the tax during boom times) and so (on the lines of the Mineral
Resources Stabilisation Fund) to give scope for further reducing the
fall in total spending during a recession. The two objectives are not
mutually exclusive if the tax is set on an appropriate set of rates.
The difficulty, of course, is mainly over the political acceptability of a levy that must (if it were to fulfil both these purposes and not only that of stabilization) impose an extra charge on a particular section of the population, a large and politically important section that extends widely over the income-distribution centiles, probably from the richest 5 per cent to the poorest 40 per cent.

It might be thought that the additional tax could be made politically acceptable if it could be shown that the additional proceeds would be devoted to objects in which the cash-crop producers were interested, for example replanting subsidies, or feeder roads, or Rural Improvement Programme-type grants. But all earmarking of revenue for particular purposes is subject to two fundamental objections: firstly, it tends to cause waste in allocation by setting constraints on the public use of available resources; and secondly, despite this, certifying that earmarked funds have resulted in a bigger appropriation for some purpose than would otherwise have been made is almost impossible.

In addition, most of the specific rural uses for funds would benefit some growers and not others, or some much more than others. More feeder roads may not appeal to those who already have roads. Replanting subsidies would give much greater benefits to rich than to poor croppers unless the subsidy were limited to a small number of trees per grower.

Without safeguards, moreover, the extra tax could turn out to be, or at least could appear to be, simply an extra levy on the countryman to support bureaucrats and town workers and expatriates and politicians.

If on the other hand what was envisaged was a purely short-term stabilizing purpose, then some fund analogous to the Mineral Resources Stabilisation Fund would be needed to build up in good times and to run down in bad. In this form there is little that can be said against the proposal. Since the funds, however, would cover the revenue from at least three commodities, its rules would need to be rather more complex than those of the Mineral Resources Stabilisation Fund.
(10), (11) The rules on payments out of the Mineral Resources Stabilisation Fund should be changed

If cycles in commodity prices were regular in time and predictable in the extent to which they introduced variation from trend, it would be easy to set out rules for making predictions on trends in copper prices. Since neither of these conditions holds, the job is a hard one, and no set of rules is likely to be ideal. The rules for determining how much shall be paid out each year from the Fund need some flexibility to avoid a situation in which, through unforeseen developments, the Fund runs unnecessarily high or dangerously low. At the same time there must be sufficient rigidity to overcome temptations to plunder the Fund improvidently. The rules that exist provide a compromise between these two considerations. The mere fact that rules do exist is of the greatest importance. It is quite possible that the rules could be improved. But any proposal for improvement, in order to be worth considering, would need to comprise one or several alternative sets of precise rules whose superiority could be tested either by a priori reasoning or by application to actual historical data or to hypothetical data generated by some cyclical or random process.

Lam does not give any precise set of rules as an alternative to the present one, so that it is difficult to examine his ideas on the matter critically. However, his remarks and the general drift of his proposal here suggest that he has temporarily forgotten the purpose of the Fund, which he has elsewhere (1978a:13) described succinctly. He writes as if the aim of the projection of the receipts of the Fund were to estimate this as accurately as possible year by year. If that were the case, there would be some point to his comment that projection on the basis of the average prices of the previous twenty years would underestimate receipts in a boom year. The aim, however, is not to estimate receipts for that year but to estimate them for the next eight years and on that ground to decide how much should be paid out in that year. To base the payment out on how much is in the Fund would (unless I have completely misunderstood what Lam means) nullify the whole purpose of the Fund. It would seem to mean roughly the same as spending the resources of the Fund as fast as they are generated,
which would, if it were intended, make the Fund completely unnecessary and is the direct antithesis of what the Fund is in fact intended to achieve.

(12) The resources of the Mineral Resources Stabilisation Fund should be held in kina-denominated (or perhaps other hard-currency) securities and not in soft-currency securities

Here I am not sure precisely in what direction Lam, when he wrote these passages (1972a:14-16), wanted policy to be shifted. The following are possible interpretations of what he is saying.

(i) Since the kina is a hard currency, it is better for the Mineral Resources Stabilisation Fund to hold its reserve in kina-denominated credits at the Bank of Papua New Guinea than to invest them directly overseas in what might turn out to be soft-currency assets (such as those in Australian dollars).

If this what Lam intends to say, it does suggest a confusion. The placing of the Fund's assets at the Bank of Papua New Guinea is a purely intra-governmental transaction. Such transactions may be important for internal government financial discipline, but whether the interest paid is large or small has no direct bearing on the gain that the Papua New Guinea community or government derives from the transaction. In whatever form the assets of the Fund are held, the fact will be that the accumulation of the Fund's resources will have led, ceteris paribus, to an accumulation of international reserves, that is to say, of liquid claims of Papua New Guinea on the rest of the world. The 'real' question about prudent management of the Fund's resources is how those resulting international reserves are held. What is required of those placing these reserves is that they do so in such a way as to maximize their real overseas purchasing power with appropriate discounts for time and risk. It makes no difference whether the Fund goes through the form of buying foreign assets directly or whether (as it does) it passes its assets to the Bank of Papua New Guinea for the Bank to allocate the foreign claims.
Which of these things is done is a mere matter of administrative convenience if we can assume that the same expertise on the international money market would be used by either body. The managers in either case would be balancing the interest rates that they would receive on different overseas assets against the possibilities of appreciation or depreciation of the currencies in which they are denominated, and they would be balancing the apparent attractiveness of any particular asset against the risks of putting all their eggs into one basket. If Lam means to say what is set out in (i) above, he appears to be propounding alternatives which in fact differ only trivially.

Another possible interpretation is the following:

(ii) The Fund, if it holds overseas assets, should hold them in hard, rather than soft, currencies.

This rule, obvious as it may seem, is not necessarily sound. 'Softer' currencies may give higher interest rates. And both the interest rate and the possibility of exchange-rate variation have to be taken into account.

A further interpretation is this:

(iii) Whatever body holds Papua New Guinea's overseas reserves would do better to hold them in kina-denominated assets than in those denominated in a softer overseas currency.

In answer, it may be said that a foreign government or bank is unlikely to be geared to repaying its debts in amounts guaranteed constant in kina terms. If, however, it were ready to do this, and the kina were in fact regarded as stronger than its own currency, then it would presumably offer a lower interest rate on the kina-denominated loan, and the lender would not necessarily gain by choosing to have repayment guaranteed in the equivalent of a fixed number of kina.
(13), (14) Simple full indexation by the Consumer Price Index of wages and salaries will worsen the relative position of the poor, and a more complex system to compensate for this should be substituted. Tax thresholds should be indexed.

Lam's argument here (1978:10-11) must have a missing assumption since it simply does not appear to hold on the assumptions that he makes.

It is evident that, if the prices of all goods (including the goods enjoyed through saving) increase in the same proportion and simultaneously all money wages and salaries are increased in that same proportion, then all wage and salary earners will be able to buy exactly as much as before and there will be no redistribution.

If we leave aside the effect of lags, redistribution against the poorer wage earners can occur with full indexation only if the basket on which the index is based does not reflect the consumption patterns of those poorer wage earners and if at the same time the prices of goods represented more heavily in their budgets than in the index basket rise faster than the price of the basket as a whole.

Lam does not state these two conditions as necessary for his conclusion. Nor does he demonstrate that in fact the Consumer Price Index is unrepresentative of the poor wage-earning family's budget or that a certain class of goods ('necessities' say) has a secular tendency to rise faster in price than the index as a whole.

What can be said a priori is that, the more closely the composition of the index basket reflects the consumption pattern of the poorest families, the firmer is the guarantee which indexing gives to those families that their real incomes will be maintained. An index based on a regimen that differs from that of the poorest wage earners will probably give them greater gains at some times and greater losses at others. The case for making the Consumer Price Index's basket as close as possible to their own spending patterns is that this is a better guarantee of their real incomes, and there are good grounds for saying that it is more important to guarantee their real incomes than those of earners higher up the scale.
Lam is for indexation of tax thresholds to avoid 'fiscal drag' (1978a:11). This sounds fair, but I believe that, in a complex progressive tax system such as Papua New Guinea's, with numerous thresholds, frequent adjustment of those thresholds would be administratively costly. Administratively, however, and on grounds of equity, it is desirable to keep most low-wage earners (and similarly cashcroppers and businessmen at comparable income levels) outside the income-tax net. This may require setting the lowest threshold appropriately and adjusting it upwards from time to time as, say, the rural minimum wages rise. But a general rise of all thresholds with the cost of living would be something of a nightmare to tax collectors and employers.

There is, however, a more important objection to this proposal. Elsewhere Lam has expressed concern about the effect of near-full indexation in reducing the means of adjustment available to policy makers. His suggestion that the wages of higher earners should be only partly indexed (1978a:10) appeals to him presumably not only on equity grounds but because it may make stabilization measures somewhat easier in certain contingencies. It will mean that the total real-wage bill will be automatically reduced as import prices rise, a situation in which some contraction of total real spending may well be necessary and some contraction in the real costs of labour desirable. It is worth pointing out, however, that fiscal drag has the same effect on the real value of private spending in times of rising prices as rendering wage indexation less complete. It is hard to see, therefore, why Lam is keen to eliminate fiscal drag through tax indexation. If the unions want near-full indexation of gross wages but will accept fiscal drag (that is, non-indexed taxes), there seems to me no good reason for saying that what they shall have is less-full indexation of gross wages and (at enormous administrative cost) full indexation of taxes.

(15) Irregular, discrete exchange-rate variations lead to speculation that is harmful to the public sector

In certain circumstances this (implied Lam 1978b:10-11) may well be true. If, however, it is accepted that the exchange rate will be moved only upward in relation to that of the country's major trading
partner, then specifically speculative movements can only be inward. These, in Papua New Guinea's case, might take the form of leads and lags in trade payments, which might transitorily swell foreign reserves and perhaps bank liquidity. The lack of monetary instruments within Papua New Guinea would presumably limit any other specifically speculative movement of funds inward. At the same time such speculative movement as occurs can hardly be enough to embarrass any of Papua New Guinea's trading partners. All this seems reasonable to suppose provided the exchange rate moves only upward.

Since, however, such upward movement would be undertaken mainly to counter import-price inflation, and would therefore seldom need to occur at the rate of more than, say, 10 per cent a year, there might be a case for announcing a crawling-peg policy, for example that the exchange rate would not change either way by more than, say, one half per cent in any day against the Australian dollar. The figure would be chosen generally so that the costs of transferring and then repatriating funds would outweigh any gain on the exchange, and it could well be less than one half per cent. This could probably meet Lam's point and prevent purely speculative movements even if the exchange rate were sometimes moved downward. Given the suppositions made above about pricing behaviour, the device might also help to stabilize prices by matching import-price rises more or less as they occur, rather than in delayed jumps. But in fact the practice adopted recently (though, as far as I know, not announced) may be even better. This is to keep the value of the kina stable against a basket of predominantly strong currencies. This will probably mean, in the near future, a slow and gradual appreciation against Australia, but no abrupt changes unless Australia itself depreciates sharply once more. Any speculative movement which the prospect of such a sharp Australian depreciation might entail would not be unfavourable to Papua New Guinea and would entail no abrupt change in import prices so long as the present policy persisted.

(16) The policy of exchange rate appreciations has been a mistake; and devaluation may well be necessary in an export recession

Lam indicates (1978b:18) that he holds to the second part of this statement. To say that he asserts the first part may be over stating his
position, but it is hard to escape the impression that he is extremely
dubious about the wisdom of the revaluations that have occurred. He
talks in one place about the currency's being 'undervalued' before the
first exchange appreciation of 1976. Presumably when he says that the
kina may have to be devalued in a recession he would imply that it
would in that case be 'overvalued'. I would suggest that talk of
overvaluation or undervaluation of the kina may be misleading and
based on a framework of assumptions which do not apply in Papua New
Guinea today.

Could the kina be overvalued? The terms 'overvaluation' and
'undervaluation', when applied to currencies, have no clear and
generally agreed meanings. Is a currency overvalued when it would
suffer a continuing outflow of reserves under free trade or only when
it would suffer the same fate under its existing set of trade and
payment restrictions? In any case, it is perhaps reasonable to use
the terms in such a way that to say that a currency is overvalued
implies that there would be gains from devaluing it that could not be
obtained by any other available means.

On that definition, could Papua New Guinea in an export
recession (unaccompanied by any fall in import prices) find that the
kina was overvalued? A symptom that might arouse this suspicion
might be a tendency for the country's foreign reserves to fall. The
suggested method of dealing with it might be either to restrict
total expenditure or to devalue. Devaluation might conceivably be
preferable to a simple cut in expenditure, but if so its advantage
would depend on its capacity to alter relative prices, so that, for
example, real wages fell, and the price of overseas-produced goods
rose in relation to that of home-produced goods. Provided government
expenditure in money terms were the same after the change as before,
a devaluation might in that case reduce the real value of spending
and so stem the decline in reserves. The advantages if any of this
method of adjustment over the alternative would lie in the fact that
it could achieve its objective without cutting government or private
expenditure in money terms (which, unless accompanied by a fall in
money wages, would involve a fall in employment and in the real amount
of national product) and moreover without a fall in money wages.
(which might be politically unacceptable). If a reduction in money wages were practically out of the question and a fall in employment and in real national product were considered undesirable, then the devaluation would have its advantages over alternative methods of adjustment, and it would be reasonable to say that before devaluation the currency would have been overvalued.

The conditions in which this can be said disappear, however, with a sufficient degree of wage-indexation. In that case devaluation automatically pushes up money-wage rates so that any advantage of devaluation over straight expenditure cuts is likely to disappear. Admittedly, if wage indexation is lagged, there may in principle be a period in which devaluation, by reducing real wages, avoids the need for equivalent expenditure cuts; and if indexation is incomplete there may be some small advantage in devaluation. But in principle indexation wipes out any advantage of devaluation as a means of adjustment. Given that there are advantages in keeping the reputation of having a 'hard' currency, and given also the unpopularity of inflation, it may be best to achieve adjustment by other means, notably a reduction in government spending, or an increase in personal income taxation (which would be unlikely to raise prices significantly). If, however, it can be made clear that, without some modification of indexation, both employment and the real provision of government services must be reduced, the unions may accept, as an alternative to reduced government spending, a mixture of extra taxation, indirect as well as direct, and a modification of indexation. A deal like this was accepted in 1976 and might be reached again under similar circumstances. Devaluation would not be the only, or the best, or a necessary, adjustment device in an export-price recession which existing reserves were inadequate to cover without contraction in the real rate of absorptions.

Recognition of the peculiarities of the Papua New Guinea economy and of the additional peculiarities introduced by wage indexation seems to me to justify the use of the exchange rate as a simple price-control device and to suggest that there may be no need to use it actively for other purposes. This will be all the more true the more taxation on cashcrop exports is made progressive and responsive to price as Lam suggests, so as to cushion the effects of exchange-rate changes on the kina receipts of cashcroppers.
Conclusion

In summary my judgement of Lam's thesis would run something like this:

First, he has very usefully opened the question of pricing behaviour among Papua New Guinea's large trading firms and of the relevance of this behaviour to the control of inflation. He has assembled some valuable evidence toward the discussion of this question but has not provided any clear and credible hypotheses which fit this evidence and enable predictions to be made about pricing behaviour in various future contingencies. The evidence that he provides does not support the view that appreciation of the kina against the Australian dollar has had no effect in restricting the growth of retail prices or the view that the establishment of the kind of state trading corporation that he proposes would be necessary or sufficient for further restricting inflation of the prices of necessities. His own evidence indeed suggests that, even under ideal management, such a state trading corporation might produce rather mixed results in the restraint of inflation. He does nonetheless provide a good prima facie case for investigating the possible uses of a state trading corporation in reducing the real social cost to Papua New Guinea of certain imported commodities.

Secondly, he establishes, on grounds of stabilization and equity, a strong case for introducing progressiveness into the tax on agricultural exports and he suggests a simple device by which this might be done. His case for using the introduction of progressiveness to increase total export tax revenue over the cycle is marred, however, by the absence of any consideration of the political difficulties that such a move must incur.

Thirdly, despite a good exposition of the purposes of the Mineral Resources Stabilisation Fund, his suggestions on how both the Fund's rules on payments into consolidated revenue and its investment practices might be altered seem to be based on misapprehensions.
Fourthly, his appeal to base the Consumer Price Index on the consumption patterns of the poorest is sound and, if decisions could be made without regard to politics, there would be merit, on grounds of stabilization, in his proposal for successively greater under-indexing as one moves up the wage scale. But his argument about the intrinsic inequity of full indexation does not seem valid without further, so far unstated, assumptions. And his appeal for tax indexation seems designed to throw away precisely the kind of stabilizing device that he wants to establish through diluting wage-indexation.

Finally, if he does mean to suggest that the policy of appreciation against the Australian dollar has been a mistake, that case is not proven, and most of the arguments that might be used to assert the view do not seem to apply. If he means to argue that devaluation is likely to be a necessary constituent of a desirable stabilization policy in some future contingencies, again that does not seem necessarily true. On the other hand his criticism of a policy in which discrete jumps in exchange-rate against the country’s major trading partner are not uncommon may have some force and there may be a case either for a declared policy of a 'crawling peg' against the Australian dollar, or for what appears to be the present policy of holding the kina's value constant against that of a basket of strong currencies. Either of these policies might be even more effective than those of the period from 1976 to early 1978 in stabilizing prices, and either (if publicly announced) might somewhat reduce perceived trade risk and the tendency to speculative movements of funds.

Anthony Clunies Ross
September 1978
References


Stabilization policy in Papua New Guinea:
a rejoinder

N.V. Lan
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Acknowledgements

I should like to thank Richard Curtain for some useful suggestions.
indirect in nature. I will be preparing, in the near future, a proposed IASER Discussion Paper evaluating recent economic performance in Papua New Guinea. This piece of work will incorporate, among other things, the results of research by Morea Vele on the price and, hopefully, income distribution effects of exchange rate revaluations especially in the second half of 1976. It will also focus attention on the stagnant or declining trends in national employment and capital formation, which have been given insufficient consideration as a result of constant preoccupation with stabilization issues in the past few years. Some of the evidence and discussion in this proposed paper will, therefore, elaborate further several points which are only briefly noted in the following rejoinder.

II. Areas of substantial agreement

Professor Clunies Ross's comments are presented in terms of sixteen points. They cover my examination of:

(a) government responses to imported inflation (points 1 to 6);
(b) proposals for rationalization of export taxation on the three major cash crops (points 7 to 9);
(c) operational difficulties encountered by the Mineral Resources Stabilisation Fund (MRSF) (points 10 to 12);
(d) implications of full wages indexation (points 13 and 14); and
(e) exchange rate policy as part of monetary measures for domestic economic stabilization (points 15 and 16).

These points certainly do not encompass all the main topics discussed and implications contained in my IASER Discussion Papers and PNG Post-Courier articles. In particular I must note here that Professor Clunies Ross appears to accept the empirical methodologies and derivations in the relevant papers. This is worth bearing in mind when his interpretations are examined in the following reply.

Lest they be completely lost in the confusing maze of arguments and counter-arguments, it is both useful and necessary to identify here various issues to which Professor Clunies Ross gives qualified support, or which he at least does not dispute. This is done in his own words and using his numerical ordering.

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1 Morea Vele, a Research Officer of this Institute, is planning an Honours sub-thesis on this topic.
Point 1: Impact of stabilization policies

Once again I am with Dr Lam insofar as he wants to make these policies more effective by ensuring that reductions in costs through revaluation are passed on to prices (Clunies Ross 1978: 11).

But how to ensure that these policies are more effective? Here we have some partial disagreement, and this will be elaborated later on.

Point 4: Price controls

This story confirms Lam’s view that price controls had some effect, even if they did not [emphasis supplied] achieve their numerical targets. It also supports his view that, the more effective controls are in compressing margins on the items regulated, the more margins on other items will tend to rise (Clunies Ross 1978: 15).

Perhaps Professor Clunies Ross could have discussed at greater length the magnitudes and, to a lesser extent, the behaviour of gross mark-ups on price-controlled imports. His acceptance of the second issue, which concerns compensating pricing behaviour of the trading sector, carries an important implication for income redistribution. However his elaboration on this question (Clunies Ross 1978: 15) does not necessarily follow, as will be pointed out when full wages indexation is assessed.

Points 5 and 6: Proposal for a State Trading Corporation

None of these cautionary points is conclusive [emphasis supplied] against the usefulness of a Lam-type state trading corporation. If there are cheaper, non-Australian sources of supply, or cheaper Australian sources of supply, than those provided by the big three importer-retailers, the advantages of tapping them would be manifest. A study, or even continuing study, on this matter seems to be needed (Clunies Ross 1978: 17).

This is because there exists

a good prima facie case for investigating the possible uses of a state trading corporation in reducing the real social cost to Papua New Guinea of certain imported commodities (Clunies Ross 1978: 27).

I am glad that Professor Clunies Ross comes out more strongly in support of a feasibility study on the proposed state trading corporation (Lam 1977a: 34-35; and 1978c: 1-5) than one could reasonably expect from his relatively short acquaintance with the proposal and the arguments. Indeed he even specifies the necessary conditions for such a corporation to ‘be workable, efficient and fully self-supporting’ (Clunies Ross 1978: 15). His cautionary notes deserve some discussion later on.
Points 7, 8 and 9: Proposal for re-structuring of agricultural export taxation

Without safeguards, moreover, the extra tax could turn out to be simply an extra levy on the countryman to support bureaucrats and town workers and expatriates and politicians.

If on the other hand what was envisaged was a purely short-term stabilizing purpose, then some fund analogous to the Mineral Resources Stabilisation Fund would be needed to build up in good times and to run down in bad. In this form there is little that can be said against the proposal.

The difficulty, of course, is mainly over political acceptability (Clunies Ross 1978: 18).

Ceteris paribus, the first statement appears equally applicable to the policy of exchange rate revaluations and was used in the debate on this issue carried-out in the published letters to the Editor of the PNG Post-Courier. More will need to be said on this, and on the frequently quoted 'political acceptability'.

III. Professor Clunies Ross's critique: style or substance?

Looking through his comments, one cannot help but be impressed by the variety of counter-arguments and different interpretations masterfully put forward. This is the more remarkable when one realizes that no new results or conflicting data for Papua New Guinea are introduced, besides those presented originally in the relevant published papers and newspaper articles. Of course the onus of proof does not necessarily rest with the commentator, especially if a case could still be made out of the evidence available. It would, nevertheless, have been extremely useful had this reply had the benefit of additional factual information, on a disaggregated basis, to draw on or to allow appropriate comparisons to be made.

1. Short term economic stabilization

The need to insulate the domestic economy from the twin problems of trade dependence, namely cyclical export instability (Lam 1978a and 1978b) and imported price inflation (Lam 1977a, 1978b and 1978c), is self-evident. I have, therefore, nothing to add to Professor Clunies Ross's skilful elaboration of 'what a stabilization policy is about and why one should be necessary' (Clunies Ross 1978: 8), through whatever policy measures are available, in Papua New Guinea. In any case the exposition in point 1 (Clunies Ross 1978: 8-11) has no direct bearing on my discussion of the impact of government responses to imported inflation, including exchange rate revaluations. If one is sufficiently interested, however, it is extremely rewarding to consult the excellent 'Papua New Guinea Currency Report' by Professor Fred Hirsch (1974: 1-11 and 39-40). Professor Hirsch
recommended that a hard currency strategy would be most appropriate for the
Papua New Guinea economy at present. It can be seen from his report that more
factors and further qualifications are required than are apparently implied by
Professor Clunies Ross in the first half of page 10 (above).

Professor Clunies Ross concludes point 1 with the following observation:

'To my mind the evidence supports the view that his combination of policies
[that is those which are designed to transfer usable resources forward
through time and exchange rate revaluations] has enabled Papua New Guinea
to reduce the inflation which it would otherwise have suffered and to avoid
the balance of payments problems... (Clunies Ross 1978: 10-11).

Professor Clunies Ross then emphasizes his view about the positive contribu-
tion of exchange rate revaluations in negating imported inflation, and the need
to continue such a policy in the future. He refers to aggregate cross-sectional
evidence in a paper by Dr Ross Garnaut, another prominent economist who made
substantial contributions to economic policy in Papua New Guinea particularly over
the years 1974 to 1976. This paper, Professor Clunies Ross argues,

shows that, among several small Pacific economies (including Papua New
Guinea) that import heavily from Australia, the inflation rate over a
high-inflation period in the 1970s was strongly (and, except for New
Zealand, almost perfectly) related in a negative sense to the currency's
degree of appreciation against the Australian dollar. So far as it goes,
this evidence about the effect of the appreciations on inflation is exactly
[emphasis supplied] what we should expect on common sense grounds. [In
particular] the rate of inflation in Papua New Guinea has been much less
than that in Australia, her principal supplier (Clunies Ross 1978: 11).

Professor Clunies Ross's uncritical acceptance of the above evidence is
indeed an exceptional feature of an otherwise mostly tightly reasoned critique.
Lest more be read from the above quote than was originally meant by Professor
Clunies Ross, it should be clarified here that the 'several small Pacific economies'
refers in fact only to four countries. Moreover the 'high-inflation period in the
1970s' denotes only the two-year time span between March 1976 and March 1978, and
not the years 1973-1975 as could be assumed normally (see Table 2 below). These are
clearly specified in the relevant table of Ross Garnaut's paper, which is reproduced
in full to facilitate further discussion.(Table 1).

There has been very little research about the relationship between exchange rate
regimes and consumer prices, particularly in other island economies. This is an im-
portant, interesting and complex area which deserves further study. The results from
Table 1 are therefore very useful for enabling informed guesses to be made, but their
usefulness should not be over-stretched. As Ross Garnaut (1978: 6) puts it, the
evidence 'in itself tells us little about the direction of causation, leaving open
the question whether the choice of exchange rate policies caused various monetary
policy responses', or vice versa.
Table 1

Exchange rates and consumer prices in the Southwest Pacific Region, 1975-77

<table>
<thead>
<tr>
<th>Country</th>
<th>Index of US Exchange Rate (Ratio of Rate on 31 December 1977 to that of 31 December 1975)</th>
<th>Index of Consumer Prices (Ratio of March Quarter 1978 to March Quarter 1976)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>91</td>
<td>122</td>
</tr>
<tr>
<td>New Hebrides</td>
<td>91</td>
<td>119</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>91</td>
<td>122</td>
</tr>
<tr>
<td>Fiji</td>
<td>99</td>
<td>114</td>
</tr>
<tr>
<td>New Zealand</td>
<td>98</td>
<td>131</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>105</td>
<td>109</td>
</tr>
</tbody>
</table>

Source: Garnaut (1978: 22).

It is indeed extremely difficult to identify the various 'strands of causation'. Some of these operate in an offsetting manner while others tend to be self-reinforcing. Moreover the same causal forces are bound to assume different weights or degrees of importance within diverse economic structures, institutions and policies. This implies, in turn, the continuing need for detailed case studies as distinct from cross-sectional research.

Another problem is that Ross Garnaut's results were derived from a relatively short period of only two years. Care and qualifications are therefore required for any extrapolation of such evidence, especially for policy support or justification. This problem is well illustrated in Table 2, where the rates of consumer price inflation from six island economies and of exchange rate adjustments, relative to the Australian dollar, over the period 1971-1976 are presented. Australia is among the major import suppliers for these island economies.

It can be seen that the behaviours of inflation in various island economies during the period 1971-1976 were highly diverse, probably due to appreciable differences in economic structures, institutions and policies. Some experienced less while others experienced more serious consumer price inflation than the level prevailing in Australia. Moreover there appeared to be no determinate
Table 2

Rates of consumer prices inflation and exchange adjustments relative to the Australian dollar, 1971-76. (Percentage)

(Revaluation: + and Devaluation: -)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>5.0</td>
<td>6.0</td>
<td>9.4</td>
<td>15.1</td>
<td>11.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Solomon Is.</td>
<td>7.0</td>
<td>1.2</td>
<td>9.2</td>
<td>21.0</td>
<td>2.4</td>
<td>3.5</td>
</tr>
<tr>
<td>Gilbert &amp; Tuvalu</td>
<td>5.0</td>
<td>4.6</td>
<td>12.8</td>
<td>13.3</td>
<td>13.7</td>
<td>12.8</td>
</tr>
<tr>
<td>PNG</td>
<td>n.a.</td>
<td>6.0</td>
<td>8.5</td>
<td>23.1</td>
<td>10.5</td>
<td>7.7a</td>
</tr>
</tbody>
</table>

Others (Base: preceding year)

<table>
<thead>
<tr>
<th>Fiji:</th>
<th>I</th>
<th>6.9</th>
<th>9.2</th>
<th>11.2</th>
<th>14.4</th>
<th>11.4</th>
<th>10.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERAc</td>
<td>-</td>
<td>+3.1</td>
<td>+13.0</td>
<td>+2.6</td>
<td>-7.8</td>
<td>+2.8</td>
<td></td>
</tr>
<tr>
<td>New Hebrides: I</td>
<td>5.4</td>
<td>8.9</td>
<td>5.0</td>
<td>20.7</td>
<td>22.7</td>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td>ERA</td>
<td>-</td>
<td>-</td>
<td>+2.0</td>
<td>+9.8</td>
<td>-18.8</td>
<td>+3.3</td>
<td></td>
</tr>
<tr>
<td>Tonga:</td>
<td>I</td>
<td>5.9</td>
<td>7.6</td>
<td>24.4</td>
<td>11.6</td>
<td>9.3</td>
<td>12.6</td>
</tr>
<tr>
<td>ERA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-3.0</td>
<td>-9.3</td>
<td>+2.3</td>
<td></td>
</tr>
</tbody>
</table>

Notes: a. The kina was revalued by 5 per cent in July and by another 10 per cent against the Australian dollar in December 1976.
b. I refers to inflation rates.
c. ERA refers to exchange rate adjustments relative to the Australian dollar.


The relationship between retail price inflation and exchange rate adjustments. The substantial appreciation of Fiji's currency unit, relative to the Australian dollar, did not seem to help significantly the rate of domestic inflation, compared with the inflation rates exhibited by other economies with no exchange rate modifications, over the years 1972-73. The same observation could be drawn for the New Hebrides between 1973 and 1974. In contrast Tonga was achieving relatively lower rates of inflation during 1974-75, despite a considerable depreciation of its currency unit in terms of the Australian dollar. Of the two most important island economies within the Australian currency area, the Solomon Is.
was experiencing generally less consumer price inflation than Papua New Guinea during the period under consideration.

Thus it appears that further research is needed before any firm statement about the relationship between inflation and exchange rate variation can be made. The heavy reliance by Professor Clunies Ross on basically tentative results in Ross Garnaut's paper is therefore regrettable logically. Indeed I feel sure that Ross Garnaut would be the last person to claim that his very interesting paper represents the last word on this complex and rather controversial subject. In any case, if the reader is sufficiently interested in this area, the symposium on 'Exchange rates and purchasing power parity' published by *Journal of International Economics* (May 1978) provides stimulating reading.

2. Exchange rate revaluations and the rate of increases in retail import prices in Papua New Guinea

This is perhaps the most contentious issue within Professor Clunies Ross's critique, probably because it is of significant policy interest. Unfortunately, however, no definite view or conclusion can be formulated, one way or the other, at present until additional definitive evidence is available. In particular more research information on the behaviours of supply costs, invisible expenses, gross profit mark-ups and operating costs from 1977 onwards would be required. This is suggested very clearly by Professor Clunies Ross (1978: 12), and I agree wholeheartedly.

In the meantime, however, Clunies Ross judges my 'hinting' suspicion that (A) 'the pricing practices of the import sector may constitute a more important determinant of the behaviour of retail import prices' (Lam 1977a: 31) as unconvincing and inconclusive. He also judges as equally unconvincing my suggestion that (B) 'there is little solid evidence that the various revaluations of the kina have appreciably [emphasis supplied] slowed down the rate of retail [import] price increases' (*PNG Post-Courier*, 4 August 1978, p. 22). He rejects this suggestion because the 'critical' or 'appropriate' evidence was absent and/or 'not available when he wrote'. Furthermore he states that my results and observations are 'contrary to the evidence of Garnaut (1978) already cited' and concludes that therefore 'it would be surprising if [they] were correct' (Clunies Ross 1978: 11-12).

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1 This refers to Lam 1977a.
of Ross Garnaut's results, which are quite tentative for various reasons discussed at some length earlier, is rather uncharacteristic. His subsequent objection to my empirical evidence and to my observations based on this evidence, appears therefore untenable analytically. I would like now to examine Professor Clunies Ross's views about the expected price effects of exchange rate revaluations. This examination is intended to illuminate the nature of the dialogue between us. He postulates that exchange rate revaluation 'may be effective even if it does not lead to an immediate and substantial fall in price' (Clunies Ross 1978: 13). The basis of this argument is that:

exchange rate revaluation in Papua New Guinea is presumably [emphasis supplied] not to produce sudden falls in [presumably retail import] price[s] but to stabilize the kina cost of imports over the fairly short term so that the forces tending to push costs up are counteracted more or less simultaneously by those tending to push them down.

A number of observations must be drawn here. Firstly the above statements, partly based on some empirical results in Lam (1977a), are in fact not supported by any new evidence at all. Secondly Professor Clunies Ross's policy interpretation is apparently more 'liberal' than official views. These are well summed up by the expectation that a four per cent kina revaluation will produce a four per cent fall in retail import prices (Post-Courier, 9 January 1978, p. 1; and 27 January 1978, p.2).

Thirdly Professor Clunies Ross does not specify how long is the relevant time lag before we can expect a reduction in retail import prices, and by how much? To be fair this question can only be satisfactorily answered empirically and with special reference to the domestic and external forces, which tend to push up the costs of imported commodities. However he identifies one of these forces. Professor Clunies Ross holds that

It would not be at all surprising if the large retailers tended to compensate for variation in costs by varying rates of margins, tending in their own pricing to lag behind upward and downward variations in costs (Clunies Ross 1978: 13)

If this is so then four implications emerge clearly:

(1) That 'trading firms tend to ... expand the margins' when the kina prices of imports are falling with exchange rate revaluations (Clunies Ross 1978: 14);
(2) That, reasonably, an important part of revaluation benefits may thus be absorbed by the import distributing and retailing sector. This is achieved through, ceteris paribus, a non-proportional relationship between exchange rate changes and movements in retail import prices;
(3) That controls on wholesale and retail mark-ups on, and prices of, major import items are not observed strictly and/or enforced effectively; and

(4) That exchange rate revaluations have produced an inequitable income distribution in favour of the trading sector, which is mostly expatriate-owned. This has been realized at the expense of the export sector, with a substantial degree of national participation, and indirectly the government sector. It is partly on this ground that there has been considerable public debate in the 'Letters to the Editor' of the PNG Post-Courier. We will return to this distributive implication later on.

Now it is clear that implication number (1) from Professor Clunies Ross's arguments does not at all contradict contention (A) of mine quoted earlier, namely that 'the pricing practices of the import sector may constitute a more important determinant of the behaviour of retail prices'. Similarly implication number (2) from Professor Clunies Ross's arguments certainly does not go against my suggestion (B) already cited, namely that 'there is little solid evidence that the various revaluations of the kina have appreciably slowed down the rate of retail [import] price increases'. This point will be illustrated empirically shortly.

We have now completed a full circle. Clockwise, my suggestions (A) and (B) are not acceptable to Professor Clunies Ross because of the absence of critical and appropriate data. Yet, counter-clockwise, his own postulates, which are not based on any additional evidence, are shown to be not inconsistent with (A) and (B) at all. I am leaving it to the reader to judge whether it was reasonable for me to raise the possibility of (A) and (B), in view of the empirical derivations available and the nature of applied policy research being undertaken then.

ii. Two further notes on related issues. The first one concerns my interpretation of the decline, of 0.6 per cent per quarter, in retail prices of major food imports during the second half of 1976. Professor Clunies Ross states that

the simple reader might suppose [such an event] to have something to do with the 5 per cent revaluation of the kina in [late] July [.However] Lam assures him that on the contrary this 'appears more likely to represent the continued trend of profit compression to comply with price control regulation, rather than as a result of the kina revaluation.

Professor Clunies Ross concludes then that 'this last assertion, besides being made without any argument or evidence, is confused in its logic' (Clunies Ross 1978: 12).

I am thankful to Professor Clunies Ross for pointing out the rather ambiguous, round-about way my explanation was put forward (Lam 1977a: 31). At the
same time, however, his conclusion indicates an important fact. It is highly misleading to entertain some preconceived ideas and/or implicit assumptions when one attempts to interpret other people's arguments. The explanation quoted above can appear to represent a logical confusion or inconsistency only when one, or 'the simple reader', assumes implicitly that the small fall in retail prices of major food imports during the last half of 1976 had 'something to do with the 5 per cent revaluation of the kina in July' (Clunies Ross 1978: 12). But, on the other hand, if that price decline had nothing to do with the kina revaluation then it must, by and large, have represented further compression of profit margins on these food imports.

And Professor Clunies Ross appears to have given insufficient consideration to the reasons for preferring this latter explanation, which are specified in Lam (1977a: 31). In particular it is clearly stated there that 'Given the data presently available and the inevitable time lag required for existing stocks to be exhausted, it is too early for the exchange adjustment to be fully felt'. It must be noted here that six-digit import data are not available for the period after June 1976. This renders it impossible to provide comparative empirical support for either of the two possible interpretations. However there are other pieces of evidence which indicate, on balance, that one line of reasoning is more realistic than the other.

These include the fact that the prices of only the major food imports, which are under legal control, exhibited a decline, totalling 1.2 per cent, over the second half of 1976. The retail prices of other imports, which are not regulated, were increasing appreciably, by 4.5 per cent, during the same period. These observed patterns conform very well to the compensatory pricing behaviour discovered earlier in the same paper (Lam 1977a: 29-30). In particular lower returns on price-controlled items were to be offset as much as possible by raising mark-ups on other imports - namely minor foodstuffs, clothing and household sundries.

My second note concerns Professor Clunies Ross's observation that 'a further tack of Lam's [in an article on imported inflation in the Post-Courier of 4 August 1978] is equally inconclusive ... [as it] simply attempts to conceal the absence of appropriate evidence' (Clunies Ross 1978: 12-13). It is indeed extremely difficult, in a short newspaper article for the interested or informed lay-person, to please every reader's expectations and requirements. Before proceeding any further into 'appropriate evidence', however, it is worth emphasizing again the planned work of Morea Velé. of this Institute on the price effects of kina revaluations in 1976. His results will certainly shed more definite light, one way or the other, on this highly contentious issue. In the meantime it may be useful to present some relevant data for further reflection.
Let us now specify very clearly a number of parameters. The food component, excluding locally grown fruit and vegetables, in the Consumer Price Index (CPI) published by the Bureau of Statistics is wholly imported. It absorbs just under 47 per cent of the average family budget. About 86 per cent of this expenditure is spent on Australian imports, while the remainder is mostly accounted for by food from Japan. Available results (Lam 1977a) indicate that retail prices on major food items, which average 87 per cent of the imported food component as a whole, have stabilized around 35 per cent above landed costs. This level of gross mark-ups also includes wages, which constitute the most important item of running costs. There were no increases in Australian shipping freight rates, normally denominated in Australian dollars, from July 1976 to August 1978.

The following table incorporates relevant rates of (1) inflation of consumer prices in Australia and Japan; (2) exchange rate adjustments relative to the Australian and American dollars (which is the common denominator for most import and export contracts outside Australia); and (3) wage increases in Papua New Guinea.

The results in section D of Table 3 are calculated on the basis of one conservative assumption, namely that exchange rate adjustments would be effective only after a time lag of six months. If, however, the alternative assumption of a three-month time lag is preferred, the relevant derivations can be made easily from data contained in Table 3. Since the proportion of wages in gross margins is not known, both row D (2) and row D (3) have to be computed. However if the kina appreciation were fully reflected in retail import prices, then there would have been a much lower (if indeed any) rate of wage indexation, particularly for the second half of 1977.

Generally the evidence appears to indicate that retail prices of imported food have not appreciably reflected the full extent of appreciation of the kina, particularly against the Australian dollar. This result, it must be stated, is by no means definitive. Nevertheless it does raise the possibility that the relationship between exchange rate adjustment and retail import prices is apparently more complex than has been generally assumed so far.

3. Retail import price control

As noted earlier on p. 39, Professor Clunies Ross agrees that regulatory limits on import mark-ups have not been fully successful. This does not, however, constitute 'an argument against price control on, or equivalent measures to limit the prices of, certain items' (Clunies Ross 1978: 11). It certainly does not, and I would like to state that some form of prices or profit regulation is necessary in the structural context of the commerce sector in Papua
### Table 3

Rates of inflation, exchange adjustments, wage increases and imported food inflation, 1977-78

<table>
<thead>
<tr>
<th></th>
<th>1977 First half</th>
<th>1977 Second half</th>
<th>1978 First half</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A)</strong> Percentage inflation rates (Base: preceding quarter)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>4.65</td>
<td>4.31</td>
<td>3.35</td>
</tr>
<tr>
<td>Japan</td>
<td>4.92</td>
<td>1.12</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>B)</strong> Percentage Kina exchange rate adjustments (Revaluation + and Devaluation -)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australian Dollar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Quarter Lag</td>
<td>+5.80</td>
<td>+6.80</td>
<td>+1.33</td>
</tr>
<tr>
<td>1st Quarter Lag</td>
<td>+7.10</td>
<td>+2.10</td>
<td>+4.07</td>
</tr>
<tr>
<td>American Dollar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Quarter Lag</td>
<td>+1.67</td>
<td>-2.50</td>
<td>+2.70</td>
</tr>
<tr>
<td>1st Quarter Lag</td>
<td>-2.34</td>
<td>+0.41</td>
<td>+6.02</td>
</tr>
<tr>
<td><strong>C)</strong> Percentage wage increases (Weighted average)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage indexation</td>
<td>2.20</td>
<td>2.00</td>
<td>nil</td>
</tr>
<tr>
<td><strong>D)</strong> Imported food inflation in Papua New Guinea (Base: preceding quarter)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Actual</td>
<td>101.54</td>
<td>105.72</td>
<td>104.35&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>(2) Expected&lt;sup&gt;b&lt;/sup&gt;</td>
<td>99.60</td>
<td>98.74</td>
<td>99.60</td>
</tr>
<tr>
<td>(3) Expected&lt;sup&gt;c&lt;/sup&gt;</td>
<td>100.23</td>
<td>99.93</td>
<td>100.72</td>
</tr>
</tbody>
</table>

**Notes:**

a. Increasing to 108.20 for September quarter.

b. Assuming no wage adjustments.

c. Assuming full adjustments of both wages and profits to the rate of increases in the minimum urban wage.

**Sources:** Computed from data published or supplied by the Australian Bureau of Statistics, the Bank of Papua New Guinea and the Papua New Guinea Bureau of Statistics.

New Guinea. All the same, however, it would have been very helpful had Professor Clunies Ross elaborated on his insightful thinking about the feasibility and present policy approach towards retail import price controls.
i. Feasibility. Controls and regulations can be highly effective only when they are vigorously policed and enforced. These tasks are rendered even more difficult in Papua New Guinea for several reasons. On the one hand the geographical structure of retailing activities is quite fragmented. Yet official resources for prices supervision tend to be inadequate. For example there were only about 21 officers located in four regional centres in 1977. Successful policing over time would be an extremely hard job, even within easily accessible urban areas. On the other hand court fines for prices control violations have been fairly nominal. These frequently averaged about A$11.00 in 1973 (Papua New Guinea 1974: 58) and between K30 and K40 in 1977. Another complication is that it is not uncommon for a distributor/retailer to order supplies from another distributor/retailer. Although the goods involved are priced within the legitimate margins, the absolute amount of profits is much greater. It is of course not possible to determine whether this trading tactic is designed specifically to evade statutory limits on import mark-ups. Nor is there sufficient public information on the frequency and/or spread of such trade practice in Papua New Guinea. It is nevertheless a problem to be reckoned with.

ii. Policy approach. The present cost-plus method towards prices and profit control on major food imports tends to encourage import of costlier goods and/or goods from more expensive suppliers, and possibly over-invoicing. This is because the larger the landed and local transport costs, the greater would be the absolute amount of allowed mark-ups.

In this connection, two significant issues emerge. Firstly there is the nature of import distributing and retailing in Papua New Guinea. This sector has long been dominated by three major transnational corporations. These have their head offices, and hence buying agents, in Australia which is a high-cost country. In addition they also have considerable (recently diversified) Australian business interests, which are well integrated to their operations in vertical and horizontal directions, in both Australia and Papua New Guinea. It is instructive to note here that Australia and New Zealand produce very close substitutes in several categories of industrial and consumer goods. Yet the latter, a lower cost country, supplies just about one per cent of Papua New Guinea's imports, compared to a market share of 50 per cent for Australia.

The second issue is that several import items of mass consumption are of an unnecessarily high quality. The two most obvious examples, in the context of a developing economy, are refined white sugar and white rice with 20 per cent broken grains. They are both from Australia. Part of the cost of urban living
can be reduced once-for-all by importing less expensive substitutes which are not necessarily inferior in terms of nutritional value. These include less well polished (brown) rice or white rice with, say, half broken grains, and granulated brown sugar. In the case of rice, savings could be considerable (over 20 per cent) based on corresponding Thai rice grades ex-port of Bangkok. Also it would be unlikely for there to be much consumer resistance because of taste. Indeed such resistance is not necessarily undesirable in view of the rapidly growing dependence of urban consumers on imported staples, including rice, which has created a great deal of public concern in Papua New Guinea. These issues, including the stability of new supply sources, deserve serious policy attention.

iii. Transfer pricing. This problem has in fact been of increasing official interest and concern in both developed and developing countries. Major policy measures against imported price inflation, including retail import margin controls and exchange rate revaluations, are neither intended nor equipped to deal with transfer prices. In fact the (kina) cost-reducing benefit from an exchange rate appreciation can be largely negated by raising purchase prices at source.

Other existing legal and administrative regulations cannot always be enforced due to insufficient information on international reference prices and inadequate experienced technical manpower. In fact the experience of some government agencies in Papua New Guinea indicates that transfer prices have been resorted to by various firms, particularly in the export sector. Such a practice is designed for purposes of tax evasion and exchange speculation (Roumeliotis 1978: 1-2).

4. State Trading Corporation

The problems of costly import sources and commodities, and the possibility of transfer pricing certainly merit further research. So does the feasibility of a State Trading Corporation to import and sell directly to the national public a limited number of non- or less perishable items of mass consumption (Lam 1978c). Such a statutory body can, at the same time, explore cheaper supply sources and less expensive grades of substitutes. It would also be able to furnish the government with the relevant international reference prices for other regulatory purposes.

As already mentioned, Professor Clunies Ross supports very strongly a feasibility study of the proposed trading set-up. He recognizes (1978: 16) that such a corporation would, ceteris paribus, not only help reduce the cost of living once-for-all. It would also be able to exert downward pressure on the rate of inflation. This would be the case if Australian prices of major imported items
were to rise faster than close substitutes from other countries. In addition the corporation might be able to absorb some cost increases, through reduced margins or efforts to raise efficiency and/or turnover. At the same time, however, Professor Clunies Ross also expresses a number of cautions, although none of them is 'conclusive against the usefulness of a Lamm-type state trading corporation' (Clunies Ross 1978: 17). A detailed assessment of these reservations is not possible without some factual information. A few remarks can nevertheless be made.

Professor Clunies Ross (1978: 16) warns that the legitimate margins on price control imports might not be 'enough to cover costs (including a return on the social resources invested) when those items are traded alone'. It is worth noting here that the proposed trading arrangement (Lam 1978c) tends to incur appreciably much lower overhead costs. This is the result of centralized warehouse operations and more efficient stock-flow controls; of relatively limited but highly mobile, family-type distribution outlets; of dealing mostly in bulk units; of a very narrow range of non- or less perishable commodities etc. The suggested goods are rice, canned meat and fish, sugar, tinned milk and flour. These are high volume lines which constitute almost 37 per cent of the average family budget. They accounted for over K30m in import value during 1976. Furthermore various discussions with people within the trading sector itself indicate generally that such a specialist set-up, if effectively managed, would be able to cover total expenses through a comparatively small share of the existing market. In fact there has admittedly existed considerable cross-subsidization from fast moving, high volume merchandise to slower and more easily perishable lines.

Professor Clunies Ross also points out (1978: 16) that the 'corporation [might] succeed in lowering the prices of essential goods'. But if this induces retail trading firms to increase mark-ups on other items, then there might not be any net reduction in the CPI at all. Moreover there is the possibility of a price-cutting war. This might be initiated by privately owned firms presumably so as to force the state trading corporation to suffer losses and fold up its operations eventually. These postulated developments certainly deserve further examination so as to clarify relevant economic and political implications. At the same time, however, they could still have some useful income redistribution effects, as will be elaborated shortly.

5. Restructuring of agricultural export taxation

The incidence and counter-cyclical impact of the present 2.5 per cent ad valorem export levy on major cash crops are examined at some length in Lam
A detailed proposal for rescheduling of this duty is made on both equity and stabilization grounds. Moreover some extra fiscal absorption, of between 6 and 10 per cent of gross export proceeds, is also suggested. This is to raise the financial resources needed urgently for replanting and productivity improvements within the agricultural export sector.

1. Political implications. Professor Clunies Ross (1978: 18) does not object to my proposal for restructuring of the present fixed rate of duty. His main concern is, however, related to 'political acceptability'. He argues that the 'extra charge on... a large and politically important section' of the population is difficult to justify. Indeed

Without safeguards... the extra tax could turn out to be, or at least could appear to be, simply an extra levy on the countryman to support bureaucrats and town workers and expatriates and politicians (Clunies Ross 1978: 18).

A moment's reflection on the implications of major policy measures indicates rather clearly that 'political acceptability' is a highly relative and flexible notion. It could indeed provide a good excuse for administrative inaction and bureaucratic delay, or for taking the easy way out first. One of the more striking examples of the expediational or rubbery nature of 'political acceptability' concerns exchange rate policy. The kina appreciated by 14.7 per cent and 8.6 per cent against the American and Australian dollars respectively between December 1976 and June 1978. These positive adjustments caused a proportionate fall in gross export proceeds earned by 'the countryman', particularly the village smallholder, who is just a price taker (Lam 1977b: 2-5). This income reduction is even larger than the suggested increase in fiscal absorption over the export cycle. In addition such revaluation-generated losses cannot be appreciably negated, even if retail import prices were to fall by the same proportion. This is because the village farmer is most unlikely to spend all his export earnings on imported goods. He does not even benefit indirectly from lower rural wages since his rewards for outside labour are mostly in kind and not in cash. The monetary value of these rewards is much lower than the ruling minimum rural wage (Lam 1977b: 5, 19).

Of greater significance is the possibility that the cost-reducing impact of exchange appreciation may not be transmitted fully to retail import prices. If this is so then there has been considerable income redistribution in favour of the trading sector, which is largely expatriate owned. At the same time real earnings of 'bureaucrats and town workers and expatriates and politicians' are fully protected through wage indexation. Only the countrymen, who constitute a 'large and politically important section' of the population, come out worse!
The implications outlined above are contrary to both the letter and spirit of the second of the National Eight Aims. Yet they have so far enjoyed 'political acceptability', despite (or probably because of only) occasional protests from representatives of export sectors which have experienced depressed external prices.

ii. Two further objections. Professor Clunies Ross objects on two fundamental grounds to my suggestion to utilize the extra tax mobilized through the restructuring of the export duty specifically for urgent agricultural development. To begin with

[1] earmarking of revenue for particular purposes... tends to cause waste in allocation by setting constraints on the public use of available resources... [2] In addition, most of the specific rural uses for funds would benefit some growers and not others, or some much more than others. More feeder roads may not appeal to those who already have roads. Replanting subsidies would give much greater benefits to rich than poor croppers unless the subsidy were limited to a small number of trees per grower (Clunies Ross 1978: 18)

It is rather surprising to read these generalist arguments against a rather specific recommendation. Since the first line of reasoning must be evaluated with special reference to the problems and suggestions discussed in Lam (1977b), let us examine the second objection first. Professor Clunies Ross states that rural uses of specifically earmarked funds would tend to be inequitable as some would benefit and not others, or some more than others. But does this imply that (A) unconstrained or non-specific allocation of government spending has so far led to greater equality in the distribution of public facilities and services across localities or population sections in Papua New Guinea? Or, if we follow through this question one step backward, can it be stated that (B) budgetary allocation of available resources has been unconstrained by socio-economic and political forces as yet?

Earlier Professor Clunies Ross emphasizes the need for 'political acceptability'. Surely this also constitutes a binding constraint on the allocative process. In addition, as already pointed out, the degree or interpretation of political justification tends to vary greatly, even between different sections of the coalition government or among the politicians themselves. A perusal of the PNG Post-Courier would provide a variety of relevant examples. Furthermore a policy measure may be acceptable or justifiable politically. However it does not necessarily result in greater vertical and/or horizontal equity in its fiscal
requirements (Lam 1977b: 14-15), or in the subsequent distribution of government resources. And this point leads us to implication (A) of Professor Clunies Ross’s second objection.

There exists no sufficient reason to suppose that a greater number of people would, in fact, benefit from unconditional uses of public funds. There is indeed evidence of considerable inequity in (presumably unconstrained) distribution of government facilities and services in Papua New Guinea. Besides such inequality appears increasingly entrenched or cumulative. This is because those people best placed to exploit new opportunities are also residents in areas already high on the comparative index of socio-economic development (Berry 1977: 152-154).

As a whole, however, Professor Clunies Ross’s second objection appears to be valid only when the following condition is proven: that the spending of collected fiscal resources, as recommended in my proposal concerning agricultural export taxation, would tend to worsen or generate greater inequality than before. It would certainly be inequitable if funds had been raised under a certain pretext, say for rural development, and were then spent on other areas which happened to command more political weight. Unfortunately these issues are neither discussed nor examined by Professor Clunies Ross.

The first objection, detailed above, implies waste and inefficiency if constraints were set on budgetary allocation of available resources. This line of reasoning is quite appropriate against some conditional, project or tied aid proposals. It is also valid when the uses to which government funds are channelled are not important on the schedule of national priorities. However, would Professor Clunies Ross regard the urgent problems noted in Lam (1977b: 16-17 and 28) as irrelevant and/or immaterial? It is worth reproducing in full below the relevant textual discussion.

However there are still some identifiable problems with the local agricultural export industries. The copra sector can be regarded as a high cost, low productivity activity mainly because of the senile age of coconut palms, whose maximum productive life is estimated to be about 50 years. About 48 per cent of estate acreage consists of palms that were planted over 50 years ago and another 48 per cent bear trees between 15 and 50 years of age. In addition new plantings during the last decade were equivalent to only about 21 per cent of senile acreage (Williamson and Sackett 1973: part 1, p. 29): The cocoa industry is, to a lesser extent, characterized by a similar problem. The economic life of cocoa plants is estimated to be between 15 and 20 years. Yet 41 per cent of estate acreage supports cocoa trees planted between 10 and 19 years ago while 28 per cent bear trees 20 years of age or over (Godyn 1974: part 1, p. 31). Although no data on the age structure of coconut and cocoa trees on village holdings
are available, the rejuvenation question is also generally regarded as a pressing problem in this sector. The need for replanting is also suggested by the 25 per cent fall in cocoa output during fiscal year 1976-77, despite record export prices for this commodity (Post Courier, 15 September 1977: 1).

At the same time only about 35 and 39 per cent of copra and cocoa estates, respectively, rely on fertilizers to improve yields. Scarcely any smallholders make use of chemical inputs, including insecticides and pesticides (Williamson and Sackett 1973: part 3, pp. 11-12; and Codyn 1974: part 3, pp. 20-21). Thus the potential of these agricultural activities as a major exchange earner in the future appears to be limited unless a vigorous program of replanting with high productivity varieties and of research and extension services, including fertilizer trials on depleted village gardens, is undertaken.

A second major problem of agricultural exports relates to the mono-cropping nature of the coffee industry. Attempts have been made to introduce secondary cash crops (notably tea, passion-fruit and pyrethrum) or activities (such as cattle raising) to coffee estates and village holdings. However they have not been very successful partly because there are very few commodities which command commercial potential comparable to coffee beans, and partly due to village farmers' unfamiliarity with the few crops which are climatically suitable as already mentioned (Shand and Strautmanis 1974). Consequently the coffee industry, which is largely a village activity (since the smallholding sector is estimated to account for up to 70 per cent of total output), is widely exposed to the destabilizing impact of a severe fall in export prices. The need to protect rural coffee earnings and strengthen the production base therefore deserves closer attention from both the government and the relevant marketing board (Lam 1977b: 16-17).

It must be repeated here again that replanting is a vital issue if output from deprecating, but renewable, resources is to be sustained over time. Replanting with new high yield varieties and other productivity improvements are equally important if Papua New Guinea is to preserve or improve its commodity share in world markets. These activities would also affect favourably rural incomes and employment. Yet the need for them has been given insufficient attention, particularly in the 1960s and early 1970s when the public sector was expanding rapidly. At the moment, however, the government does not possess adequate resources to finance and encourage replanting and productivity-raising measures, except on a small scale and/or at specific areas. Thus it appears justifiable politically to impose some fiscal discipline, through appropriate constraints on public spending, so that greater efforts could be devoted to solving these crucial problems over time.

6. Operational problems of the MRSF

There seem to be a few misinterpretations of my discussion in Professor Clunies Ross's critique (points 10, 11 and 12, Clunies Ross 1978: 19-21). The
relevant section of Lam (1978a: 12-16) attempts to identify 'a number of potentially significant difficulties in the operation of the MRSF'. These include inaccurate forecasts of cyclical copper prices and hence resources receivable by the Fund. This problem tends to be aggravated further by certain justifiably prudent, but nevertheless rather inflexible, statutory provisions (Lam 1978a: 14). In addition there are various complications concerning the investment of surplus balances in borrower's currency (Lam 1978a: 15-16).

i. Revenue flow from the MRSF. Professor Clunies Ross does not dispute the observed fact that 'cycles in commodity prices [are not easily] predictable', and that 'it is quite possible that the rules could be improved' (Clunies Ross 1978: 19). He then argues, however, that inaccurate yearly estimates may not be an important problem. This is because 'the aim... is not to estimate receipts for [any particular] year but to estimate them for the next eight years and on that ground to decide how much should be paid out in that year' (Clunies Ross 1978: 19). Fine. But the problem is still there. 'Such [annual] estimation biases [or inaccuracies] ... would certainly complicate the short-run determination of the yearly revenue returnable to the budget' (Lam 1978a: 14). I am sure that Professor Clunies Ross would not deny that.

Further it is possible, as he himself agrees, that through unforeseen developments MRSF balances may run 'unnecessarily high or dangerously low' (Clunies Ross 1978: 19). On the basis of such a postulated eventuality, a partial suggestion is made. 'It may ... be desirable to consider, among other measures, a revenue-distributing mechanism which tends to be self-adjusting and thus renders self-liquidating any errors of estimate over the required eight year period' (Lam 1978a: 14, emphasis supplied). The subsequent marginal variation in revenue flow to the budget would of course be subject to the statutory limit of 20 per cent in real terms (Lam 1978a: 14). The above statements certainly do not imply, or are not equivalent to, 'spending the resources of the Fund as fast as they are generated' as apparently (mis)interpreted by Professor Clunies Ross (1978: 19).

It is not the absolute annual level of actual revenue flow to the Fund that is the focus of concern. Rather it is the errors in estimating the size of such a flow and the need that they should be rendered self-adjusting or self-liquidating. Under existing legal stipulations concerning price forecasts, the more pronounced the copper export upswing the greater would be the estimating errors. The noted time span of eight years, as specified in the
MRSF Act, would more or less represent a copper export cycle.

The need to compensate for such over- or under-estimates, as Professor Clunies Ross recognizes (1978: 19), is obvious. And this should preferably be realized by means of some automatic mechanism with precise rules of operation, rather than through some deliberate administrative action. Hence the bare outline of a possible mechanism is, 'among other measures', noted (Lam 1978a: 14). Professor Clunies Ross is accurate in pointing out (1978: 19) that 'Lam does not give any precise set of rules as an alternative to the present one'. There are several reasons for the absence of further elaboration on rules and regulations for possible reform. These include the need to limit the scope of an already very broad topic. Indeed the MRSF was only one of the six fiscal responses to export instability examined in Lam 1978a (pp. 12-16 of this work). For those who are sufficiently interested, a self-adjusting mechanism with a set of precise rules proposed by Professors Bauer and Paish (Bauer and Yamley 1968: 175-189) is worth consulting. This suggestion was put forward in their discussion of income stabilization issues in West Africa, and was published in the Economic Journal in December 1932.

ii. Investment of MRSF surplus balances. Professor Clunies Ross makes the very appropriate qualification, at the beginning of his examination of this issue that 'I am not sure ... in what direction Lam... wanted policy to be shifted' (Clunies Ross 1978: 20). With this in mind one understands why his subsequent discussion, particularly sub-headings (ii) and (iii), appears to have read more into Lam (1978a: 14-16) than is actually there.

Let us clear up the relevant ground first. The MRSF Board is obliged by law to protect the real purchasing power\(^1\) of its funds. In pursuit of this objective the Board initially placed its excess balances in an account denominated in Australian dollars at the Bank of Papua New Guinea. There was a provision for appropriate adjustments to take account of movements in the exchange rate between the kina and the Australian dollar. My discussion notes a number of variables and complications arising from investment in borrower's currency. For example account must be taken of comparative real rates of interest (that is the money rates deflated by, say, the relevant prices index), both domestic and overseas. Moreover careful attention must be focused on current as well as prospective economic and financial conditions. This is because these would

\(^{1}\) Unspecified as to internal or external.
affect the money rates of interest on offer, and the extent of movements in prices and exchange rates either way. These requisites are then illustrated by a discussion of two cases of possible exchange gains and two of potential exchange losses (Lam 1978a: 15-16).

As a matter of fact, Professor Clunies Ross (1978: 21) points to the same things in his comments. He states that

the managers ...would be balancing the interest rates that they would receive on different overseas assets against the possibilities of appreciation or depreciation of currencies in which they are denominated, and they would be balancing the apparent attractiveness of any particular assets against the risks of putting all their eggs into one basket.

He appears to share the MRSF Board's interpretation that it is the real external purchasing power of surplus balances which should be preserved and/or maximized as much as possible (Clunies Ross 1978: 21). But surely this is not the only possible reading which could be drawn from a relatively ambiguous stipulation in the MRSF Act. Professor Clunies Ross also pays some attention to the current financial strength of the kina (p. 21) but he does not elaborate on the implications of two other important requirements which may have a bearing on investment policy of the MRSF. Firstly the resource flow to the budget is denominated in kina terms. Secondly the government has committed itself to a steady rate of real expenditure growth of three per cent per year over the export cycle.

In any case I would not like to pursue this discussion much further as it would appear to be conducted with the benefits of hindsight. It is now a matter of public knowledge that the surplus balances of the MRSF were reduced by over K850,000 as a result of the Australian dollar devaluation and kina appreciations in 1976. Besides Fund balances were fully converted to kina denomination at the end of June 1977.

7. Full wage indexation

Between March 1977 and 1980, urban wages and salaries will be indexed to the full percentage increase in the CPI in Papua New Guinea. There is, however, a ceiling of 12.5 per cent for any twelve months period. This incomes policy is intended nominally to protect real earnings of urban workers. In practice, however, the real level of factor incomes 'would certainly be compressed during an inflationary period, even if the rate of price increases is less than 12.5 per cent'. (Lam 1978a: 9). This is because there exists firstly the wage
adjustment lag of six months and secondly, the fiscal drag of extra income tax liabilities. The former problem appears unavoidable as a shorter adjustment period would be very inconvenient. However the latter can be removed through some form of income tax indexation (Lam 1978a: 11).

i. Fiscal drag. Professor Clunies Ross agrees in principle that it is only fair to try to avoid 'fiscal drag'. His only objection to tax indexation, purely on the ground of practical administrative difficulty, is well taken. But it is a gross exaggeration to argue that the elimination of fiscal drag would be 'at enormous administrative cost' (Clunies Ross 1978: 23). The introduction of some form of tax indexation would involve some extra work, especially in non-computerized pay systems. However it would certainly not prove to be 'something of a nightmare to tax collectors and employers' (Clunies Ross 1978: 23). This is because each half yearly wage indexation would require fresh calculations and adjustments of tax liabilities from all factor incomes earned. New tax tables would have to be prepared in any case. Indeed it is conceivable that tax indexation could save both time and efforts for tax collectors and pay masters. This would be the case if the extra earnings from every mid-year indexation were simply added to the pay packets or cheques, without the calculation and deduction of marginal tax liabilities. In this way new tax tables would need to be prepared only once a year, and tax indexation could be incorporated through the personal rebate system of the annual declaration form.

ii. Relative income distribution. To my knowledge the income redistribution implications from full wage indexation have received comparatively less attention than their importance would deserve. The point made in Lam (1978: 9-11) is that full indexation without adequate reference to particular spending patterns would tend to produce an inequitable income redistribution, particularly among lower income earners in Papua New Guinea. The main reasons are firstly 'the existence of appreciable differences in relative consumer expenditures across various income strata'. Secondly prices for different categories of consumer items may be rising at unequal rates, as illustrated by the three examples discussed (Lam 1978a: 9-10).

Professor Clunies Ross contends that 'Lam's argument here ... must have a missing assumption since it ... does not appear to hold on the assumptions he makes' (1978: 22). It would probably have been more accurate to remark that the necessary conditions are all stated there, but not in a manner acceptable to Professor Clunies Ross's exacting requirements. We will come
back to this point a little later on. In the meantime it must be noted that his argument concerning the redistributive impact of wage indexation represents a special case, rather than the general rule. According to Professor Clunies Ross

It is evident that, if the prices of all goods (including the goods enjoyed through savings) increase in the same proportion and ... all money wages and salaries are increased in that same proportion, then all wage and salary earners will be able to buy exactly as much as before and there will be no redistribution (emphasis supplied) (Clunies Ross 1978: 22).

It is surely unrealistic and unreasonable to presume that all prices would rise at the same pace. The highly diverse rates of inflation exhibited by various commodity groups, both necessities and non-essentials, are well evidenced in Lam (1977a: 43-49). Thus Professor Clunies Ross's special case does not generally hold true in practice. In other words full wage indexation would tend to generate an adverse impact on relative income distribution. The extent of such an effect depends firstly on actual spending patterns exhibited by different income groups relative to the constructed consumption weights in the CPI. The second determinant is the rate of price increases associated with various commodity categories.

Professor Clunies Ross does recognize the redistributive implications arising from the two postulates above. However he holds that Lam does not demonstrate that [A] in fact the Consumer Price Index is unrepresentative of the poor wage-earning family's budget or [B] that a certain class of goods ('necessities' say) has a secular tendency to rise faster in price than the index as a whole (Clunies Ross 1978: 22).

Point (A) is obvious and merits only a brief explanation. The CPI cannot be representative of the poor wage-earning family's budget or, for that matter, high salary earners' spending patterns alone. This is because it is constructed on a weighted average basis. It may reflect more closely the consumption behaviour of poorer sections of the community if these constitute a large majority of the population. But commodity weights in the CPI just are not identical to the consumption patterns of the poorer domestic consumers, or of those earning less than the weighted average income except by pure chance or coincidence. Moreover Papua New Guinea's current (1978) CPI was based on a survey of consumption modes of national public servants in July 1970. But these workers have certainly been receiving wages and salaries substantially higher than employees on the urban minimum wage.

As noted earlier, point (B) is well documented in Lam (1977a: 43-49). In particular the price increases recorded for basic necessities - namely rice,
tinned meat and fish, sugar, flour, milk etc. - took place much faster than those associated with relatively inessential items between 1972 and 1975. This latter group includes beer, cigarettes, soft drinks, electrical charges, taxi fares etc. It is a well known fact that necessities tend to absorb a comparatively greater proportion of poorer families' budgets. In addition the trend towards higher prices of these items (compared to the prices of non-essential goods) may well continue in the future. In this case, then, full wage indexation would certainly result in considerable inequity in the pattern of income distribution, particularly between lower and higher income earners. Generally the more one has to spend on basic consumer commodities and the faster is the rate of increase in their prices, the more serious is the extent of income redistribution in favour of other more privileged workers.

8. Exchange rate policy

We have now gone through the most important areas of contention between Professor Clunies Ross and myself. His discussion of exchange rate policy (points 15 and 16, Clunies Ross 1978: 23-26 above) is directed largely to relatively minor points made in my examination of monetary policies and options for domestic economic stabilization (Lam 1978b, pp. 10-11 and 18 of that work). Indeed his comment is basically not a disputing one. Rather, it is a detailed explanation of Professor Clunies Ross's views on the adjustment processes. In addition some parts of his elaboration are not strictly relevant to, while other parts tend to overstate, the issues raised in Lam (1978b).

i. Exchange rate speculation. The problem noted in page 11 of Lam (1978b) relates to private speculation, which is still an unknown quantity in Papua New Guinea. Australian experience indicates clearly the undesirability of maximizing surprise with large and sudden policy alterations. As may be expected with any sharp shock treatment, such measures would produce major upsets of plans since the substitution and wealth effects, especially those associated with shattered expectations, would be correspondingly large and serious. Entrepreneurs could suffer severe losses, and the profitability of current and capital transactions be substantially affected. Such occurrences would generate ... risk-averting resource allocation which would increase future costs (Lam 1978b: 11).

Professor Clunies Ross agrees that large, discrete adjustments in the kina exchange rate would be undesirable. He then elaborates on certain
measures for smoothing out exchange rate variations. His analytical emphasis is laid heavily on the assumption that the kina 'exchange rate will be moved only upward in relation to that of the country's major trading partner' (Clunies Ross 1978: 23-24). Given this condition, then 'specifically speculative movements can only be inward' (p. 24). Professor Clunies Ross also touches on 'the practice adopted recently' of fixing the kina exchange rate by means of a trade weighted basket of major currencies. He explains that

This is to keep the value of the kina stable against a basket of predominantly strong currencies. This will probably mean, in the near future, a slow and gradual appreciation against Australia, but no abrupt changes unless Australia itself depreciates sharply once more. Any speculative movement which the prospect of such a sharp Australian depreciation might entail would not be unfavourable to Papua New Guinea (p. 24).

I do not wish to comment on Professor Clunies Ross's views about the above matter, which is important and requires further serious study. I would state, however, that, being economists interested in applied policies and policy implications, we would learn a great deal from discussions with commercial bankers and businessmen. There are various significant issues of mutual interest, including future economic and financial expectations and prospects.

ii. Exchange rate appreciation. Professor Clunies Ross (1978: 24-25) graciously acknowledges that he 'may be overstating [Lam's] position' at the beginning of his discussion on exchange rate revaluation. He is under 'the impression that [Lam] is extremely dubious about the wisdom of the revaluations that have occurred' (p. 25). However he then examines at some length the possibility and adverse effects of devaluation during an export recession. This is of course only indirectly, if not remotely, related to 'the wisdom of revaluations'.

It may be useful to reiterate here some of the points already presented. Exchange rate revaluations have been designed primarily to insulate the domestic economy from overseas price inflation, through a postulated reduction in the rate of increases in retail import prices (Clunies Ross 1978: 10-11). A by-product or economic cost of such policy measures is a proportionate fall in the kina value of export earnings. This income reduction, in the case of village smallholders, cannot be fully compensated for by supposedly lower import prices. This is because these producers are most unlikely to spend all their export proceeds on imported commodities.

However empirical results presented in Lam (1977a), and in Tables 2 and 3 (pp. 43 and 49 above) clearly indicate two important facts. Firstly
the relationship between exchange rate revaluations and domestic inflation in general, and retail import prices in particular, in Papua New Guinea as well as in other South Pacific island economies is much more complicated than has generally been assumed so far. Secondly there is little solid evidence that the cost reducing impact of kina appreciation has been transmitted to any significant extent to retail import prices. Of course these empirical derivations are by no means conclusive. In the absence of more definitive results, however, one can not help but suggest that exchange rate revaluations may not have achieved their most important intended objective. If this is so then there has been considerable income redistribution in favour of the trading sector, which is mostly expatriate owned. This has been achieved at the expense of, among others, the village smallholders who receive generally very low export earnings (Lam 1977b: 14-15). Yet they constitute a very 'large and politically important section' of the population.

iii. Exchange rate depreciation. It is interesting to observe how a basically theoretical postulate is being translated into a categorical assertion. According to Professor Clunies Ross (1978: 24-25), 'Lam indicates (1978b: 18) that he holds to the second part of this statement', namely that devaluation may well be necessary in an export recession. It is necessary to quote the relevant passages in Lam (1978b: 17) in full.

So far the discussion [on economic stabilization] has been concerned with the possibility of some unique combinations of interest or exchange rate and budgetary position capable of achieving a certain measure of external and domestic stability at a sustainable level of reserve losses and minimum disturbances to consumption and employment, given the exchange constraints imposed by the export recession. It is, however, possible that no such policy combinations may be feasible (all emphasis added).

Could this postulate be irrelevant or unrealistic or too pessimistic, given the resources and policies of, and constraints on Papua New Guinea?

Other things being equal, one might expect that the stabilizing accumulation of overseas currencies during the [export] upswing phase should be sufficient to help the domestic economy ride out of a cyclical trough without an appreciable cut in real aggregate spending ... However other factors or events can certainly not be taken for granted. Indeed it is purely a matter of subjective judgement, based on quantitative assessments of current developments, whether or not the existing reserve stock is [sustainably adequate] for the duration of the export depression (all emphasis supplied) (Lam 1978b: 15).
The first line of fall-back defence is examined by both Professor Clunies Ross (1978: 25) and myself (1978b: 15-17). It concerns 'aggregate private expenditure and government programs', which may 'have to be directly or indirectly cut through tightened fiscal and monetary policy' (Lam 1978b: 18). Deflationary measures are indeed very bitter pills, socio-economically and politically, as the experience of 1975-76 reveals. Professor Clunies Ross believes that they would be adequate, and of course one would hope very strongly that they would be. He sees no need for any second-line adjustment policies, including devaluation, which are even more highly unpalatable. He may be right, although one feels that he could have examined, however briefly, the possibility of adverse structural changes noted in Lam (1978b: 18). These could generate serious divergence or distortion between the local and external cost relationships over time, with significant implications on exchange rate policy. In this connection, then, there appears to be a pressing need for further policy research into the impact of exchange rate movements, whether automatic or deliberate, on various financial and economic sectors in Papua New Guinea.

IV. Conclusion

I am very thankful to Professor Clunies Ross for his time and effort in going critically through my discussion and analysis of stabilization policies in Papua New Guinea. Hopefully this detailed rejoinder has been able to identify clearly several important areas of substantial agreement between us. Most significant is of course his strong support for a feasibility study of a State Trading Corporation as proposed in Lam (1977a and 1978c).

I have, moreover, attempted to clarify various points of considerable contention, through additional evidence and further elaboration of statements and arguments. In particular new empirical data do not appear to support Professor Clunies Ross's a priori supposition about the positive impact of exchange revaluation on retail import prices. It is also apparent that a number of disputed issues has emerged simply because some of the basic arguments were given insufficient attention, or were mis-read and over-emphasized.

In sum, then this reply is mainly concerned with the identification and clarification of points of consensus as well as of disagreement between Professor Clunies Ross and myself. However if it has, at the same time, contributed to a better appreciation of and stimulated further thinking on stabilization policies and problems in Papua New Guinea, it will have realized its limited objectives.
References


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