

REVIEW OF THE TARIFF REDUCTION PROGRAM

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EXECUTIVE SUMMARY

1. Assessment of the Tariff Reduction Program

1.1. Direction of Policy

The government's decision to reduce most tariffs via the Tariff Reduction Program (TRP) was sound. Well-designed tariff reduction programmes encourage greater efficiency and productivity in the private sector through greater exposure to international competition.

The TRP has been an important initiative to move tariff policy in the direction of the strategy adopted in the government's Medium Term Development Strategy (MTDS), with its emphasis on focusing "interventions on resources, products, and commodities in which Papua New Guinea enjoys a competitive advantage in global markets".

High rates of protection are inconsistent with the strategy laid out in the MTDS, because they attract resources into industries whose cost of production is high by international standards, and because they have an effect equivalent to a tax on the export industries that must compete in international markets. They penalise existing and potential export industries by raising their production costs, both directly through increases in the price of their inputs, and indirectly by contributing to a higher cost structure across the domestic economy.

The emphasis on outward-looking policies, including trade policy, in the MTDS is in line with the well-established conclusions of economic analysis and is also supported by a balanced assessment of the historical experience of developing countries. The competitive pressures arising from globalisation reinforce the imperative to focus on economic activities "in which Papua New Guinea enjoys a competitive advantage in global markets."

It is important to emphasise however that trade policy is only one element in the development strategy, and that success of the strategy depends on the effective implementation of reform across a broad range of economic policies.

A policy of reducing tariffs is also consistent with the findings of research on the poor productivity performance of the Papua New Guinea economy, which has emphasised greater openness to trade and investment as one of the keys to improved productivity growth. Improved productivity growth is in turn the key to raising living standards, which is the fundamental challenge facing the Papua New Guinea economy, with its relatively low per capita income level and its young, rapidly-growing population.

The likelihood that Papua New Guinea will face increasing pressure in future to remove tariffs on imports from major economic partner countries, through the negotiation of free trade agreements, is a further reason to encourage manufacturers to adjust to lower levels of protection, and to avoid the establishment of new industries that will need to be provided with substantial protection on a long-term basis in order to survive.

1.2. Impact of the Tariff Reduction Program on Economic Efficiency

The TRP has achieved substantial reductions in both nominal and effective rates of protection. Consultations with manufacturers indicated that the re-allocation of resources that would be expected to follow from a sustained program of tariff reduction has in fact been occurring. Firms have discontinued some production lines while introducing other new lines. New technology has been introduced and operations have been reviewed to achieve greater efficiencies. Some firms have expanded while others have contracted. While other factors beside the TRP have also contributed to these changes, this is important evidence that the TRP has been having its intended effect of improving economic efficiency in the private sector. There would be concern over the effectiveness of the TRP if none of these changes were occurring.

1.3. Impact of the Tariff Reduction Program on the Manufacturing Sector

Over the period of the TRP employment in the manufacturing sector increased more strongly than in any other sector. Consultations confirmed that a number of firms are continuing to confidently implement expansion plans, while others are struggling to cope with lower rates of protection. This variation in experience is to be expected in a period of substantial tariff reform. The overall performance of the manufacturing sector during the TRP demonstrates that tariff reform need not result in a contraction of the manufacturing sector as a whole. It was encouraging also to hear some manufacturers state that they are planning their future development on the assumption that in the longer term they will enjoy less protection than at present.

1.4. Design of the Tariff Reduction Program

Implementation of the TRP through a series of clearly-scheduled steps that were legislated in advance was important for the predictability and credibility of the program, enhancing its effectiveness and lowering the associated transitional costs. Predictability assists business in planning adjustments to tariff changes, while credibility increases the likelihood that business will respond in the manner intended, rather than investing resources in seeking to have the policy changed or reversed. Future tariff policy should also be based on gradual implementation over multi-year periods.

1.5. The Importance of Sound Macroeconomic Management

Improving macroeconomic conditions have made an important contribution to the increasingly buoyant business conditions encountered in Papua New Guinea over the last four years, following an earlier period of poor economic performance. Relatively buoyant business conditions during the recent period will have facilitated adjustment to the TRP, in contrast to the added difficulties resulting from the poor performance of the economy in the early years of the TRP.

Large increases in export prices have been an important factor behind the recent improvement in economic performance. Improved macroeconomic policies have also made a vital contribution, and this contribution will become even more vital in the event of any future downturn in the export prices.

To facilitate a favourable environment for reform in the future it is essential to maintain and build upon the recent improvements in macroeconomic management.

1.6. Exchange Rates

The impact of exchange rate changes can often be greater than the impact of tariff changes on the profitability of businesses in both the manufacturing and export-oriented sectors. In the early years of the TRP depreciation of the real exchange rate would have cushioned the impact on manufacturers of the tariff reductions. Over the life of the TRP however the net effect of movements in the real exchange rate will have been to reinforce rather than cushion the effect of the tariff changes. A recent study has also indicated that, over a longer time span, adverse movements in the real exchange rate have been important in retarding the expansion of export-oriented agricultural production.

1.7. Tariffs and Consumer Welfare

Census and other data indicates that it is likely that virtually the entire population of Papua New Guinea is affected by tariffs on consumer goods, especially basic consumer goods, and on other basic manufactured goods. Tariffs on basic manufactured commodities thus benefit a relatively small number of people in the manufacturing sector and other protected industries, while penalising all but a tiny proportion of the entire population. There is no reason to suppose that the conclusion indicated by the standard economic analysis of tariffs, that the benefits to consumers from reducing tariffs outweigh adverse effects on other sections of the community, is not applicable in Papua New Guinea.

1.8. Tariffs and Expanding Economic Opportunities

As a rationale for reducing tariffs, the objective of encouraging internationally competitive economic activities is also consistent with the urgent requirement to expand economic opportunities for Papua New Guinea's rapidly expanding population.

Export data indicates that internationally competitive economic activities in Papua New Guinea are overwhelmingly concentrated in the traditional export sectors: minerals and oil, agriculture, forestry and fisheries. Agriculture, forestry and fisheries has been the sector making the greatest contribution to economic growth in Papua New Guinea in recent years, and it is also the sector that accounts for the overwhelming majority of Papua New Guinea's economically active population. For the foreseeable future the rural sector and related sectors must play the leading role in generating the income-earning opportunities needed to cater for Papua New Guinea's rapidly increasing population. It follows that policy priority should be given to the need to reduce or eliminate impediments facing efficient market-oriented production in the rural sector as well as other export-oriented sectors. Policies that penalise these sectors should be avoided. The TRP has been consistent with this guiding principle.

At the same time the manufacturing sector does represent a significant share of employment, especially waged employment, in the urban sector. Alternative

employment opportunities in the urban sector are scarce and the potential for movement from the urban to rural sectors is limited. A sudden or sharp decline in employment in the manufacturing sector would be likely to have serious undesirable social consequences.

The importance of manufacturing employment in the urban sector underlines the principle that tariff reductions should be phased in gradually over time in order to minimise the transitional costs associated with the resulting structural changes. The design of the TRP, with tariff reductions phased in a series of clearly-scheduled steps, has also been consistent with this principle.

Continued growth in manufacturing employment is desirable, but it is also important that this should occur in ways that are consistent with the emphasis in the government's economic strategy on improving the overall efficiency of the economy and encouraging the movement of resources into internationally competitive activities. Once again the TRP is consistent with this approach.

1.9. Business Costs and Import Monitoring

Lack of progress in addressing the structural impediments and associated excessive business costs has economy-wide consequences for the effect of tariff reductions. The adjustment imposed on the manufacturing sector is unnecessarily severe, the positive impact on other sectors including the export sectors is diminished, and investments that might have facilitated the adjustment process are discouraged. The overall effect is to increase the adjustment costs and reduce the benefits associated with tariff reform, so that the full potential benefits of tariff reform are not realised. Inadequate progress in addressing the structural impediments and associated excessive business costs thus constitutes a serious policy failure, which must be rectified if future tariff policy is to produce its desired results.

Key structural impediments include infrastructure deficiencies, the high cost and unreliable supply of public utilities (especially electricity), law and order problems and resulting high security and insurance costs, high costs of road and maritime transport, and inadequate import monitoring. In addition to the adverse impact on the profitability of affected businesses the import monitoring problems threaten to undermine the entire integrity and effectiveness of tariff policy.

Addressing the problems of import monitoring is a complicated task. One set of issues relates to the need for more adequate definition and better coordination of the legal powers of the agencies involved, to ensure that effective enforcement is possible. The need for internal reform and improvements in procedures within agencies such as the Internal Revenue Commission is another key issue. It is acknowledged that efforts in this direction are already being made, at times involving considerable courage on the part of the executives concerned. These efforts need to be much more strongly supported.

1.10. Adjustments to Improve Operation of the Existing Tariff Structure

The following adjustments to the existing tariff structure and its administration are proposed:

- Removal of remaining tariffs on goods that are used as inputs by export industries and that are not produced in Papua New Guinea.
- Removal of tariffs on other goods not produced in Papua New Guinea, except in specific cases where sound reasons can be identified for not doing so.
- Establishment of a procedure allowing for removal of tariffs on intermediate goods in cases where it can be demonstrated that local producers cannot meet the specification required by the end-user industry, or that the product supplied by the local producer is of unacceptable quality.
- Conversion of remaining non-ad valorem tariffs to appropriate ad valorem rates except in cases where there are compelling reasons for not doing so.
- For products that have a clearly-defined international price, and for which problems of fraudulent declarations of value for duty purposes have been identified, use of non-ad valorem duties to remove the incentive for fraudulent declaration of value.

2. Future Tariff Policy

2.1. Current Tariff Levels and the Future of Tariff Reform

Despite the reductions achieved by the TRP, the protective and prohibitive tariff rates in particular remain high. Furthermore, these rates appear to be associated with effective rates of protection that are still often exceptionally high, as well as being highly variable across products. High effective rates of protection indicate that serious inefficiencies in resource use remain, while the variability of effective rates of protection indicates that the current tariff structure is supporting production activities of widely varying efficiency in resource use. The high and variable rates of effective protection reflect the combined effect of the ongoing high protective and prohibitive tariff rates and the gap between these tariff rates and the tariffs applied to production inputs, which are either dutiable at the intermediate rate of 15% or imported duty-free if they are not produced in Papua New Guinea.

To produce more moderate and uniform effective rates of protection it is necessary both that the protective and prohibitive rates should be reduced further, and that in the process they should be better aligned with the tariff rates applicable to production inputs.

Industries currently protected by tariffs at the prohibitive rate should not be exempted from future tariff reductions, since the resulting widening of the gap between tariffs applicable to these and other industries would over time become increasingly distortionary, providing increasing incentives for the use of resources in activities whose efficiency relative to other activities in the economy would be steadily declining. At the same time the special factors that resulted in the provision of higher rates of protection for these industries should be recognised by designing tariff reduction programs for each industry that take account of these factors.

2.2. Policy Process

It is inevitable that from time to time the government will receive requests for special tariff protection for “infant” industries, or for special relief in the form of tariff increases for industries claiming to face adverse circumstances. The recommendations in this report will also require decisions from time to time on the removal of tariffs on particular products, where the local manufacturer is unable to meet the required specification or where the product supplied by the local manufacturer is shown to be of unacceptable quality.

It is important that the policy process by which such decisions on tariff policy are made is transparent, and that it is required to reach decisions on the basis of clearly defined criteria, designed to ensure that decisions are consistent with the government’s objectives of improving the efficiency of the economy and encouraging economic activities in which Papua New Guinea enjoys a competitive advantage in global markets. The process should be designed to guard against *ad hoc* decisions that favour special interests, which have proved costly for Papua New Guinea in the past.

Responsibility for making recommendations on such decisions should be entrusted to a body specially constituted for this purpose, with membership drawn from agencies and organisations with responsibilities related to improving the efficiency and competitiveness of the economy and to enhancing consumer welfare. In the interests of transparency all recommendations should be made public, along with the information and criteria on which the recommendations are based.

Infant industry protection should be provided only for industries that can be clearly shown to be capable of prospering without special protection within a reasonably short time period. It should be a basic principle that any special protection introduced on infant industry grounds or as tariff relief should be provided on a temporary basis only, with a finite expiry date.

2.3. Study on Manufacturing Competitiveness

An analysis of Papua New Guinea’s potential manufacturing competitiveness would be valuable as a reference point for future discussions of industry policy, and for assessment of any future applications for infant industry protection.

2.4. Downstream Processing

A number of export-oriented downstream processing operations have already emerged in response to commercially profitable opportunities. Government can best support these developments by policies aimed at improving the business and investment climate, including the reduction or removal of the tax-equivalent effect on export-oriented production represented by tariffs. There is in general no case for encouraging the development of export-oriented downstream processing activities that cannot achieve internationally competitive levels of efficiency. Since the processed products must be sold at internationally competitive prices, the result would necessarily be to lower the returns to producers of the raw product, leading in all likelihood to lower levels of production.

Downstream processing for the local market faces the constraint of a small local market, which will often frustrate the achievement of an economic scale of production, so that these ventures will typically need protection in order to survive. This appears to be the experience of the downstream activities aimed at the local market that have emerged to date. Unless a convincing case can be made to the contrary, the finished goods produced by domestically-oriented downstream processing operations should be protected by tariffs at the TRP protective rate. Should increased protection be requested, the request should be evaluated in accordance with appropriate criteria for infant industry protection or the provision of short term tariff relief.

2.5. Next Steps in Tariff Policy

The government's decision to reduce most tariffs via the TRP was sound, as already stated above. The emphasis in the MTDS on focusing "interventions on resources, products, and commodities in which Papua New Guinea enjoys a competitive advantage in global markets" is also sound. Further reductions in tariffs are desirable, with an emphasis on achieving lower and more uniform effective rates of protection. This can be achieved by progressively lowering the protective and prohibitive tariff rates until they are more closely aligned with the intermediate tariff rate. Future tariff reductions should be scheduled in a series of clearly-timetabled steps that are legislated in advance, in the same way as the TRP.

At the same time it is very clear that tariff reform will not fully achieve its objectives unless it is accompanied by measures to address the structural impediments in the Papua New Guinea economy in order to reduce excess business costs, and by a continuation and further strengthening of the recent improvements in macroeconomic management. Evidence of progress in addressing business costs will also be an important factor in determining the degree of business support for tariff reform.

The installation of a new government following this year's election offers an opportunity to make a fresh start on the business cost issue as well as on tariff policy.

The implementation of the final step of the TRP has left a vacuum in tariff policy. It is very desirable for that vacuum to be filled by a government statement of its intention that tariffs are to be further reduced, so that business is left in no doubt as to the future direction of tariff policy. The government should indicate that steps to implement this intention will be announced in the 2009 Budget, after consultations with stakeholders.

The government should also move immediately to implement credible measures aimed at reducing business costs. Recognising that evidence of improvement in this area is important for securing acceptance of further tariff reform, it should aim to be able to demonstrate tangible progress by the time of the 2009 Budget.

3. Recommendations

The recommendations arising from this review are set out as Chapter 7.

CHAPTER 1

THE TARIFF REVIEW

The Tariff Reduction Program (TRP), introduced in 1999, involved a timetabled program of tariff reductions over the years from 1999 to 2006. During this period tariff policy in Papua New Guinea essentially followed the framework set out in the TRP, although there were a small number of *ad hoc* deviations from the program that are discussed later in the report.

With the last of the tariff changes scheduled under the TRP having been implemented in 2006, the government clearly has decisions to make regarding the future direction of tariff policy. A review of the TRP is obviously desirable as a part of the decision-making process. This tariff review was commissioned to address these needs.

Terms of Reference

Under its terms of reference the review was required to enquire into:

- (i) and make a comprehensive assessment of the costs and benefits (if any) owing to the implementation of the 2003 TRP recommendations, particularly the reduction in tariffs;
- (ii) the level and composition of imports and exports;
- (iii) the effective rates of protection provided through import tariffs;
- (iv) the benefits, costs and overall effect of tariffs and the TRP to PNG, including consumers, employees, businesses as well as importers and exporters;
- (v) the extent to which the TRP is providing incentives (if any) to value adding industries in PNG, particularly the downstream processing of agricultural goods, minerals and hydrocarbons;
- (vi) whether the protection to any sector should be varied, based on the contribution of that sector to the economy and the long term sustainability of the industry;
- (vii) the benefits and disadvantages arising to PNG from international tariff and trade reforms under the Asia Pacific Economic Cooperation (APEC), the World Trade Organisation (WTO), and other relevant international trade agreements.

At the same time the review was required to:

- (i) be mindful of the government's desire/initiative to improve the economy;
- (ii) hold consultations with businesses and consumers;
- (iii) take account of other reports and studies on the advantages and disadvantages of protecting manufacturing and agricultural sectors in small, open economies; and
- (iv) take account of PNG's commitment under the APEC, WTO Agreement, and other international trade agreements, including other State commitments to the local industries, if any.

Consultations with Papua New Guinea stakeholders took place in the months of March and April 2007. The consultations involved a series of meetings with government agencies and other public bodies with policy-making responsibilities, private sector representatives and industry associations, and independent experts. These meetings took place in Port Moresby, Lae, Madang, Goroka and Kokopo. Meetings with private sector groups representing a wide range of manufacturing industries as well as retail businesses were organised with the efficient assistance of the Manufacturers Council of Papua New Guinea. Meetings were also arranged with representatives of agricultural commodity exporting industries, with some assistance from the Rural Industries Council. Advertisements were placed in the national press inviting interested parties to arrange consultative meetings with the reviewer, but this drew almost no response. Consumer groups did not seek meetings with the reviewer, and the review accordingly had to depend on relevant agencies such as the Independent Consumer and Competition Commission (ICCC) to represent the consumer interests.

A survey was also conducted of manufacturers to obtain information on how the TRP has affected them. Results of the survey are summarised in Appendix A and further information based on the survey is presented in Table 18. Since only a limited number of manufacturers responded to the survey, the results can be taken as illustrative only, rather than as fully representative of manufacturers' views. An effort was made to conduct a similar survey of agricultural commodity exporting industries through the Rural Industries Council, but no responses were received.

Government agencies, especially the Papua New Guinea Treasury, assisted with the arrangements for these meetings, but at the same time it was made very clear that the review was expected to be fully independent, and that no effort would be made by Treasury to guide the findings of the review. Consultations with government agencies indicated an expectation that the review will produce recommendations that can serve as a reference framework for decisions on tariff policy to be made in the 2008 and subsequent Budgets.

CHAPTER 2

THE TARIFF REDUCTION PROGRAM

The TRP was introduced in 1999, as part of a reform agenda agreed in exchange for financial assistance from the international financial institutions. Its principal features include:

- Duty rates for most goods, with the exception of goods that are produced or could potentially be produced in Papua New Guinea, were set at zero. As a result approximately three quarters of Papua New Guinea's imports now enter the country duty free.
- For goods that are produced or could potentially be produced in Papua New Guinea, duty rates were consolidated into three bands: the prohibitive rate, the protective rate, and the intermediate rate. Initial rates were set for each band, and the TRP then provided for these rates to be reduced in three timetabled steps of 5%.

The protective rate is intended to provide protection for producers of finished goods. The intermediate rate applies to inputs into the production process that are produced or could be produced in Papua New Guinea. The prohibitive rate is designed as a major deterrent to imports of certain goods for which local production has been deemed to be especially valuable. Prior to the TRP tariff rates for these products had ranged from 55% to 100% but the rates were consolidated for most of these products at 55% in 1999, before being reduced further under the TRP.

The timetable, together with the beginning and ending rates for each band, are set out below in Table 1.

Table 1: Timetable for Tariff Reduction Program (1 January Basis) 1999-2006

	1999-2000	2001-2002	2003-2005	2006
Intermediate Rate	30%	25%	20%	15%
Protective Rate	40%	35%	30%	25%
Prohibitive Rate	55%	50%	45%	40%

Source: White Paper on Tariff Reform

A small number of products were subject to different timetables and/or ending rates, because of government contractual obligations to the producers and/or previous commitments to very high tariff rates. Products in this category included sugar, salt, canned mackerel and veneered and laminated wood (including plywood).

A further category of goods subject to different tariff arrangements are those to which specific duties apply, expressed as a rate per unit of volume, weight, or alcohol content. Products in this category include beverages, tobacco products and animal feed. The tariffs on beer and cigarettes are designed to be prohibitive.

In 2003 the Manufacturers' Council of Papua New Guinea proposed that the TRP should be temporarily suspended, leaving the rates at the penultimate steps of 45%, 30% and 20% respectively. The 2003 Tariff Review was commissioned in response to this proposal and recommended that the TRP should be implemented as scheduled, including the final step. With the implementation of the final step the prohibitive, protective and intermediate rates are now set respectively at 40%, 25% and 15%.

There is no schedule currently in place for further reductions beyond 2006. The 2003 Tariff Review report recommended that the TRP should be continued beyond 2006, with further reductions of 5% in each rate every three years, commencing in 2009, until all tariffs are at 15%. On this basis the protective and prohibitive rates would reach 15% in 2012 and 2021 respectively. This recommendation has not so far been adopted.

Parallel to the introduction of the TRP the government introduced a Value Added Tax, or VAT (now renamed Goods and Services Tax, or GST) to offset revenue losses from reduced tariffs and to replace provincial sales taxes. The VAT/GST system is particularly useful for export industries because exports can readily be zero-rated, so that the VAT/GST does not have to be built into export prices. Exporters are also able to apply for drawback of duties paid on goods that have been used in producing exports. The introduction of VAT/GST in parallel with the implementation of the TRP represented a basic change in the approach to the role of import taxes and sales taxes in government revenue generation. Under this changed approach tariffs were no longer to be viewed as significant revenue-generating instruments. That role was to be taken over by VAT/GST, which was also to replace the varying array of sales taxes applied at the provincial level.

2.1 Rationale of the Tariff Reduction Program

The TRP was based on the recommendations of the government's 1997 White Paper on the Tariff Reform Program (the White Paper), which in turn followed from the findings of a review of tariff policy in Papua New Guinea submitted in 1996 by the World Bank.

The purpose of the TRP was to encourage a more efficient and productive private sector through greater exposure to international competition. At the same time the introduction of the VAT/GST was designed to ensure that there would be no concern over revenue losses arising from the TRP, while at the same time introducing a more modern and efficient approach to the design and collection of indirect taxes.

While the White Paper acknowledged that industries in developing countries may need assistance at least for some period of time, it also pointed out that high tariffs contradict the objective of a more efficient and productive private sector, both by encouraging relatively inefficient production in the protected industries and by imposing higher costs on the industries that use the products of the protected

industries as their inputs. Export industries, including in the agriculture sector, are as a result likely to be penalised i.e. face negative protection. Lower tariffs would thus act as a stimulus to export industries and industries with export potential, and in so doing would improve the efficiency of resource allocation by encouraging the direction of resources towards production of goods in which Papua New Guinea enjoys comparative advantage. Tariffs also result in higher prices to consumers, and this effect can be especially regressive when tariffs are applied to goods that figure prominently in the consumption baskets of low income households. The TRP therefore aimed in general to reduce tariff protection of domestic industries to more moderate levels, without however eliminating it entirely.

Both the White Paper and the World Bank review acknowledged that a program of tariff reduction such as the TRP would give rise to significant adjustments, especially in the protected industries, and that these adjustments would be unnecessarily costly if tariffs were reduced too quickly. The adoption of a gradual program of tariff reductions through a series of clearly scheduled steps was designed to allow the private sector to plan ahead for the necessary adjustments, and in so doing to minimise the transitional costs associated with the TRP.

The White Paper also followed the World Bank review in acknowledging that tariff reform will not fully deliver its desired results unless other necessary reforms are addressed simultaneously. The White Paper accordingly emphasised that in parallel with the TRP the government should:

- Strengthen human resources through better education and training programs.
- Take steps to improve the law and order situation.
- Upgrade and maintain physical infrastructure (roads, ports etc).
- Deregulate the domestic shipping industry.
- Improve the supply and lower the cost of public utilities.
- Improve the efficiency of the bureaucracy through public sector reform.
- Maintain a low-inflation macroeconomic policy.

As will be discussed in more detail later in this report, it is the perceived failure of government to deliver the desired changes in most of these areas that has been at the heart of the strongest objections to the TRP.

The White Paper and the TRP also followed the World Bank review in adopting, at least in the short term, a “tiered” or “cascading” tariff structure, with higher tariffs on finished goods, lower tariffs on intermediate goods and still lower tariffs on capital goods. The White paper noted that the lower tariffs on inputs would partly cushion the effect of the reduction of tariffs on finished goods. The World Bank had also noted however that this should be viewed as a temporary expedient and that the long term target should be a uniform tariff rate on all goods.

A “tiered” tariff structure, in a somewhat different form, had also been one of the recommendations of the earlier Brogan Report (Report of the Working Group on Tariff Policy and Administration), which had been largely accepted by the government of that time. The White Paper and World Bank review however moved away from the Brogan Report in de-emphasising the revenue-raising function of tariffs, arguing that VAT and excise taxes should be used as alternative instruments

for this purpose, leaving the provision of moderate levels of protection as the prime function of tariffs.

2.2 The Medium Term Development Strategy

In 2004 the Papua New Guinea government adopted its Medium Term Development Strategy (MTDS) for 2005-2010. The MTDS is based on ten guiding principles. The TRP was consistent with these principles, in particular the fifth principle (Competitive Advantage and the Global Market): “to focus interventions on resources, products, and commodities in which Papua New Guinea enjoys a competitive advantage in global markets”.

This principle implies acceptance of the opportunity provided by international trade for countries to make efficient use of their resources by specialising in the production of goods and services best suited to their resource endowments. It also recognises the need for international competitiveness in order to overcome the limitations of the domestic market by exploiting opportunities in the global economy.

High rates of protection contradict the fifth principle of the Medium Term Development Strategy by attracting resources into industries whose cost of production is high by international standards, and by acting like a tax on the export industries that must compete in international markets. They penalise existing and potential export industries by raising their production costs, both directly through increases in the price of their inputs, and indirectly by contributing to a higher cost structure across the domestic economy.

The MTDS thus brings into focus the development-related rationale for the TRP. High rates of protection are inconsistent with an efficient development strategy, and as such needed to be reduced as a matter of priority. Lowering of protection rates was intended to reduce the attractiveness to investment of sectors with relatively high costs of production and to encourage the movement of resources into industries with cost structures that are more internationally competitive, as well as to encourage existing industries to become more cost-competitive. The TRP also assisted movement in this direction by enabling producers to purchase cheaper inputs for their production processes. Consumers were expected to benefit through the resulting lower prices of goods and services. To the extent that downward pressure on prices extended to basic commodities the TRP had the potential to make a significant contribution to poverty reduction.

2.3 Revenue Performance

In 1998 tariff revenue of K394million accounted for 17.3% of government revenue. In 2006 tariff revenue of K96.9 million accounted for 2.2% of government revenue, while GST and excise duty of K815.2 accounted for 18.3% of government revenue.

The evolution of government revenue since 2000 is shown in Table 2. The table demonstrates that tariffs are now of very minor significance as a source of

Table 2: Evolution of Government Revenue During The Tariff Reduction Programme								
K million	2000	2001	2002	2003	2004	2005	2006	2007
Tax on Income and Profits	1475	1509.2	1491	1786.6	2223.3	2770.9	3644	3071.6
Personal Income Tax	549.2	598.8	694.3	758.4	826.5	841	878.6	890.3
Company Tax	265.1	252	310.9	334.5	436.7	516.5	477.5	511.7
DWT	53.8	57.9	62.1	117.2	123.2	154.7	176.3	168.1
Mining and Petroleum Taxes	426.9	434.9	258.9	396.5	634.3	1076.8	1900.6	1292.8
Interest Withholding Tax	64.2	51.3	21.9	41.4	33.3	17.9	18.2	21.9
Other Direct	57	51.9	69	55.3	78.6	72.1	91.8	80.8
Gaming Tax	58.8	62.4	73.9	83.3	90.7	91.9	101	106
Domestic Taxes on Goods and Services	504	505.4	575.7	596	620.8	657.3	760.1	758
Excise	175.4	186.5	178.8	174.7	203.1	255.9	304.2	309.8
GST	218.4	198.1	289.6	311.8	315.7	326.2	390.2	420
Mining Levy	108.5	120.2	105.9	101.8	101.3	73.1	62.8	25.6
Other Indirect	1.7	0.6	1.4	7.8	0.7	2.1	2.9	2.6
Taxes on International Trade	341.5	280.3	303.2	295.3	375.9	315.9	320.7	300.3
Import Duty	88.8	73.2	79.5	73.7	151.1	101.1	89.5	96.9
Export Duty	133.8	98.1	106.7	111.8	101.5	136.3	150	118
Excise Duty on Imports	118.9	109	117	109.8	123.3	78.5	81.2	85.4
Tax Revenue	2320.5	2294.9	2369.9	2677.9	3220	3744.1	4724.8	4129.9
Tax on Income and Profits	63.6%	65.8%	62.9%	66.7%	69.0%	74.0%	77.1%	74.4%
Personal Income Tax	23.7%	26.1%	29.3%	28.3%	25.7%	22.5%	18.6%	21.6%
Company Tax	11.4%	11.0%	13.1%	12.5%	13.6%	13.8%	10.1%	12.4%
DWT	2.3%	2.5%	2.6%	4.4%	3.8%	4.1%	3.7%	4.1%
Mining and Petroleum Taxes	18.4%	19.0%	10.9%	14.8%	19.7%	28.8%	40.2%	31.3%
Interest Withholding Tax	2.8%	2.2%	0.9%	1.5%	1.0%	0.5%	0.4%	0.5%
Other Direct	2.5%	2.3%	2.9%	2.1%	2.4%	1.9%	1.9%	2.0%
Gaming Tax	2.5%	2.7%	3.1%	3.1%	2.8%	2.5%	2.1%	2.6%
Domestic Taxes on Goods and Services	21.7%	22.0%	24.3%	22.3%	19.3%	17.6%	16.1%	18.4%
Excise	7.6%	8.1%	7.5%	6.5%	6.3%	6.8%	6.4%	7.5%
GST	9.4%	8.6%	12.2%	11.6%	9.8%	8.7%	8.3%	10.2%
Mining Levy	4.7%	5.2%	4.5%	3.8%	3.1%	2.0%	1.3%	0.6%
Other Indirect	0.1%	0.0%	0.1%	0.3%	0.0%	0.1%	0.1%	0.1%
Taxes on International Trade	14.7%	12.2%	12.8%	11.0%	11.7%	8.4%	6.8%	7.3%
Import Duty	3.8%	3.2%	3.4%	2.8%	4.7%	2.7%	1.9%	2.3%
Export Duty	5.8%	4.3%	4.5%	4.2%	3.2%	3.6%	3.2%	2.9%
Excise Duty on Imports	5.1%	4.7%	4.9%	4.1%	3.8%	2.1%	1.7%	2.1%
Tax Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tax Revenue	2320.5	2294.9	2369.9	2677.9	3220	3744.1	4724.8	4129.9
Non-Tax Revenue	144.5	171.6	169.9	239.2	245.1	279.3	371.7	327.2
Total Revenue	2465	2466.5	2539.8	2917.1	3465.1	4023.4	5096.5	4457.1
Infrastructure Tax Credits			55.2	40	34.7	20.3	71.1	85.4
Grants	518.4	719	691.4	693	849.7	1283.1	994	879.1
Total Revenue and Grants	2983.4	3185.5	3286.4	3650.1	4349.5	5326.8	6161.6	5421.6
Import Duty as % of government revenue	3.6%	3.0%	3.1%	2.5%	4.4%	2.5%	1.8%	2.2%
GST and Excise Duty as % of gov't revenue	20.8%	20.0%	23.0%	20.4%	18.5%	16.4%	15.2%	18.3%
Tax Revenue	77.8%	72.0%	72.1%	73.4%	74.0%	70.3%	76.7%	76.2%
Non-Tax Revenue	4.8%	5.4%	5.2%	6.6%	5.6%	5.2%	6.0%	6.0%
Total Revenue	82.6%	77.4%	77.3%	79.9%	79.7%	75.5%	82.7%	82.2%
Infrastructure Tax Credits			1.7%	1.1%	0.8%	0.4%	1.2%	1.6%
Grants	17.4%	22.6%	21.0%	19.0%	19.5%	24.1%	16.1%	16.2%
Total Revenue and Grants	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Import Duty as % of revenue and grants	3.0%	2.3%	2.4%	2.0%	3.5%	1.9%	1.5%	1.8%

government revenue, in each of the last three years accounting for less than 3% of government revenue and less than 2% of government revenue plus grants. In the same

three years GST and excise duty consistently accounted for over 15% of government revenue plus grants.

2.4 Departures from the TRP

There have been a number of departures from the TRP, some of which were and continue to be of considerable importance.

- In 2002, the government entered into a legal contract with Ramu Sugar Limited to maintain the tariff rate on sugar at 70% until 2011, instead of lowering it to 40% by 2006 as scheduled under the TRP.
- In 2003 a tariff of 40% was introduced on salt, which had previously been subject to a zero duty.
- In the 2007 Budget, the tariff on canned dark-meat tuna was raised from 15% to 20% and the tariff on carbonated soft drinks from 15% to 25%. The import tariff on beans used as inputs for making canned baked beans was reduced from 25% to zero, and the tariff on canned baked beans raised from zero to 25%. These changes were enacted for one year only, and are subject to review thereafter. The government also decided to maintain until the end of 2011 its undertaking to maintain an import tariff of 20% on canned mackerel.

These *ad hoc* changes to tariff policy were the subject of considerable adverse comment from participants at the review consultations.

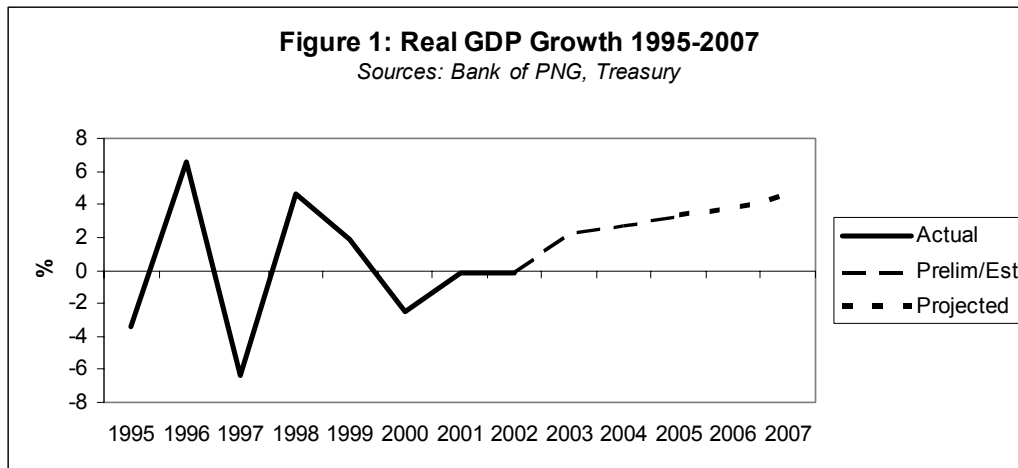
CHAPTER 3

THE PAPUA NEW GUINEA ECONOMY: PERFORMANCE

The early years of the 21st century have been marked, at least since 2002, by encouraging macroeconomic performance, and correspondingly buoyant business conditions. Rises in export prices, which have been spectacular for some commodities, have clearly been a factor, but credit must also be given to the government's macroeconomic policy and the monetary policy of the Bank of Papua New Guinea.

3.1 Growth

After a volatile growth performance in the late 1990s, and further experience of negative or zero growth in 2000-2002, the Papua New Guinea economy has been steadily expanding through the years 2003-2007. This is illustrated in Figure 1. During 2003-2007 GDP growth has also been exceeding population growth by a steadily increasing margin, so that there has been some increase in per capita GDP as well.

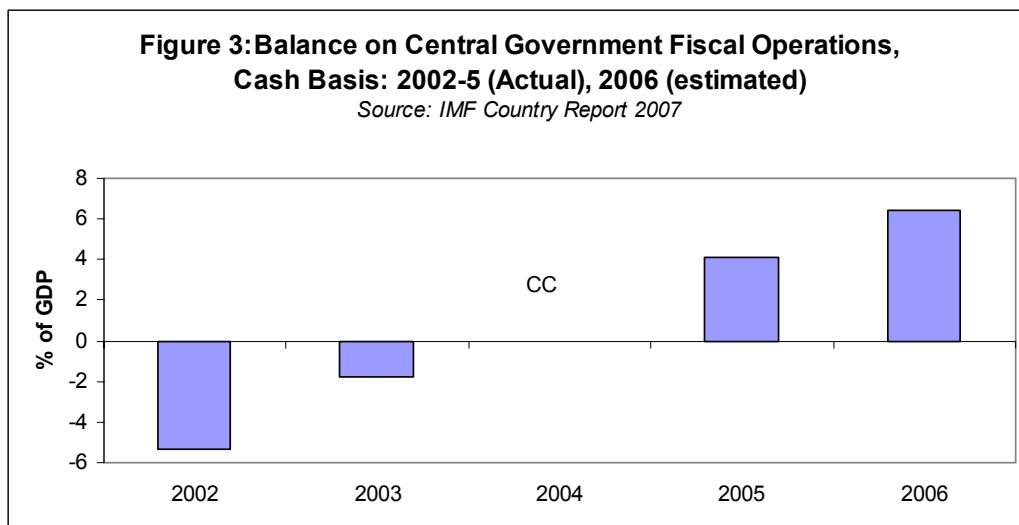
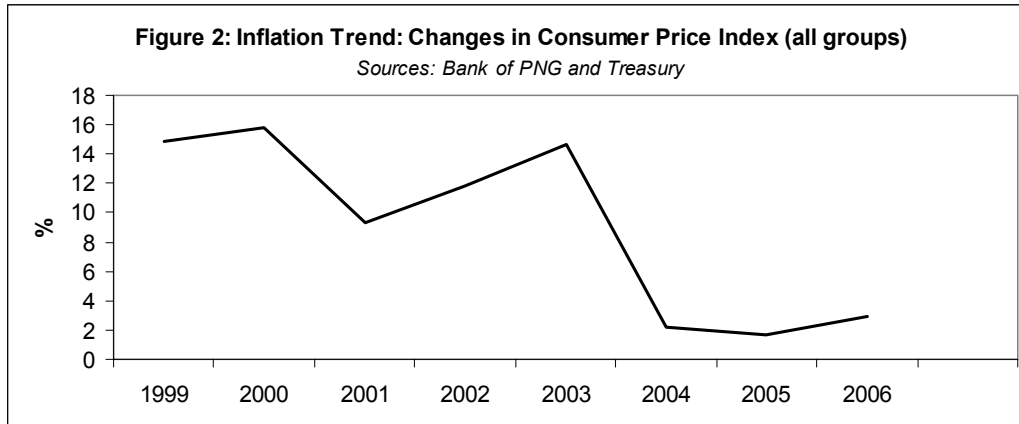


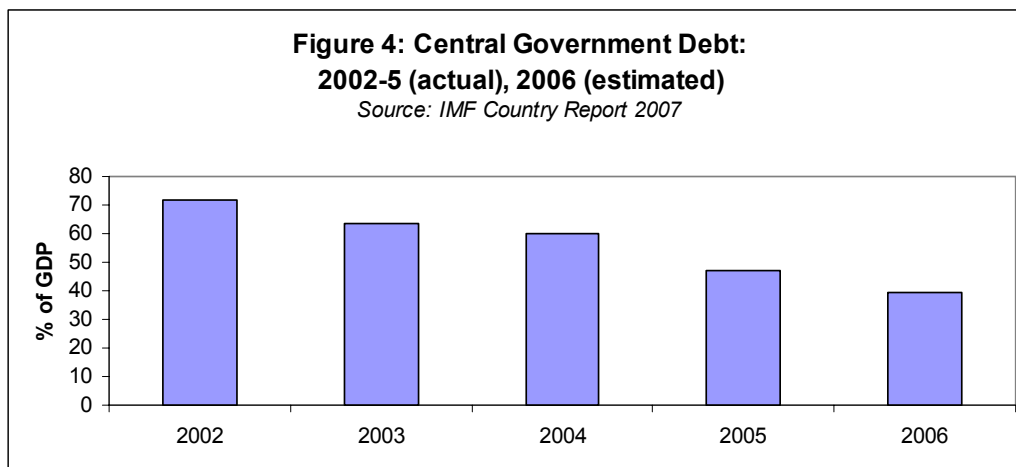
3.2 Inflation

Figure 2 shows that inflation took somewhat longer to be brought down to more satisfactory levels, reaching 2.2% in 2004, after running at double-digit levels in all but one of the preceding five years. Furthermore there is the hint of a resumed upward trend in 2006. It also has to be noted that a number of participants at the consultations expressed considerable scepticism as to whether the consumer price index is currently providing an accurate measure of inflation.

3.3 Fiscal Policy

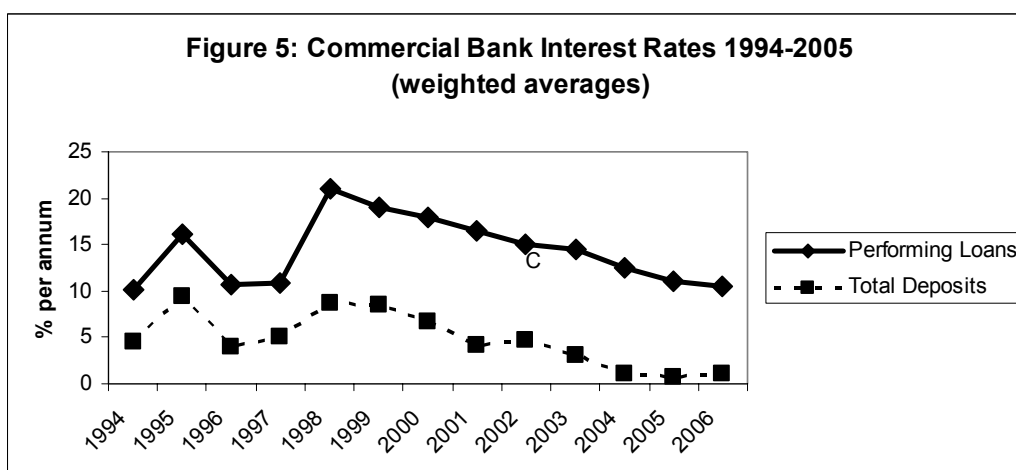
The central government's overall fiscal balance has steadily moved from deficit into surplus over the years 2002-2006 (Figure 3). There has been an accompanying fall in central government debt (Figure 4). Some concern was expressed during consultations at the potential impact of the election cycle on the government's fiscal position in 2007 and subsequently.





3.4 Interest Rates

As might be expected, improved fiscal and monetary policy performance has been reflected in a downward trend in interest rates. Figure 5 illustrates this for two representative commercial bank rates. It can be noted however that the spread between deposit and loan rates has remained consistently high, and the loan rates correspondingly also remain relatively high, despite the fact that they have fallen steadily since 1998.



3.5 Export Prices and Volumes

Table 3 highlights the sometimes spectacular changes that have occurred in export prices since 2001. Prices for gold, copper and oil in the mineral sector have displayed a strong upward trend over the whole period, during which gold and oil prices have approximately doubled, while copper prices have risen almost fourfold.

	2001	2002	2003	2004	2005	2006
Cocoa	260.3	508.8	523.2	429.1	369.5	377.4
Coffee	124.9	143.3	146.2	147.5	215.5	217.1
Copra	120.5	182.7	189.2	219.9	187.5	159.7
Copra Oil	169.9	238.6	289.2	360	345.3	289.7
Palm Oil	260.3	388.5	409	410.8	367.8	378
Logs	116	124.4	116.3	111.9	113.2	117.3
Non-Mineral	179.6	270.3	292.7	279.1	255.9	255.1
Gold	245.6	303.9	326	327.5	319.5	473
Copper	284.9	338.2	344	499.5	617.3	1113.7
Crude Oil	546.9	585.9	681.3	826.6	1040.7	1290.7
Mineral	376.1	401.8	438.5	502.2	614.2	959.3
<i>Source: Bank of PNG</i>						

Price trends for non-mineral exports have been more mixed. Prices for cocoa, copra, copra oil and palm oil all appeared to peak in 2004 before falling away somewhat, although an upward movement re-appeared in 2006 for cocoa and palm oil. Log prices fluctuated over the period but were only slightly higher in 2006 than in 2001.

The picture presented in Table 3 contrasts sharply with the outcome that was anticipated at the time of the 2003 Tariff Review, when it was believed that the commodity boom was coming to an end. Nevertheless, it was clear from the consultations that many in both business and government still anticipate that the recent trend in commodity prices will eventually be at least partially reversed, and that it is therefore appropriate for attention to be focused both on the most effective way for government policy to exploit the current windfall gains and also on developing sufficient resilience in the economy to withstand any future significant fall in export prices.

	2001	2002	2003	2004	2005	2006
Cocoa	140.4	128.8	148.8	153.2	163.2	162.4
Coffee	79.8	76.9	83.9	76.8	87.9	63.7
Copra	92.2	65.1	34.8	79.6	92.4	52.6
Copra Oil	78.1	139.6	236.2	223.3	269.4	205.5
Palm Oil	141.9	148.7	150.1	155.7	158.8	166.4
Logs	41.2	55	60.4	60.3	68.1	79.6
Non-Mineral	94.5	101.5	115.4	117.7	123.2	115.8
Gold	123.9	105.9	122.6	120.8	126.4	100
Copper	82.1	82.1	111.3	83.9	109.2	104.6
Crude Oil	49.2	35.4	34.5	28.9	30.6	33.2
Mineral	86.3	78.1	93.6	87.4	94.7	80.9
<i>Source: Bank of PNG</i>						

Trends in export volumes have been much more mixed than for export prices, as shown in Table 4, indicating that supply responses in the short-term at least to the rises in prices have not always been what might have been expected. Volumes of mineral exports have fluctuated considerably, but for both gold and crude oil were substantially lower in 2006 than in 2001, with only copper registering higher volumes

in the later year. Among non-mineral exports, volumes for palm oil and logs rose steadily if not spectacularly. Copra volumes fell sharply before rising to a peak in 2005 and then falling away again, while copra oil volumes in contrast rose sharply to a peak in 2003, fell in 2004 before peaking again in 2005, and then falling once again. Cocoa volumes fell in the early part of the period before rising steadily over most of the remainder of the period, while coffee volumes appear to have been on a fluctuating downward trend.

Data on export values in Table 5 shows that the value of most main categories of exports have been on a steady and in some cases very strong upward trend since 2001, indicating that the effect of rising prices has generally dominated any downward movements in volumes. Exceptions were marine products and logs which fell away in 2004, sharply in the case of marine products, before rebounding in 2005 and 2006. The value of agricultural exports dropped in 2006.

The buoyancy in current exports masks some underlying potential vulnerabilities that are also indicated in the data. First, the dominant share of mineral exports in total exports is among other things an indicator of the vulnerability of the Papua New Guinea economy to any collapse in mineral prices, especially if this were to happen in conjunction with a substantial downturn in mineral production in Papua New Guinea. The weakness in the trend of mineral export volumes in recent years serves to further underline this point. Second, given the increased reliance on non-mineral exports that would inevitably follow a severe downturn in mineral export receipts, the relatively weak volume performance of several traditional non-mineral exports, even in a time of generally buoyant prices, also emphasises the economy's potential vulnerability to such a downturn.

Concern on this score is reinforced by the results of a recent study published by the Institute of National Affairs in 2006, which takes a longer-term perspective, and concludes that over the period since 1975, the “growth performance of the export-oriented agricultural sector of Papua New Guinea agriculture has generally been weak.” Strong growth in production has occurred only in palm oil, but from a low base, while average growth in production of coffee, cocoa, natural rubber and coconut-based production has been no more than modest. Exchange rate movements and tariff policy are identified in the study as the key factors contributing to this outcome.

Table 5: Value of Total Exports and Exports of Main Product Categories 2001-2006

	2001	2002	2003	2004	2005	2006
Agricultural and Other Exports	803.8	1084.9	1390.8	1688	1949.9	1653.3
Forest Products						
Logs	255.7	365.5	369.6	355.7	404.9	491
Total	332.3	414.1	416	459.5	476.3	526.7
Marine Products	75.3	94.1	125.3	58.2	69.4	92.2
Minerals						
Crude Oil	1889.4	1431.2	1631.9	1652.2	2283.1	2988.5
Gold	2115.1	2294.8	2811.2	2779.5	2834.1	3090.9
Copper	859.1	1018.7	1415	1544.2	2497.7	4329.5
Total	4895.6	4774	5890	6007.5	7651.9	10459.2
Total Exports	6107	6387.1	7822.1	8213.2	10147.5	12731.4
<i>Source: Bank of PNG</i>						

3.6 Balance of Payments

Not surprisingly in the light of the export performance, the balance of payments position has remained robust throughout the period since 2001. Table 6 highlights the continuing strength of the balance of merchandise trade, which has exhibited a steadily increasing surplus.

Inward Foreign Direct Investment								
K million, 2001-2006								
	1998	1999	2000	2001	2002	2003	2004	2005
Exports	3707	5006	5813	6105	6387	7842	8233	10168
Imports	2231	2760	2775	3165	4197	4231	4703	4732
Balance	1476	2246	3038	2940	2190	3611	3530	5436
Inward FDI					71	360	83	104

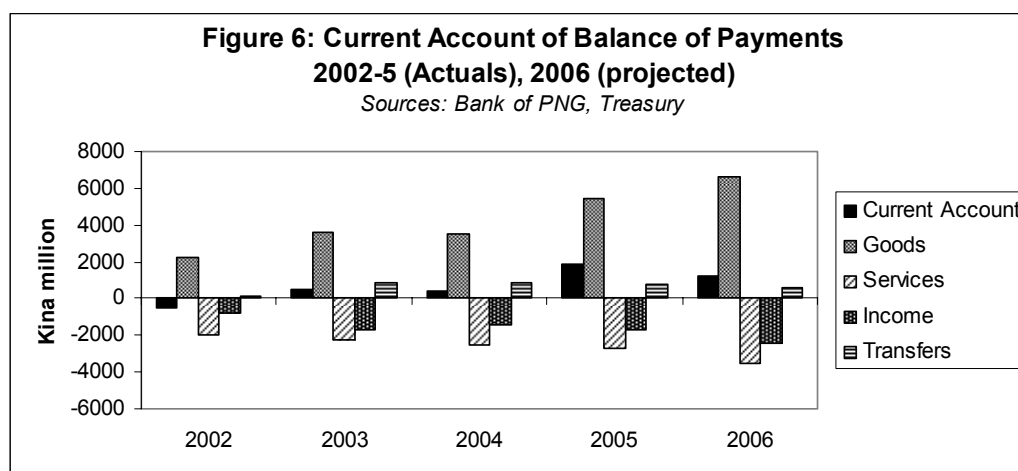


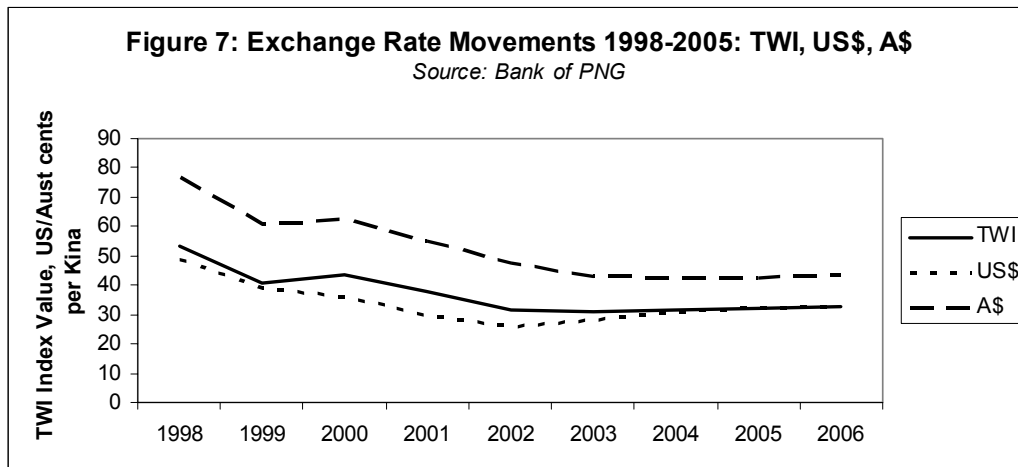
Figure 6 indicates trends in the components of the balance of payments. The steadily increasing surplus in the balance of trade is offset to a significant degree by rising deficits on services trade and income payments, while transfers have been a small and relatively stable surplus item, at least since 2002. For the balance on current account there is a steady trend toward rising surpluses through to 2005, but the surplus fell somewhat in 2006.

3.7 Foreign Direct Investment

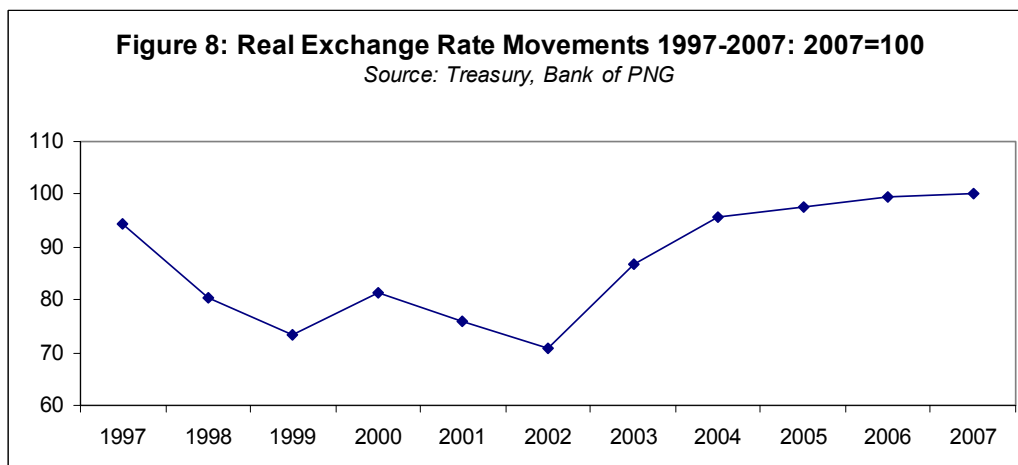
One somewhat concerning piece of data in Table 6 is the relatively weak performance of inward foreign direct investment. This is despite a higher level of investment approvals recorded by the Investment Promotion Authority (IPA). The IPA notes that approvals not infrequently fail to translate into realised investments. Major investment projects on the horizon in the resource sectors may well change this picture in future.

3.8 Exchange Rates

Figure 7 illustrates trends in the US\$/Kina and A\$/Kina exchange rates, as well as in the trade-weighted index (TWI), which provides the best overall measure of exchange rate movements. The US\$/Kina rate and the TWI follow each other particularly closely. These two rates follow a downward trend to 2002 before stabilising, while the A\$/Kina rate continues a downward trend for one more year, to 2003, before it too stabilises. In all three cases the recent period of relative stability is marked by a very slight upward trend. It would appear that the Bank of Papua New Guinea has been acting to moderate the impact of the commodity boom on the exchange rate.



The real exchange rate trends illustrated in Figure 8 present a rather different picture. The somewhat bumpy downward trend to 2002 reflects a situation in which the depreciation of the nominal exchange rate was more than sufficient to offset the excess of Papua New Guinea inflation over world inflation, so that the real exchange rate generally fell in these years, but by less than the fall in the nominal exchange rate. The real exchange rate then began to appreciate when the nominal exchange rate stabilised while inflation in Papua New Guinea remained high. The real exchange rate began to stabilise only when inflation stabilised as well as the nominal exchange rate, but it did so at a significantly higher level than that applying in 1998.



For protected industries the two trends in the real exchange rate have opposite implications. Falls in the real exchange rate will have served to partially cushion the impact of tariff reductions under the TRP. The subsequent appreciation of the real exchange rate on the other hand will have reinforced the pressure being imposed through tariff reductions. Over the period of the TRP as a whole the net effect of real exchange rate changes will have been to reinforce the impact of tariff reductions.

Over a longer timespan, adverse trends in the real exchange rate were also identified in the previously-cited study published by the Institute of National Affairs as a key factor holding back growth in the export oriented agricultural sector of Papua New Guinea, through their negative impact on the profitability of the sector.

3.9 Employment

Table 7 shows trends in employment in main economic sectors as recorded in the Bank of Papua New Guinea's business surveys. This data must be treated with caution because it is based on business surveys rather than a comprehensive household labour

Table 7: Employment Trends in Major Economic Sectors 1998-2006 (March 2002 = 100)

	Manufacturing	Agriculture /Forestry/ Fisheries	Building and Construction	Transport	Retail	Wholesale	Financial/ Business and other	Total	Mineral*
1998	99.4	95.7	136.6	116	97.3	109.7	109.7	102.3	93.4
1999	103.1	99.2	130.8	109.4	99.9	114.7	116	104.9	94.5
2000	106.8	103.8	128	103.2	102.8	115	106.2	106.5	103.4
2001	99.5	102.2	92.9	99.4	100.6	102.7	100.5	100.6	96.9
2002	104.1	103.9	99	106.3	97.9	103.3	99.1	102.2	98.8
2003	110.9	114.1	124.1	106.1	96.9	113.3	100.8	108.5	97.6
2004	117.7	112.9	107.9	106.8	93.1	123.8	104.7	109.2	95.6
2005	127.5	112.9	98.4	106.1	93.7	130.7	105.7	111	101.5
2006	132.6	123.3	118.9	108.2	97.3	109.7	112.4	119.1	111
% Change 1999-2006	28.6%	24.3%	-9.1%	-1.1%	-2.6%	-4.4%	-3.1%	13.5%	17.5%
* The mineral sector is not included in the total									
<i>Source: Bank of PNG</i>									

force survey, which does not exist in Papua New Guinea. Its coverage of the economy is also restricted to the reach of the surveys. The table also shows the percentage change in employment in each sector over the period of the TRP.

The table indicates that all sectors experienced a downturn in employment, that in some cases was very severe, in 2001. Since 2001 there was strong and steady growth in employment in manufacturing, steady but not quite so strong growth in employment in financial and business services, and a similar pattern in wholesale trade to 2005 before a sharp drop occurred in 2006. Employment in agriculture/forestry/fisheries, construction and retail trade rebounded after 2001, before falling into another trough and then rebounding again in 2005 and 2006. Employment in transport was relatively stable following an initial rebound after 2001.

It would not be legitimate to relate the growth in manufacturing employment solely to the TRP. Clearly buoyant business conditions have been an important factor, perhaps the major factor, just as depressed business conditions in 2001 no doubt also had a

greater impact than the TRP at that time. Nevertheless it is striking that the percentage growth in employment in the manufacturing sector over the period of the TRP was greater than in any other sector, and therefore also of course greater than in the economy as a whole. Agriculture/forestry/fisheries registered the next highest growth in employment over the period, while all other sectors except mining recorded a fall in employment over the same period.

3.10 Living Standards

Table 8 sets out data on some selected indicators of living standards as well as population and population growth rates, both for Papua New Guinea and, for purposes of comparison, also for a selection of other Pacific island and Southeast Asian

Table 8: Selected Indicators - Population and Living Standards

	Life Expectancy at birth, total	Infant Mortality rate, per 1000 live births	Literacy rate, adult total (% of people ages 15 and above)	GDP per capita, current US\$	Population (million)	Population growth rate (%)
	2005	2005	2006	2005	2005	2005
Papua New Guinea	56	55	57	840	5.9	2.0
Solomon Islands	63	24		624	0.5	2.5
Vanuatu	69	31	74	1611	0.2	1.9
Fiji	68	16		3219	0.8	0.8
Samoa	71	24		2184	0.2	0.7
Kiribati	62	48		772	0.1	1.2
Viet Nam	71	16	90	631	83.1	1.2
Indonesia	68	28	90	1302	220.6	1.4
Thailand	71	18	93	2750	64.2	0.8

Source: World Bank, World Development Indicators 2007

economies. Papua New Guinea compares poorly with the other countries in the table on the three indicators shown (life expectancy, infant mortality and literacy). Its per capita GDP is comparable with that of Kiribati, significantly above that of the Solomon Islands and Viet Nam, and well below that of the other Pacific and Southeast Asian countries in the table.

The table also shows that Papua New Guinea's population is approaching 6 million, with a population growth rate of 2% per annum. Papua New Guinea's population growth rate, along with that of the other two Melanesian countries in the table, the Solomon Islands and Vanuatu, is much higher than that of any other country in the table. These countries also consequently have very young populations. The data in Table 12 highlights both the importance and the challenge of developing policies to achieve sustainable increases in living standards in Papua New Guinea.

3.11 Longer Term Trends: Productivity

Over the longer term improvements in productivity are the key to sustainable rises in living standards. Data deficiencies make the measurement of productivity changes very difficult to measure in Papua New Guinea.

One recent attempt at measuring total factor productivity trends is found in an IMF working paper by Faal (2006). Faal appropriately notes problems due to data deficiencies and problems inherent in the methodology used in his studies as reasons for caution in interpreting his results. To the extent that the results can be relied upon however they are both interesting and potentially important, and provide strong support for the policy approach represented by the TRP and also for the emphasis in the MTDS on promoting improvements in efficiency of resource allocation as a crucial element in development strategy.

First, when measuring total factor productivity trends in Papua New Guinea over time Faal reaches the very disturbing conclusion that “on average, no productivity improvements have been achieved since independence.” The analysis also shows that “raising real GDP growth will require increases in both investment and productivity”, but that the required rates of productivity growth will be difficult to achieve “in the absence of structural reforms and strong institutions.”

Faal then goes on to investigate the determinants of productivity growth in Papua New Guinea, with a view to identifying “factors that can positively influence real GDP and productivity growth in Papua New Guinea”. His findings are consistent with the findings of other studies that emphasise “sound macroeconomic fundamentals, price stability and opening up the economy to foreign trade and investment as critical factors affecting total productivity growth”. Faal emphasises in particular the need for “a stable macroeconomic environment and policies, higher levels of investment and technology transfer, and better public policies to reduce corruption and improve the quality of public institutions.”

3.12 Conclusions

- Improving macroeconomic conditions have made an important contribution to the increasingly buoyant business conditions encountered in Papua New Guinea over the last four years, following an earlier period of poor economic performance. Buoyant business conditions during the recent period will have facilitated adjustment to the TRP, in contrast to the added difficulties resulting from the poor performance of the economy in the early years of the TRP.
- Large increases in export prices have been an important factor behind the recent improvement in economic performance. Improved macroeconomic policies have also made a vital contribution.
- The response of export volumes to price increases has been mixed. The relatively weak performance of export volumes, both for mineral and non-mineral exports, is an indicator of the potential vulnerability of the economy to any serious downturn in export prices. Weak performance in the production of traditional agricultural export products, other than palm oil, has been a long-term feature of the Papua New Guinea economy over several decades. Exchange rate movements and tariff policy have been the key factors contributing to this situation.
- Allowance needs to be made in future policy planning for the likelihood that the recent increases in export prices will be at least partly reversed at some point in the future.
- Low levels of incoming foreign direct investment indicated in the Bank of Papua New Guinea’s statistics are a cause for concern.

- The potential vulnerability of Papua New Guinea to future economic shocks, the relatively weak performance of export volumes, and the relatively poor record in attracting foreign direct investment, all serve to underline the importance of maintaining and further building upon the recent improvements in macroeconomic management, reducing impediments to growth in the export sectors, and placing renewed emphasis on other policy measures to improve the business environment.
- In the early years of the TRP, falls in both the nominal and real exchange rates will have partly cushioned the impact of tariff reductions. Conversely, in the latter years of the TRP the nominal exchange rate stabilised and the real exchange began to appreciate before stabilising at a level higher than that applying at the start of the TRP. The rise in the real exchange rate in this period will have reinforced the impact of tariff reductions. Over the period of the TRP as a whole changes in the real exchange rate will have to some degree reinforced rather than cushioned the impact of tariff reductions.
- Over the longer term adverse movements in the real exchange rate have been a major factor contributing to the weak growth performance of agricultural exports.
- Over the period of the TRP employment in manufacturing grew more strongly than in any other sector, despite the reduction in tariffs and the reinforcing effect of a higher real exchange rate in the latter years of the TRP. This result suggests that in overall terms manufacturing has coped reasonably well with the TRP, despite the considerable difficulties that manufacturing along with other sectors of the economy experienced during the period of depressed business conditions in the early years of the TRP.
- Papua New Guinea scores relatively poorly on indicators of living standards relative to developing countries in its immediate neighbourhood and in the wider surrounding region. Achieving sustained increases in living standards is clearly a policy priority. Continuing high rates of population growth in Papua New Guinea make this an especially challenging task.
- Productivity improvements are the key to sustained increases in living standards. Papua New Guinea's productivity performance has been poor over a lengthy period. Essential conditions for improving productivity performance include sound macroeconomic fundamentals, price stability, and greater opening up of the economy to foreign trade and investment. The TRP is consistent with this latter requirement.

CHAPTER 4

THE PAPUA NEW GUINEA ECONOMY: STRUCTURE

4.1 Sectoral Shares of GDP and Contributions to GDP

Table 9 provides information on the share in GDP accounted for by the different sectors of the Papua New Guinea economy, while Table 10 presents estimates of the contribution of each sector to GDP growth.

	2002	2003	2004	2005	2006
Agriculture, Forestry and Fishing	38.0%	38.3%	36.0%	37.1%	33.7%
Oil and Gas Extraction	7.7%	6.8%	5.8%	11.3%	13.6%
Mining and Quarrying	10.7%	11.1%	13.1%	12.4%	15.1%
Manufacturing	6.3%	6.5%	6.7%	6.1%	5.8%
Electricity, Gas and Water	1.7%	1.8%	2.1%	1.9%	1.7%
Construction	8.5%	9.0%	9.3%	8.1%	8.2%
Wholesale and Retail Trade	6.4%	6.8%	7.0%	6.2%	5.9%
Transport, Storage and Communication	2.3%	2.3%	2.4%	2.1%	1.9%
Finance, Real Estate, Business Services	3.5%	3.4%	3.3%	2.9%	2.8%
Community, Social, and Personal Services	11.6%	11.2%	11.0%	9.3%	8.8%
Adjustments	3.3%	2.8%	3.3%	2.7%	2.5%
Total GDP	100.0%	100.0%	100.0%	100.0%	100.0%
Non-Mining GDP	81.6%	82.1%	81.1%	76.3%	71.3%

Source: Treasury, 2007 Volume 1 Budget Table

Of the sectors most directly affected by the TRP, the share of manufacturing is relatively constant at between 6% and 7% of GDP in all but one of the years shown. The share of agriculture, forestry and fisheries is much larger, although it has declined from 38% of GDP in 2002 to almost exactly a third of GDP in 2006. The combined share of oil and gas extraction and mining and quarrying has exhibited the largest increase, rising from 18.4% in 2002 to 28.7% of GDP in 2006. Correspondingly the “non-mineral” share of GDP has fallen between the same years from 81.6% of GDP to 71.3% of GDP.

The contribution of agriculture, forestry and fisheries to GDP growth was positive in every year except 2002, when GDP growth itself was also negative. The sector contributed the bulk of the growth in GDP in 2003 and over 60% of the growth in 2004, but made smaller contributions in 2005 and 2006 (although it still contributed almost 30% of the growth in 2006). The contribution of the manufacturing sector was negative in 2002, but ranged from 0.2% to 0.7% (or between 7.5% and 21% of the total growth) over the next four years. It is interesting that the combined contribution of oil and gas extraction and mining and quarrying to GDP growth is typically rather small, and in three of the five years is in fact negative or very close to zero. The largest combined contribution of the two sectors was 0.6% (or 18% of the total GDP growth) in 2005. The construction sector made a particularly large contribution to

GDP growth in 2002 (its contribution in that year was strongly positive even though overall GDP growth was negative), and made another strong contribution in 2006.

Table 10: Sectoral Contributions to Real GDP Growth 2002-2006

	2002	2003	2004	2005	2006
Agriculture, Forestry and Fishing	-1.6	1.8	1.7	0.6	1.1
Oil and Gas Extraction	-2	-0.1	-0.3	0.4	0.5
Mining and Quarrying	-0.3	0.4	0.3	0.2	-0.4
Manufacturing	-0.4	0.4	0.2	0.7	0.4
Electricity, Gas and Water	0	0.2	0.1	0	0
Construction	2.6	0.6	0.3	0.5	1.1
Wholesale and Retail Trade	1.3	0.2	0.2	0.3	0.3
Transport, Storage and Communication	-0.1	0.1	0.1	0.1	0.1
Finance, Real Estate, Business Services	-0.2	-0.1	-0.1	0.2	0.2
Community, Social, and Personal Services	0.4	-0.5	-0.3	0.2	0.3
Adjustments					
Total GDP	-0.2	2.2	2.7	3.3	3.7
Non-Mining GDP	2.5	2.1	3.1	3.1	4.1

Source: Treasury, 2007 Volume 1 Budget Table

4.2 Trade: Shares of Exports

Table 11: Share in Total Exports of Main Product Categories 2001-2006

	2001	2002	2003	2004	2005	2006
Agricultural and Other Exports	13.2%	17.0%	17.8%	20.6%	19.2%	13.0%
Forest Products						
Logs	4.2%	5.7%	4.7%	4.3%	4.0%	3.9%
Total	5.4%	6.5%	5.3%	5.6%	4.7%	4.1%
Marine Products	1.2%	1.5%	1.6%	0.7%	0.7%	0.7%
Minerals						
Crude Oil	30.9%	22.4%	20.9%	20.1%	22.5%	23.5%
Gold	34.6%	35.9%	35.9%	33.8%	27.9%	24.3%
Copper	14.1%	15.9%	18.1%	18.8%	24.6%	34.0%
Total	80.2%	74.7%	75.3%	73.1%	75.4%	82.2%
Total Exports	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Bank of PNG

Table 11 shows the shares in total exports of the main commodity groups. It is striking that exports are overwhelmingly dominated by the minerals group, which accounted for over 80% of exports in the two years at the beginning and end of the period shown, and around three quarters of total exports in each of the four intervening years.

The share in total exports of agricultural and other exports rose steadily from just over 13% to just over 20% from 2001 to 2004, but then dropped away, falling back to 13% in 2006. The share of forest products in total exports ranged between 5.5% and 6.5% between 2001 and 2004, but then dropped away to below 5% in 2005 and 2006. The share of marine products is very small, between 1.2% and 1.6 % from 2001 to 2003, and then steady at only 0.7% from 2004 to 2006.

The data on sectoral export shares should be considered in relation to the emphasis in the MTDS on focusing “interventions on resources, products, and commodities in which Papua New Guinea enjoys a competitive advantage in global markets”. The export data shows that internationally competitive activities in PNG are at the present time overwhelmingly concentrated in the traditional export industries, both mineral and non-mineral.

4.3 Trade: Main Export Destinations and Import Sources

Table 12a: Main Import Sources 2003-5			
% of total			
Imports			
	2003	2004	2005
Australia	54.8	55.3	44.8
United States	9.6	8.1	13.8
Singapore	6.6	6.0	6.4
New Zealand	5.2	3.3	5.0
Japan	4.8	4.4	3.9
China	4.6	3.2	2.0
Malaysia	2.3	1.7	1.7
Indonesia	2.0	1.5	1.5
Table 12b: Main Export Destinations 2003-5			
% of total			
Exports			
	2003	2004	2005
Australia	45.7	45.6	43.2
Japan	12.8	10.8	11.3
Germany	6.6	7.1	7.3
Korea	5.4	6.1	7.4
China	6.7	4.9	3.7
Philippines	3.5	4.0	5.3
United Kingdom	2.5	3.5	1.9
United States	2.7	2.2	1.4
Singapore	2.1	2.2	1.1
Netherlands	1.1	1.5	0.9
Indonesia	1.7	1.2	0.4
Italy	1.6	1.1	0.7
<i>Source: Bank of PNG</i>			

Table 12a highlights the main sources of Papua New Guinea imports while Table 12b shows the main destinations of Papua New Guinea exports. These tables highlight the very strong orientation of Papua New Guinea’s overseas trade toward Australia, which accounts for approximately half of both imports and exports in each year shown.

At a much lower level the United States, Japan, China, Singapore and Indonesia are significant partners in both the export and import trade of Papua New Guinea. New Zealand and Malaysia are significant though rather minor sources of imports, but less important as export destinations. Export destinations are rather more diversified than

import sources, with Germany, Korea, the Philippines, the United Kingdom, the Netherlands and Italy all figuring on the list in Table 12b of countries accounting for 1% or more of Papua New Guinea exports in at least two of the three years shown.

4.4 Population, Labour Force, and Employment

An issue that was the subject of some debate in consultations was the structure of Papua New Guinea's population, labour force, and employment, and the implications of this structure for tariff policy. This issue has implications both for the incidence of tariffs on the population and for the relative weight to be given in policy to the creation of jobs and other income-earning opportunities in different parts of the economy. The discussion was linked to assessments of the current rate of new job creation relative to the number of school leavers seeking entry to the job market. Figures widely cited as "stylised facts" suggested a ratio 50,000 school leavers to 10,000 new jobs, both on an annual basis, although no statistical data corroborating these figures could be found, and some of those consulted were emphatic that such data does not exist. The continuing high rate of internal migration from rural to urban areas also figured prominently in these discussions as an issue that must be addressed.

Some widely divergent assessments were given by different people consulted. There is general agreement that the formal sector in Papua New Guinea contains a relatively small section of the population, but views differ as to how the remainder of the population should be classified. One view is that the remainder of the population is divided between a large "semi-formal" sector, partly rural and partly urban, comprised of people engaged in producing for the market but not formally employed in waged or salaried jobs, and a large informal sector, comprising people whose production is almost entirely of a subsistence nature and who have very little connection with the cash economy. This view was put forward for example by some representatives of the Manufacturers Council of Papua New Guinea, with whom it tended to be associated with an emphasis on giving priority to increasing the number of jobs created in the formal sector, and a related emphasis on the importance of expanding employment in manufacturing as the most promising avenue, if not the only avenue for achieving a better match between the number of school leavers and the number of new jobs. At the same time the parallel creation of income-earning opportunities in the rural segment of the "semi-formal" sector would be important as a means to slow down the rate of rural-urban migration, and thus contain or reduce the excess supply of job seekers in the urban sector. In the meantime the large subsistence sector could be left out of these calculations, thus helping to make the scale of the problem more tractable. This view also implies that a substantial proportion of the population is largely if not completely unaffected by tariffs on consumer goods.

At the other end of the scale was the view put forward for example by staff at the National Planning Office, that over the last ten years the cash economy has expanded to embrace virtually the entire population, so that the proportion of the population with little or no connection to the cash economy is now very small, perhaps as low as 5%. This view does not necessarily lead to a discounting of the importance of increased job creation in the formal sector. It does however imply a greater relative weight to the importance of expanding income-earning opportunities outside the formal sector, primarily though not exclusively in rural areas. In terms of tariff policy

it supports a greater emphasis on removing cost impediments to efficient and competitive production in the export-oriented industries found primarily in the agricultural and related sectors, as against endeavouring to shore up profitability in manufacturing industries by maintaining or increasing tariff protection levels. It also means that tariffs on consumer goods, especially basic goods, affect virtually the entire population. This does not in any way imply that the manufacturing sector should be viewed as dispensable. It does however support a view that the manufacturing sector should be supported in ways that are consistent with encouraging increased efficiency and competitiveness throughout the economy.

The discussion in the remainder of this section of the chapter endeavours to piece together the picture that can be drawn from the available data, with a view to putting forward tentative conclusions.

The most recent census data is from the 2000 Census, which counted a total population of just under 5.2 million, as against the estimated 2005 population of 5.9 million. The division between urban and rural populations indicated in the 2000 Census is shown in Table 13. It can also be calculated from the Census data that 9.3% of the labour force in 2000 was located in the urban sector and the remaining 90.7% in the rural sector.

Table 13: Division of Population Between Urban and Rural Sectors		
2000 Census		
	Numbers	
	Persons	Households (citizens)
Urban	686,301	100,392
Rural	4,504,485	843,375
Total	5,190,786	943,767
	Percent of Total	
	Persons	Households (citizens)
Urban	13.2%	10.6%
Rural	86.8%	89.4%

Source: NSO: 2000 Census: National Report

Table 14 shows information on the percentage of rural citizen households involved in producing a range of agricultural and related products for cash, together with the numbers of households and persons involved, calculated from data in the 2000 Census report. The numbers of persons involved are obtained by multiplying the number of households by the average number of persons per rural household, calculated from Table 13. Since households may be engaged in multiple activities it is not possible to ascertain from the Census the total number or percentage of rural households engaged in at least some production for cash. It may however be reasonable to infer from the data in Table 14 that the percentage is probably very high.

Table 14: Involvement of Rural Households in Production of Selected Agricultural Products for Cash (2000 Census)			
	Percent of Rural Households	Numbers	
		Households	Persons (est)
Cocoa	16.9	142,794	756,806
Coffee	44.8	378,122	2,004,047
Rubber	0.9	7,927	42,012
Oil Palm	1.7	14,361	76,113
Coconut	12.9	108,951	577,438
Betel Nut	14.0	117,970	625,239
Livestock	8.0	67,099	355,624
Poultry	5.7	48,167	255,284
Food Crop	11.8	99,107	525,265
Fishing	3.3	28,084	148,847
Other	1.1	9,064	48,038

Source: NSO: 2000 Census: National Report

Table 15 shows the rural households engaged in producing the various products for cash as a percentage of total citizen households, and compares these figures with the percentages of total citizen households in the urban and rural areas. The result shows for example that the number of rural citizen households engaged in producing coffee for cash is almost four times the total number of urban citizen households. The numbers of rural citizen households producing cocoa, coconut and betel nut are also each greater than the total number of urban citizen households, while the number of rural households producing food crops for cash is almost the same as the number of urban citizen households.

It can also be calculated from the Census data that the number of urban citizens employed in wage jobs in 2000 was 120,011, and the Census data also provides a figure of 5.7% as the percentage of employed urban citizens in the manufacturing sector. If it is assumed that all employees in the manufacturing sector are in wage jobs this would give 10,655 as the total number employed in manufacturing, which seems implausibly low, even if the appropriate percentage increase in manufacturing employment from Table 7 is applied to the figure, to give 13,233 employed in manufacturing in 2006.

Table 15: Total Urban and Rural Households, and Rural Households Engaged in Production of Selected Agricultural Products for cash	
	Percentage of Total Citizen Households
Total Urban Households	10.6%
Total Rural Households	89.4%
Rural Households engaged in production for cash of	
Cocoa	15.1%
Coffee	40.1%
Rubber	0.8%
Oil Palm	1.5%
Coconut	11.5%
Betel Nut	12.5%
Livestock	7.1%
Poultry	5.1%
Food Crops	10.5%
Fishing	3.0%
Other	1.0%
<i>Source: NSO: 2000 Census: National Report</i>	

As an alternative, the 2001 Census of Business Activity came up with 22,731 as the number of employees in manufacturing. Application of the appropriate percentage increase from Table 7 to this figure would give 30,300 employees in manufacturing in 2006. As a further alternative Table 16 reproduces 2002 data from the 2003 Tariff Review on the percentage of formal employment in various sectors, showing 14% employed in manufacturing. If formal sector employment is taken as equivalent to the total number of workers employed (urban and rural) in wage jobs as per the 2000 Census, this gives a figure of just over 34,000 as the number employed in manufacturing, which is also the figure that has sometimes been quoted by

Table 16: Formal Sector Employment by Sector 2002	
	% of total
Agriculture	33%
Mining	8%
Manufacturing	14%
Construction	4%
Wholesale	5%
Retail	14%
Transport	7%
Finance	14%
<i>Source: 2003 Tariff Review</i>	

Manufacturers' Council representatives. Application of the appropriate percentage increase from Table 7 would give 42,250 as the total number employed in

manufacturing in 2006. It may therefore be reasonable to infer that the total number of persons employed in manufacturing in 2006 lay somewhere in the range between 30,300 and 42,250.

Whichever figure is accepted, it is clear that the number of persons, and by implication also of households deriving their livelihood from employment in manufacturing is small relative to the numbers engaged in producing for cash in the rural sector. The rural sector is also where the bulk of the population is located, and rural industries, along with the forestry and fisheries sectors account for the majority of PNG's internationally competitive activities outside the minerals sector.

The conclusion seems inescapable that expansion of income-earning opportunities in the rural sector is the most realistic approach to addressing the economic needs of the majority of the population. It can also contribute to containing social pressures in the urban sector, by reducing incentives for rural-urban migration. This approach is also consistent with the requirement laid down in the MTDS to give priority to economic activities in which PNG enjoys a "competitive advantage in global markets."

Manufacturing nevertheless clearly accounts for a significant share of urban employment, especially waged employment, and it has been generating jobs at a faster rate than other sectors, especially other urban-based sectors. The combination of natural increase of the urban population and ongoing rural-migration is likely to continue to swell the urban population in the foreseeable future. Most of those consulted who expressed an opinion on the issue to the review agreed that there is little prospect of significant reverse migration from urban to rural areas, so that expansion of income-earning opportunities in the rural sector cannot be expected to play a role in absorbing the urban unemployed. Persons displaced from manufacturing employment are unlikely to readily find employment elsewhere.

A sudden or sharp decline in employment in the manufacturing sector would be likely to have serious undesirable social consequences. Continued growth in manufacturing employment is desirable, but it is also important that this should occur in ways that are consistent with the emphasis in the government's economic strategy on improving the overall efficiency of the economy and encouraging the movement of resources into internationally competitive activities.

4.5. Conclusions

- Measured by shares in GDP, agriculture, forestry and fisheries is the largest sector in the PNG economy, followed by oil and gas extraction and mining and quarrying. The latter two sectors taken together accounted for a share of GDP only slightly smaller than that of agriculture, forestry and fisheries in 2006. The share of manufacturing in GDP in 2006 was 17% of that of agriculture, forestry and fisheries.
- Agriculture, forestry and fisheries was also the sector making the largest contribution to real GDP growth in three of the last four years. Manufacturing made the largest contribution in the remaining year.
- Export data indicates that internationally competitive economic activities in PNG are overwhelmingly concentrated in the traditional export sectors: minerals and oil, agriculture, forestry and fisheries.

- It is clear that the number of persons, and by implication also of households deriving their livelihood from employment in manufacturing is small relative to the numbers engaged in producing for cash in the rural sector. It does not seem plausible or realistic to suggest that manufacturing can play the leading role in generating the income-earning opportunities needed to cater for Papua New Guinea's rapidly increasing population. That role must surely be played by market-related activities in the rural sector.
- It follows that among the guiding principles for tariff policy priority should be given to the need to reduce or eliminate impediments facing efficient market-oriented production in the rural sector and other export-oriented sectors. Policies that penalise these sectors should be avoided.
- Nevertheless employment of between 30,000 to 40,000 in manufacturing does represent a significant share of employment, especially waged employment, in the urban sector. A sudden or sharp decline in employment in the manufacturing sector would be likely to have serious undesirable social consequences.
- The importance of manufacturing employment in the urban sector underlines the principle, emphasised in the World Bank review of 1996 and adopted in the White Paper of 1997, that tariff reductions should be phased in gradually over time in order to minimise the transitional costs associated with the resulting structural changes.
- Continued growth in manufacturing employment is desirable, but it is also important that this should occur in ways that are consistent with the emphasis in the government's economic strategy on improving the overall efficiency of the economy and encouraging the movement of resources into internationally competitive activities.
- As an accompaniment to tariff policy, impediments arising from causes other than tariffs to expansion of efficient production in both rural and urban sectors must be reduced or eliminated wherever possible and as quickly as possible.
- Assessment of the impact of tariffs should take into account that it is likely that virtually the entire population of Papua New Guinea is affected by tariffs on consumer goods, especially basic consumer goods, and on other basic manufactured goods. Tariffs on basic manufactured commodities thus benefit a relatively small number of people in the manufacturing sector, while penalising all but a tiny proportion of the entire population. There is no reason to suppose that the conclusion indicated by the standard economic analysis of tariffs, that the benefits to consumers from reducing tariffs outweigh adverse effects on other sections of the community, is not applicable in Papua New Guinea.

CHAPTER 5

ANALYTICAL FRAMEWORK AND INTERNATIONAL CONTEXT FOR TARIFF POLICY

In the interests of transparency this chapter sets out the analytical framework that has guided the review. Policy issues relating to tariff liberalisation programs are then considered, followed by a brief summary of implications for tariff reform of Papua New Guinea's international obligations and other developments in the international economy.

5.1. Basic Analytical Issues

Economics has developed a widely accepted set of conclusions about the role of tariffs in international trade that provide a starting point for any discussion of tariff policy.

5.1.1. Gains from International Trade

That countries in principle stand to gain from international trade is one of the most widely accepted tenets of modern economics. Countries gain by specialising in production of goods that they produce relatively more efficiently, and exchanging these goods for other goods that are produced relatively more efficiently in other countries. Essentially, countries gain by importing of goods at a cost lower than the cost of producing them domestically. In this sense it is the acquisition of lower-cost imports that is the ultimate goal of international trade. From this perspective exports represent the resource cost of acquiring the lower-cost imports.

Imports may also benefit the economy by contributing to the growth of productivity, if they serve as vehicles for the introduction of new technology to the economy, and if competition from imports places pressure on domestic producers to become more efficient and more innovative.

5.1.2. The Impact of Tariffs

Tariffs are a tax on imported goods. Their effect is to raise the domestic market price of imported goods above the price at which they are available through international trade. This has several consequences:

- Imports of goods subject to the tariff will fall.
- Domestic producers of the protected goods will be able to sell their products in the domestic market at a higher price. This encourages them to expand output, and increases their profitability.
- The increased profitability of the protected industries relative to other industries will result in resources being attracted to the protected industries from the other industries, including possibly from export industries that are producing at internationally competitive costs. Analytically, a tariff can be considered equivalent to a tax on exports.

- Expansion of the output of the protected industries represents an inefficient allocation of resources, in the sense that it involves the domestic production of goods at a resource cost higher than the cost of importing them.
- Costs are likely to rise in other industries, for two reasons:
 - The higher price of the protected goods means increased input costs for the industries that require these goods as inputs to their own production.
 - Market forces will ensure that the ability of the protected industries to pay higher wages will gradually spill over into a higher wage structure for the economy as a whole.
- Consumers will pay more for the protected goods.
- Government will raise revenue from the tariff.

Thus the most obvious effects of a tariff (higher costs to consumers, increased government revenue, and expanded output in the protected industry) are not the only effects, and not necessarily the most important effects from a development perspective. An important point to recognise is that while tariffs may encourage the protected industries to grow, they generally do so at the expense of other industries. In doing so, they encourage greater use of resources in relatively inefficient activities, at the expense of relatively more efficient activities, particularly production for export.

5.1.3. Tariffs and Employment

Tariffs are sometimes advocated as devices to increase employment. Since they generally encourage output to expand in the protected industries, it is true that they may well increase employment in those industries. It is necessary however to recognise that tariffs also generally penalise the industries that are not protected, including export industries, so that their impact on employment in those industries is likely to be negative. The net effect of the positive and negative impacts on employment in different industries might easily be to leave overall employment in the economy unchanged, or could even be a fall in overall employment.

This conclusion applies with particular force in economies where all resources are fully employed. Even in economies with substantial unemployment or underemployment, labour generally has to be combined with other resources including capital in order to increase production in the protected industries. Capital is usually scarce in developing economies even if labour is not. If the protected industries need more capital per unit of labour employed, the attraction of resources into the protected industries at the expense of other industries may result in a fall in employment, even if there is substantial unemployment or underemployment of labour.

5.1.4. Tariffs and the Balance of Trade

It is true that tariffs can be expected to cause a fall in imports of the goods to which tariffs are applied. However the impact on industries penalised by tariffs, including export industries, must also be considered. If there is a negative impact on supply from the export industries, the resulting fall in exports may wholly or partly offset the fall in imports, so that the balance of trade will improve by less than the fall in

imports might suggest, may not improve at all, or might even deteriorate. The overall effect is to reduce the country's engagement in international trade, with a corresponding reduction in the extent to which the potential benefits from exploiting the gains from trade are realised.

5.1.5. Political Economy of Tariffs

Not all sections of the community are affected by tariffs in the same way. Producers in the protected industries, including both investors and workers, gain from tariffs, at least in the short run, and government gains revenue which in principle is available to be spent for the benefit of the community as a whole, or at least some sections of the community. Consumers on the other hand suffer from having to pay more for the goods subject to tariffs. The standard economic analysis of tariffs concludes that tariffs harm consumers more than they benefit producers and the beneficiaries of government revenue, so that their overall effect is to lower the economic wellbeing of the community as a whole. This effect is called the deadweight loss from the tariff, and it is one of the measures of the negative effect of tariffs on the economy. High tariffs are especially harmful; the deadweight loss from a high tariff exceeds the deadweight loss from a low tariff by proportionately more than the difference between the two tariffs.

Since tariffs reduce the economic well-being of the community as a whole, it follows that the reduction or removal of tariffs should improve community well-being. Reductions in high tariffs should be especially beneficial. This conclusion is subject to some important qualifications, that are highlighted below.

Since producers in protected industries benefit from tariffs, however, they can be expected to support the use of tariffs and to oppose their reduction or removal. Producers are generally well aware of how they benefit from tariffs, and are often well-organised to lobby in support of their interests. Consumers typically have much less understanding of how they are affected by tariffs, and are generally poorly organised to lobby in support of their interests. Businesses in industries adversely affected by tariffs may be more aware of the effect of tariffs but are usually less skilled at mobilising support for their interests than businesses in the protected industries. Governments can therefore generally expect more political pressure for the introduction, retention or raising of tariffs than for their reduction or removal.

5.1.6. Tariffs and the Distribution of Income

While in the short run tariffs benefit both investors and workers in the protected industries, in developing countries where labour is abundant and capital is scarce tariffs will in the long run tend to raise the relative return to capital and lower the relative return to labour throughout the economy. The structure of tariffs too can have important implications for income distribution. Tariffs that fall disproportionately on goods that are heavily represented in the consumption baskets of lower income groups are clearly regressive.

5.1.7. Tariffs and Poverty

Tariffs may have both negative and positive implications for poverty. There may be positive implications at least in the short run if poverty is concentrated among those employed in the protected industries (and their dependents), but negative implications if poverty is concentrated among those employed in the industries that are penalised by tariffs (and their dependents). Tariffs on basic consumption items will impact disproportionately on the poor. At the economy-wide level, by reducing efficiency and productivity growth in the economy, tariffs may act to constrain capacity to address poverty and related issues.

5.1.8. Effective Rates of Protection

In countries where there are significance differences in tariffs on goods at different stages of processing – for example, where there are different tariff rates for raw materials, intermediate goods and finished goods - nominal tariff rates will be misleading indicators of the level of protection available to different industries, and consequently of the overall implications of tariffs for the efficiency of resource allocation. Effective rates of protection are more accurate indicators of the efficiency of resource use under these conditions.

Effective rates of protection will differ from nominal tariff rates whenever different nominal tariffs apply to goods at different levels of processing. Effective rates will exceed nominal rates in industries where the nominal tariff on finished goods exceeds the nominal tariff on intermediate inputs and raw materials. If value added is relatively low in such industries it is possible for effective rates of protection to be very high even if nominal tariff rates are low. This feature of effective rates of protection is likely to be very relevant to the structure of Papua New Guinea's tariffs at the end of the TRP, given the disparity between tariff rates on finished goods and tariff rates on intermediate goods and materials.

Some further explanation of these points, illustrated by simple examples, is provided in Appendix B.

Negative rates of effective protection generally apply to the products of export industries. These negative effective rates of protection provide a measure of the penalty imposed by tariffs on export industries, illustrating how tariffs act as a tax on export industries.

5.2. Rationales for Tariffs

Economic analysis of tariffs has produced a number of clearly-defined rationales for tariffs. While these rationales are often invoked in policy debates the qualifications to which they are subject are less often recognised. The qualifications narrow the range of conditions under which these rationales provide justifications for tariffs.

5.2.1. Infant Industries

There may be cases where a potentially competitive industry needs time to establish an economically viable scale of production, or to become efficient through a period of

“learning by doing”, before it can survive in open competition with foreign competitors. Tariff protection may be proposed to allow such “infant industries” the “breathing space” that they need in order to become internationally competitive. This tariff protection is costly as long as the industry remains uncompetitive, but once the industry becomes internationally competitive it provides an economic benefit, including the potential for increased exploitation of the gains from trade, that would not otherwise be available. The country enjoys a net economic gain if this benefit exceeds the cost of the initial infant industry protection.

The infant industry rationale does not provide an argument for permanent protection. In cases where the rationale is valid, infant industries will eventually be able to survive without protection. Even in these cases it does not follow automatically that tariffs should be used. Tariffs are not the only policy instruments available for supporting infant industries, and other policy instruments will often be more efficient, as explained in the next section.

Successful use of infant industry protection depends on governments correctly selecting for infant industry protection industries that are able to become internationally competitive. If protected infants cannot become internationally competitive they will require permanent protection in order to survive, thereby imposing a long-term cost on the economy. The poor track record of governments in choosing appropriate industries for protection lies behind the sceptical view that trade economists tend to hold toward infant industry protection. According to this view, proposals for infant industry protection should be rigorously scrutinised to determine whether they meet the criteria for successful application of infant industry policy.

Even if the industry has the potential to become internationally competitive, the availability of protection may reduce the incentive to improve efficiency and competitiveness, unless the government’s policy leaves no room for doubt that the protection will eventually be removed. Otherwise the industry may prefer to lobby to have protection made permanent, and if the lobbying effort is successful the “infant” may never “grow up”.

5.2.2 Social Benefits of Increased Production

There is a long-established branch of economic analysis dealing with the case for government intervention when the costs and prices facing private producers do not correctly reflect the costs and benefits of their activity to the community as a whole. Such situations are examples of “market failure”, and one result may be that the output of the producers concerned may exceed or fall short of the level needed to maximise the economic well-being of the community, which may be described as the socially optimal level of output. In these situations overall economic well-being can be increased by government intervention designed to lower or raise the output of these producers toward the socially optimal level. Tariff protection is clearly one possible policy instrument for industries where there is a case on social grounds for government intervention to promote an expansion of output.

The case for using tariffs on social grounds depends first, on establishing a clear link between the desired social objective and increased output in the industries to be protected, and second, establishing that tariffs are the most efficient of the available

policy instruments for achieving the desired objective. Various worthy objectives are typically cited for the use of tariffs on social grounds, including increased employment, poverty reduction, introduction of new technology and development of new skill sets within the economy. The link between tariffs and these objectives is not automatic however. It has already been pointed out above that tariffs may not increase total employment in the economy, even if they increase employment in the protected industries, and that they may or may not contribute to poverty reduction, depending on the facts of each case. Careful, rigorous analysis is needed in each case to assess whether tariffs really are consistent with the desired objective.

Even if tariffs are shown to be potentially capable of contributing to the achievement of certain government policy objectives, they will rarely if ever be the most efficient policy instrument for pursuing those objectives. It is a well-established principle of economic policy that the most efficient policy instrument for pursuing any given policy objective is the one that addresses that objective most directly. Tariffs are an indirect way of addressing most if not all government policy objectives, and generally there will be other policy instruments that could address the issue at hand more directly and therefore more efficiently. Nevertheless a case may sometimes be made for using tariffs if for some reason the more efficient policy instruments cannot be used. For example a subsidy is a more efficient policy instrument than a tariff for some purposes, but a government may lack the fiscal capacity to provide a subsidy or may be precluded from using subsidies by its obligations under international agreements.

5.2.3. Terms of Trade

It is well understood that tariffs may improve the terms of trade of countries that are large enough to affect world prices by changing the quantities that they import and export at any given price level. By improving its own terms of trade however a country necessarily worsens the terms of trade of its trading partners. Using tariffs to improve the terms of trade is thus a “beggar-thy-neighbour” policy that will eventually be counter-productive to the extent that it invites retaliation from trading partners.

Papua New Guinea is clearly too small a country to appreciably affect world prices by any conceivable change in its import demand. A tariff however is analytically equivalent to an export tax, and export taxes can affect the terms of trade in the same way as tariffs. By restricting exports, even a small country can possibly affect world prices for its main exports, if it has a major share of the world market for those products. Papua New Guinea is a significant exporter of some commodities, but its share of the world market is not large. It therefore seems unlikely that this rationale for tariffs is relevant to Papua New Guinea.

5.3 Tariffs and Development Policy

5.3.1. Inward-looking versus outward-looking strategies

The use of tariffs has been central to a major controversy in development policy over the relative merits of development strategies based on import substitution and strategies based on an outward-looking orientation.

5.3.2 Import Substitution

The essential idea of an import substitution strategy is to promote industrialisation behind high tariffs and/or other trade barriers. Typically the products selected initially for high levels of protection are those that account for the largest share of imports, since they offer the largest potential market for local manufacturers. Typically most of the products in this category are consumer goods. Prohibitive trade barriers encourage the development of domestic manufacturing industries (and sometimes agricultural industries as well) to supply the local demand for these products. These manufacturing industries will typically at first import their intermediate and capital goods requirements, and this changing composition of imports can provide the opportunity to develop backward linkages, by using trade barriers to encourage the development of local production of first intermediate goods and then capital goods.

Since import substitution policies generally involve high initial levels of protection, they are very costly in their early phases. The rationale for such policies was that manufacturing industry is characterised by higher productivity growth than primary commodity production and that industrialisation is thus an essential element in strategies to break out of the “low income trap” that would otherwise hold developing countries back; however developing countries would be unable to industrialise in open competition with developed countries, and thus import substitution policies were needed to allow manufacturing industry to develop. It was assumed that the payoff in terms of higher future levels of productivity would outweigh the high initial costs of the strategy.

Import substitution strategies were popular in developing countries in the 1960s and 1970s, and have also been practised in earlier years by some developed countries such as Australia and New Zealand. The outcome of import substitution strategies however was often highly unsatisfactory, leading to widespread disillusionment with this approach to development. Often local markets were too small to allow an efficient scale of production, but the high cost structure of the import substitution industries precluded an expansion into export markets. The industries established under the strategy were often based on simple technologies and could not offer the productivity gains that had been postulated. Import substitution seemed to lead into an economic cul-de-sac, rather than sustainable development.

Partly as a result of disillusionment with import substitution the emphasis in development policy moved toward outward looking strategies, giving priority to the development of internationally competitive industries in sectors where countries possessed comparative advantage, with productivity gains being pursued through supportive policies in areas such as infrastructure development and education and skills development. In adopting an outward-looking strategy Papua New Guinea is thus following the example of many other developing countries.

It cannot be claimed that countries that have adopted outward-looking strategies have been universally successful. Nevertheless the “success stories” among developing countries that have adopted this approach clearly demonstrate its potential benefits as a model for sustainable development. By contrast it is not easy to point to countries that have achieved sustainable development on the basis of import substitution. Most countries that adopted import substitution industrialisation strategies have found it

necessary at some point to switch to outward looking strategies in order to pursue sustainable development objectives. In many cases the transition from import substitution to outward-looking strategies has been difficult to achieve, and success has been partial at best. There is a small handful of countries, mainly in Northeast Asia that are sometimes viewed as possible cases of successful use both of an initial import substitution strategy and of subsequent transition to an outward-looking strategy. Even in these cases the assessment of their import substitution phase has been controversial. To the extent that they have been successful, a fortunate combination of economic circumstances, an unusually competent bureaucracy, and an emphasis on developing strong education systems have all been important ingredients. In all cases they possessed a clear comparative advantage in many of the industries that were targeted for development. Typically the transition to an outward-looking strategy was characterised by the introduction of export subsidies to neutralise the penalty imposed on export industries by tariffs, and both the tariffs and export subsidies were then gradually reduced. WTO disciplines on export subsidies mean that this approach to the transition would be difficult if not impossible to follow today.

International experience thus indicates that pursuit of an import substitution strategy under today's conditions would at best be highly risky and in general would be unlikely to contribute positively to a successful strategy for sustainable development, and that Papua New Guinea has been wise to adopt an outward-looking orientation in its development strategy.

Import substitution may have a role in individual cases. These cases can be considered and assessed under appropriate criteria for assessment of infant industries, or for correcting market failures. It is especially important however to ensure that protection is not used to develop inefficient industries that raise the cost structure of the entire economy, or that result in increased prices for basic commodities purchased by low income households.

5.3.3 Downstream Processing

Developing countries are usually understandably concerned to encourage downstream processing of their natural resources. An outward-looking development strategy implies that downstream processing will generally be aimed at export markets, and must therefore be internationally competitive. If a favourable environment for investment can be created, technology, logistic and marketing considerations will determine which downstream processing industries will be viable. If downstream processing of a particular product is not economically viable this can be taken as an indication that continued export of the product in unprocessed form represents the best economic return.

On the other hand intervention to encourage inefficient downstream processing industries will lead to lower returns for growers and owners of natural resources, which in turn will tend to result in lower levels of output. Often large-scale downstream processing industries are capital intensive, so that their development results in relatively few jobs. Smaller-scale downstream processing industries may offer relatively more employment opportunities, and their emergence may be

encouraged by policies designed to support small and medium enterprise development.

5.4. Policy Issues in Tariff Liberalisation

5.4.1. The Adjustment Process

The purpose of trade liberalisation is to encourage a re-allocation of resources toward more efficient uses. Changes in the pattern of production are therefore an expected result of a trade liberalisation program and an indication of success of the program rather than the reverse. Some lines of production may be discontinued while new lines of production may be introduced. Firms may respond to increased competition by introducing new technology and restructuring their organisation. Some operations may grow while others may shrink or even close down. Some firms may take on additional staff while others may shed labour. There would be concern over the effectiveness of a liberalisation program if none of these changes occurred.

5.4.2. Adjustment Costs

At the same time it must be recognised that adjustment is costly, and the costs of adjustment must be counted as an offset to the gains from liberalisation. Costs are imposed on labour if displaced workers cannot quickly find alternative employment at comparable levels of remuneration. Investors in industries adversely affected by liberalisation suffer from reduced profitability or even failure of their investments. Costs are incurred in introducing new technology or restructuring operations.

The costs of adjustment will be influenced by the design of the liberalisation program and by the existence or otherwise of mitigating policies. Examples of the latter can include training, relocation and placement programs designed to assist displaced workers to move quickly into alternative employment. More generally, governments face a policy decision as to whether they should compensate the “losers” from a liberalisation program. Costs to investors will be less if liberalisation is phased in over a period long enough to allow existing investments to be fully depreciated and capital to be directed into new investments. On the other hand a lengthy transition period delays the realisation of the gains from liberalisation.

Adjustment costs will be less if markets are flexible and well integrated with each other, so that resources can move quickly and relatively freely between alternative uses. Potential adjustment costs will be much higher where there is little connectivity between sectors and markets are not working well, so that resources, especially labour, are not likely to be able to move quickly between sectors.

Adjustments can be especially painful in cases where previous policies have encouraged investment in inefficient industries in locations where the labour and capital involved in the investments has little or no realistic prospect of finding alternative employment without incurring very substantial costs. In these cases high adjustment costs compound the typically high costs of the initial protection of the industry.

5.4.3 Predictability

Another way in which the gradual phasing of liberalisation over time can assist with adjustment is by providing predictability in the business environment. Businesses are better able to plan their investment decisions if tariff reductions are staged over a number of years on the basis of a clear timetable. Uncertainty over the future direction of policy is likely to result in deferral of investment plans.

A gradual phasing in of the changes over an extended timetable is also important in allowing business to adjust to the changes in a rational and orderly manner, rather than being forced to make abrupt and disruptive adjustments to large and sudden “once-and-for-all” policy changes.

5.4.4 Comprehensiveness and Sequencing of Reform

Trade liberalisation is typically only one of a range of economic reforms that are needed to make an economy more efficient. Other areas needing reform may include macroeconomic policy, financial market reform, labour market policy, deregulation, trade facilitation, competition policy, corporatisation or privatisation of state enterprises, public sector reform, infrastructure development, security of persons and property, and education reform. Trade liberalisation is most likely to achieve its intended benefits when it is included in an overall reform package that includes reforms in these other areas where they are needed. Experience in other countries has also shown that the sequencing of reforms is important for the overall outcome. On the other hand trade liberalisation that proceeds in the absence of other necessary reforms may not be followed by the expected economic benefits, and may even produce perverse results.

5.4.5 Consistency and Credibility of a Trade Liberalisation Program

Private sector behaviour will respond to policies that are seen to be credible. Policies are not credible if they are perceived as likely to be easily reversed or readily open to modification by the creation of special exceptions. In that case businesses may decide to defer responding to the policy in the manner intended, and to focus energies instead on lobbying for reversal of the policy or the creation of special exceptions favourable to themselves.

Inconsistent policies provide mixed signals to business that are difficult to interpret. Business may respond by deferring investments. Policy inconsistency in the form of extensive creation of special exceptions further undermines support for policies by generating a perception of unfairness. Another example of inconsistency is a policy mix that seeks to impose efficiency on the business sector while at the same time tolerating serious inefficiencies elsewhere in the economy that add substantially to business costs. The result is policy ineffectiveness and the undermining of business support for government policy.

5.5 Other Issues Related to Tariff Reform

5.5.1. “Dutch Disease”

The terms “Dutch Disease” refers to the situation in countries where the natural resource sector expands rapidly, drawing resources away from other sectors. The effect may operate through an appreciating exchange rate, or through a rise in wages across the economy as other sectors are forced to compete for labour with the resource sector, in the process undermining their own competitiveness. Responding to the “Dutch disease” with increased tariff protection would further undermine the international competitiveness of the protected sectors.

5.5.2 Exchange Rates

Exchange rate movements can have an effect on international competitiveness in parallel with tariff changes. The effect of large exchange rate swings may be significantly greater than the effect of tariff changes. Depending on their direction exchange rate changes may reinforce or offset the effect of tariffs. An exchange rate depreciation is analytically equivalent to the combination of a tariff and an export subsidy.

5.5.3 Trade Remedy Issues

Demands for increased tariff protection are sometimes linked to accusations of dumping or subsidised exports. Dumping has a technical meaning, and dumping in the technical sense is not easy to prove. Safeguard actions are generally recognised as the appropriate measure for dealing with a sudden “surge” of low cost imports that damages local industries. Imports of inferior goods that pose a health or safety risk are best addressed by the application of appropriate health or food safety standards.

As a WTO member, Papua New Guinea is obliged to follow the WTO rules on the use of anti-dumping and safeguard measures, in the event that it decides to make use of these measures. These rules require the establishment of formal procedures that are both costly and time-consuming, and place the onus on the importing country to demonstrate the existence of conditions that justify the use of anti-dumping or safeguard measures. Considerable investigative capacity would be needed in the agencies tasked with implementing these procedures. Failure to correctly follow the procedures laid down in the WTO rules could result in the resulting measures being challenged by other WTO members.

Even where antidumping or safeguard measures are used, WTO rules do not permit them to be used as a means of permanent protection. Special duties applied as anti-dumping or safeguard measures must be time-bound, with a clearly-defined expiry date.

5.5.4 Import Monitoring

There can be very significant problems associated with smuggling, misdeclared or underdeclared imports and counterfeit imports. It is not clear however how higher

tariffs would assist in addressing these problems, since they will in fact increase the incentive for these kinds of activity.

5.5 International Obligations

Papua New Guinea's tariffs are bound in the WTO at rates that are generally well above current applied rates. Current WTO commitments thus place little or no constraint on Papua New Guinea tariff policy, although it is conceivable that further commitments in the Doha Round might affect the applied rates for some products. Papua New Guinea's APEC commitments are non-binding and thus also place little formal constraint on tariff policy. Nevertheless governments sometimes find it useful to invoke WTO and APEC commitments in support of proposed economic reforms.

As a WTO member Papua New Guinea is also bound by the trade rules that have been agreed by the membership of that organisation. In particular Papua New Guinea is bound by the WTO rules on anti-dumping, safeguards, subsidies and countervailing measures, technical barriers to trade, sanitary and phytosanitary measures, and intellectual property protection.

Papua New Guinea also has commitments or potential commitments under a number of current and prospective preferential trade agreements. Current commitments are in PICTA (with the other Forum Island Countries) and the MSG Trade Agreement. Papua New Guinea is currently involved in negotiations for a reciprocal free trade agreement (known as an Economic Partnership Agreement, or EPA) with the European Union, and this could lead in turn to negotiations for a free trade agreement with Australia and New Zealand. Papua New Guinea, like other Pacific states is being increasingly disadvantaged by the spread of preferential trade agreements in East Asia, which often result in the members of these agreements enjoying preferences in East Asian markets over the Pacific states among others. There may in the future be some pressure on Pacific states as a result to negotiate their own free trade agreements with East Asian countries.

Over the long term these developments could result in Papua New Guinea facing pressures that it will find increasingly difficult to resist, to provide duty free access for a wide range of products to many of its most significant trading partners. This prospect reinforces the view that over the medium- to long-term Papua New Guinean business should be planning to survive with significantly lower tariff levels than exist at present. In particular it would be imprudent to encourage the widespread development of new industries that are likely to need significant protection on a permanent basis.

5.6 Implications of Globalisation

One of the features of the phenomenon known as globalisation is the internationalisation of production. This process is typically driven by multinational firms seeking to spread their production operations across the global economy with the objective of maximising the efficiency and profitability of their global operations. This generally means placing each segment of their production processes in the locations where they can operate most efficiently and thus make the greatest contribution to the profitability of the company's global operations. This trend is

accompanied by greatly intensified competition among countries, including developing countries, to attract foreign direct investment. Manufacturing competitiveness in manufacturing processes best suited to a country's economic conditions and resource endowments then becomes the key to attracting investment in manufacturing.

Multinational companies are also being driven by the same competitive imperative to review their existing international operations, often with a view to consolidating them into a smaller number of larger operations that can more efficiently utilise available logistic facilities and new technology. This can also lead to competition both between countries and between national units of the same company to retain a place in the consolidated operations.

In both cases the criteria that determine the location decision are likely to include:

- Manufacturing costs in the particular operation being considered
- Availability of skills appropriate to the technology to be used
- Efficiency of the business environment
- Logistic costs and efficiency
- Proximity to major markets and sources of inputs
- Access to research and development facilities

Countries that do not fit the criteria being applied will find it difficult to attract new investments and/or may find themselves at risk of losing some existing investments.

Access to the domestic market of host countries will often be another factor entering into the multinationals' calculations. Maintenance by the host country of restricted access to its domestic market through high rates of protection may in some cases offset considerations that would otherwise lead a company to close down its local operations. Unless steps can be taken to improve relative competitiveness of the location however its relative disadvantages may tend to magnify over time, in the worst case leading to a need for the country to apply ever-increasing rates of protection in order to retain the investment, and without any guarantee that the effort will not ultimately be unsuccessful. Countries that cannot maintain their attractiveness as an investment location without resort to high levels of protection will have to assess whether the benefits of the investments they are able to attract or retain are sufficient to outweigh the ongoing costs of high protection levels. In any event the Investment Promotion Authority (IPA) indicated that in their experience tariffs are not a major factor in investment decisions by overseas investors.

In any event high levels of protection may often deter multinationals from including a country in their international production networks, since the efficiency of the networks depends among other things on the ability to move components and materials freely within them.

5.7 Export Processing Zones

Considerations of manufacturing competitiveness are also central to prospects for successful establishment of export processing zones. Overseas experience has shown that investment is generally attracted only to zones where the host government has invested heavily in providing an efficient infrastructure. Establishment of a potentially

viable export processing zone is thus a costly endeavour. Countries considering the establishment of export processing zones are therefore well advised to first consider the potential competitiveness of the proposed zones as a location for the type of investment that is being sought. Zones that lack the requisite competitiveness are likely to turn out to be “white elephants” and represent a waste of scarce investment resources.

CHAPTER 6

ASSESSMENTS OF THE TARIFF REDUCTION PROGRAM AND ISSUES FOR FUTURE TARIFF POLICY

This chapter begins by reviewing the results of the stakeholder consultations. The discussion also draws on the survey conducted among members of the Manufacturers' Council. The results of the survey are tabulated in Appendix A. As noted earlier this cannot be regarded as fully representative of manufacturers' views but it is useful as a check on the results of the consultations. The review of stakeholder consultations is followed by an assessment of effective rates of protection in Papua New Guinea. This in turn is followed by a review of the costs and benefits of implementation of the recommendations of the 2003 Tariff Review, as required by the terms of reference for this review.

The chapter concludes with an overall assessment of the TRP and issues for future tariff policy, followed by a consideration of next steps in tariff reform. The discussion in these two concluding sections draws both on the material in the earlier parts of the chapter and on the analytical framework in the preceding chapter, and sets out the basis for many of the recommendations in the next chapter.

6.1 Stakeholder Consultations

6.1.1 Impact of the TRP on Businesses

As might be expected a wide range of experiences of the TRP was reported by manufacturers. Although some firms indicated that they had downsized during the operation of the TRP, it was striking that a substantial number of manufacturers reported that their business had expanded during the period, although most attributed this to the buoyant state of the economy rather than any positive impact of the TRP. This finding is consistent with data showing a strong expansion in manufacturing employment over at least the last five years of the TRP's operation. Survey responses reported in Table A.1(b) indicate an almost even split between manufacturers reporting that they had increased employment during the TRP and those reporting a decrease in employment. The responses from Table A.1(e) indicate that costs of doing business figured somewhat more significantly than the TRP in decisions to reduce employment.

There was also wide variation among manufacturers in changes in their production pattern over the period of the TRP. Some reported adding new lines of production, others reported discontinuing some lines of production, while still others reported adding some new lines of production and discontinuing others. This variation is also reported in the survey responses from Table A.1(a). The principal reasons given in Table A.1(c) and (d) for discontinuing existing lines or adding new lines of production were the need to respond to competition and changing market demands. The TRP ranked around the middle of the explanatory factors in these two tables.

Visits to individual manufacturing establishments revealed in some cases an impressive degree of adoption of modern technologies, although it was also clear in some cases as well that low production volumes precluded adoption of the most cost-effective version of those technologies.

One point to emerge from the consultations was that in some industries, particularly those involved in the production of chemical products, manufacturers have responded to the TRP by reducing the quality of their formulations. This practice will have reduced the benefit to consumers of these products from the TRP, although consumers may not always be aware of this.

6.1.2 Views on Future Tariff Changes

Stakeholders were sharply divided on the desirability of future tariff reductions. As might be expected stakeholders representing agricultural export interests were strongly in favour of further reductions, or in many cases the complete elimination of tariffs. These stakeholders correctly emphasised the basic point that tariffs have an effect equivalent to a tax on production for export. Retailers and wholesalers also were generally in favour of reducing or removing tariffs. Similar views were expressed by some individual manufacturers and some business associations, notably the Chamber of Commerce.

By far the most prevalent view among manufacturers however was that support for any further tariff reductions would be conditional on firm steps being taken by government to bring about reductions in business costs. Some manufacturers acknowledged that further tariff reductions are inevitable but argued that they need more time to prepare for this. A minority stated that they accepted the current level of tariffs but could not tolerate further tariff reductions, which they argued would cause them to sharply curtail their operations or even close down altogether. The relation of tariffs to business costs and the unacceptability of further tariff reductions figure prominently in the responses reported in Table A.2(c). A very small minority of manufacturers argued for increases in tariffs, usually for specific new products, either because they considered the increases necessary for their survival, because they believe themselves to be suffering from anomalies that need to be corrected, or because they apparently believe that it is the function of tariffs to underwrite the profitability of local manufacturing.

6.1.3 Views on the Design of a Tariff Reduction Program

There was widespread support among manufacturers for implementing tariff reductions via a series of clearly timetabled steps, spread over a number of years. This is also reflected in the responses reported in Table A.2(b). Views were divided on whether a tariff program should be implemented without change once it had been commenced, or whether the government should be willing to review the program either when circumstances change or at some agreed point in the implementation of the program, and be prepared to amend the program if the review showed this to be necessary or desirable. This division of views is also reflected in the questionnaire responses reported in Table A.2(d). One manufacturer's representative however made adverse comment on the uncertainty that he considered had been created when the Manufacturers' Council proposed a suspension of the TRP in 2003.

There was general acceptance also of the consolidation of most tariffs into four bands, and of the rationale for doing so. Questionnaire responses in Table A.2(a) indicate strong support for widening the gaps between the bands. This point tended not to be made explicitly in consultations, although some manufacturers argued for a reduction of tariffs on intermediate goods to zero, which would in effect widen the gap between tariffs on finished goods and intermediates. Widening of the gap in this way would tend to increase effective rates of protection.

6.1.4. Business Costs

The strongest complaints voiced in the consultations were over the government's perceived failure to take steps to reduce the excessive cost of doing business in Papua New Guinea. As already noted in the 2003 Tariff Review, manufacturers consider that they had entered into a bargain with the government whereby government action to reduce business costs would be the counterpart of manufacturers' acceptance of the TRP. The manufacturers clearly believe that the government has reneged on its side of the bargain. This perceived failure has led to an obvious loss of confidence in government policy on the part of manufacturers.

The list of factors ("impediments") contributing to excessive business costs is a long one. In table A.3 they are ranked according to the importance placed on them in questionnaire responses. The most severe impediments according to the questionnaire responses are infrastructure deficiencies, high cost and unreliable supply of public utilities (especially electricity), inadequate law and order, and high shipping and road transport costs.

Manufacturers were asked via a survey to attempt to give a quantitative estimate of the excess costs faced by their operations, compared to the more normal levels of costs in other countries. Only a small number of responses was received, and these were not provided on a consistent basis across all the responses, so that the results have to be treated with some caution. It would appear however that the estimated excess costs for individual cost items range from 5% to 80%, and typically fall in the range of 20-40%. The estimated effect on overall operating costs appears to typically fall in the range between 20% and 30%. A number of these manufacturers also provided estimates of the losses incurred by their businesses as a result of inadequate import monitoring. These estimated losses ranged from 4% to 40%. A well-designed research project could readily produce more precise estimates of excess costs.

Strong dissatisfaction with business costs is not confined to manufacturers. These costs also impact on agricultural and other commodity exporters, who also expressed strong dissatisfaction on this issue. Arguably the effects are even more severe on these exporters than on manufacturers, especially the effects of infrastructure deficiencies, transport costs and law and order problems.

There was also considerable evidence of the so-called "Dutch disease" operating in Papua New Guinea at the present time. The most obvious symptom of this phenomenon is the extent to which firms in the natural resource sectors are able to readily outbid other sectors in competition to attract employees, especially skilled labour and professionals.

6.1.5 Import Monitoring Problems

Although import monitoring problems are included in the list of “impediments” in Table A.3, the issue deserves a separate heading as it was repeatedly mentioned in consultations. Manufacturer after manufacturer complained of the difficulty of competing with imports that have evaded import duty by one method or another. These methods include fraudulent declaration of import values, declaration of imports under false tariff classifications, entry of undeclared goods hidden in the back of container shipments, and straightforward cross-border smuggling. Imports of counterfeit goods or goods in breach of trademarks are also viewed as a serious problem. Many manufacturers consider that the problem is largely out of control, and express frustration at what they perceive is the Internal Revenue Commission’s refusal to acknowledge the scale of the problem, which is said to be especially serious in Lae.

It was argued by some that much of the fraudulent activity in relation to imports is beneficial because it introduces additional competition into the market place. This is not an argument that should be accepted. If policies exist they should be enforced, otherwise there is likely to be a progressive collapse in respect for and compliance with government policy and the law. Businesses are entitled to expect that they can operate in an environment where laws and regulations are adequately enforced.

It is true however that policies that embody substantial incentives for non-compliance will generally be difficult to enforce. At least one manufacturer acknowledged that high tariffs strengthen the incentive to evade import duty. Increasing tariffs would thus simply tend to exacerbate the problem. If tariff changes are to be considered as a response to the problem reductions in tariffs are likely to be more effective than increases.

One suggestion made by packers of palm oil is that ad valorem duties on products such as palm oil, for which there is a clearly identifiable international price, should be replaced by equivalent specific (non-ad valorem) duties. This would remove the incentive for fraudulent under-declaration of value.

Manufacturers also complain about the lack of an anti-dumping procedure in Papua New Guinea to deal with products perceived as dumped.

6.1.6 *Ad Hoc* Tariff Changes, “Picking Winners” and the Need for Transparent Policy Process

The majority of manufacturers are strongly opposed to *ad hoc* tariff changes and granting of special tariff treatment to specific industries. They view such practices as unfairly favouring special interests, and they accordingly generate a sense of unfairness and arbitrariness in the application of government policies, which in turn undermines support for those policies. The undermining of confidence in trade policy is particularly evident where the decision-making process is non-transparent. It was disturbing for example that over the course of the review almost nobody could be found who understood the reasons for the tariff changes in the 2007 Budget. The prevailing attitude of manufacturers toward those changes appeared to be one of considerable cynicism.

One Port Moresby wholesaler/retailer was especially critical of the increased tariff protection on soft drinks, arguing that the local producer needs to be exposed to more effective competition to ensure maintenance of acceptable standards of service and supply.

Decisions resulting from a non-transparent process may also take inadequate account of practical considerations. For example the Internal Revenue Commission submitted that the new tariff on dark-meat tuna will be difficult to monitor because the description of the product does not correspond to a single unique item code in the Papua New Guinea tariff.

Manufacturers also note that special tariff treatment of selected industries has invariably proved very costly to the economy, and may add substantially to costs of production in the manufacturing sector. Manufacturers that use sugar as a production input, for example, complain about the additional costs they bear as a result of the 70% tariff protection provided to the local sugar producer.

6.1.7 Tariff Exemptions

Several manufacturers expressed dissatisfaction with the increasingly prevalent practice of granting blanket tariff exemption for new projects, including large-scale hotel developments as well as mining and oil developments. This is viewed as depriving local manufacturers of legitimate business opportunities.

On the other hand the Chamber of Mines and Petroleum emphasised that a demand for tariff concessions for capital goods and materials is likely to be standard for future developments in the resource sector. The Chamber claims that it has not hitherto been the practice for tariff concessions to be provided on consumables. The Chinese-financed Ramu Nickel project is the first to obtain a concession on consumables, according to the Chamber.

When considering the need for tariff exemptions account should be taken of the extent of industry assistance that is already available through other channels. For example the 2007 Budget indicated that permanent loss of revenue due to exemptions under the Income Tax Act amounted to K23 million in 2005, with a further K5 million of tax being deferred. Other sources of industry assistance include the Infrastructure Tax Credit scheme and exemptions under the Stamp Duty Act. It is understood that estimates may have been prepared of the amount of tariff revenue lost as a result of the granting of tariff exemptions, but no information on this was provided to the review.

6.1.8 Product Specific Issues

A number of producers complained about the quality of inputs that they find themselves needing to purchase from local manufacturers. Poultry producers expressed particular dissatisfaction with the quality of the animal feed supplied to them by local feed converters.

Similarly, at least one producer raised the issue of whether tariffs could be removed on imports of products where the imported version is demonstrably better suited to their requirements than the locally-produced version, or where the local producer cannot supply the range of specifications that they require.

Several agricultural exporters and processors of agricultural products highlighted that they are paying import duty on various items of plant and equipment that they import, even where these items are not produced in Papua New Guinea and not likely to be produced there in the future. They argued that tariffs should be reduced to zero on these items.

A number of exporters and other producers also raised the issue of packaging materials that cannot be supplied locally, but which are still subject to duty, perhaps because they are imported under the same tariff code as the materials which are locally produced under tariff protection. While acknowledging that they have to accept tariffs on materials that are locally produced these producers consider that they should be entitled to duty-free imports of materials that are not produced locally.

Manufacturers also noted the existence of some anomalies in the current tariff schedule, where goods have not been allocated the tariff rate appropriate to their category (e.g. intermediate or finished goods).

6.1.9 Firm-Specific and Industry-Specific issues

Canned Tuna

The local tuna canner that requested the increased tariff on canned dark-meat tuna submitted that the increase will need to remain in place for some time as part of a longer-term strategy of developing an internationally competitive tuna canning industry in Papua New Guinea. Dark-meat tuna is a by-product of the process that is not readily saleable in overseas markets, and a strong local market for this product is argued to be important to the overall profitability of the existing operation. The tariff is needed to secure the local market in the face of competition from overseas competitors, especially from Thailand.

However the existing operation is not internationally competitive and its viability is dependent on protection in the local market and preferential access to the European Union market. The latter at least will eventually be eroded as a result of trade agreements involving the European Union and competitor countries. In order to survive long-term therefore the industry in Papua New Guinea must become internationally competitive and in order to achieve this it must dramatically increase the scale of its operation. This means that catches from Pacific Island waters that are currently transferred out of the region for processing in Thailand and the Philippines must be redirected to onshore processing in Papua New Guinea. This in turn requires government policy action in Papua New Guinea and other Pacific island states to make these onshore landings a condition of continued entitlement to fishing licenses, which will further improve the competitive position of a Papua New Guinea canning industry by cutting off a significant portion of the supply of fish to competitor countries.

It was submitted that achievement of international competitiveness in tuna canning could result in a dramatic increase in the size of the tuna canning industry, perhaps to six or seven times its current size. This could involve a level of employment comparable to that of the entire manufacturing sector at the present time, and a significant proportion of those employed would be women. It was acknowledged that the dark-meat tuna produced by an industry of this size could not be absorbed by the local market as canned product, and that a substantial proportion of the dark meat would then have to be processed as fish meal, as is already the case in some canning operations. In any event tariffs on dark-meat tuna will presumably be no longer necessary once the industry has achieved international competitiveness.

The feasibility of the proposed strategy however depends among other things on policy decisions by the Papua New Guinea government, which are not under the control of the local producer. In the meantime Papua New Guinea consumers, particularly low income consumers are being disadvantaged by the additional tariff on a product that is a significant item in their consumption basket.

Excise Industries

Brewing and cigarette production are two industries that continue to enjoy prohibitive tariff protection. In both cases effective rates of protection are almost certainly very much higher than the nominal rates, since a substantial proportion of the material inputs to their manufacturing processes are imported duty-free. Both industries are the source of substantial excise duty for the Papua New Guinea government. Tariffs are thus not the direct determinant of prices to the consumer. In both cases there are compelling social reasons for prices to consumers to be maintained at high levels rather than for the product to be made available to consumers at the lowest possible price.

The incumbent firms in both industries, especially South Pacific Breweries, are large relative to the size of the economy and are substantial employers. The two firms have also been able to achieve an extraordinary degree of market dominance. For example, information submitted by South Pacific Breweries indicates that the company accounts for 99.5% of the Papua New Guinea beer market. Competition for both firms comes primarily from “home-grown” production, “brus” in the case of cigarettes and liquor from local stills in the case of beer. Both firms pay close attention to potential competition from imports, including parallel imports and illegally trademarked goods in the case of cigarettes.

Both firms emphasise the size of their contribution to government excise tax receipts, the high standard of their production facilities, and the substantial sums of money that they commit to community and social service activities.

Both are subsidiaries of large multinational companies with parallel operations spread throughout the Asia-Pacific region. Both parent companies are engaging in substantial rationalisation of their regional operations, and the continued viability of their Papua New Guinea operations as a production unit within the group is dependent on being able to continue to demonstrate an acceptable contribution to the group’s overall profitability. Both firms have emphasised the prevalence of relatively high rates of protection for most of their group’s operations in nearby countries, and have

maintained that in their case high rates of protection are needed to offset high production costs associated with production volumes that are low by international standards. Both have argued that reducing protection levels would expose them to import competition and erode their profitability. The implicit threat is that under those conditions their parent companies could decide to shut down their Papua New Guinea production units and supply the market with imports from production units elsewhere. South Pacific Breweries maintains that penetration of the local market by imports would result in the closure of one of its two breweries.

If import competition led to closure of local production, the Papua New Guinea government would still collect excise duty on the imports that would replace domestic production, and in principle excise receipts could actually expand if lower prices led to an expansion of the size of the market. In practice the two firms argue that under these conditions the efficiency of revenue collection would be likely to fall compared to the present situation, so that revenue receipts might well decline. Employment would still be maintained in the distribution side both of their businesses and the businesses of their new competitors but the employment currently existing in the production side would be lost.

At the same time retention of prohibitive rates of protection for these two firms is likely to become increasingly problematic as tariff rates continue to fall on other products, especially in view of the very high rates of effective protection that are likely to be prevailing in the two industries. Under these conditions the two firms would tend to become a privileged “manufacturing aristocracy”, able to readily outbid other firms in competition for labour and services, as firms in the mining and oil sectors are already doing. It is likely that this situation would increasingly be seen as unacceptable by other businesses, leading to pressures on government to withdraw the privileges of the two firms. Arguably it would be both in the interest of government and in the long term interest of the two firms to explore the possibility of operating successfully under lower levels of protection.

Plywood, Veneered Panels and Laminated Wood: PNG Forest Products Ltd

PNG Forest Products Ltd produces plywood, sawn timber and prefabricated houses. It is a large employer, with production facilities located in what is essentially a “company town”, where a large proportion of the infrastructure and services is provided by the company. After some difficult years the company is currently in a period of recovery and development, involving the upgrading of its production facilities and diversification into new production lines, especially in the prefabricated housing field.

Prior to the TRP plywood and similar wood products produced by PNG Forest Products Ltd were subject to a tariff of 100%, due to a contractual commitment by the Papua New Guinea government. Over the life of the TRP this tariff was reduced to 40%. The company submitted that after such a dramatic reduction in tariffs it needs time to adjust to this lower tariff rate, but also stated that its forward planning is based among other things on the assumption that in the future it will have to operate under lower rates of tariff protection.

Sugar

As noted earlier the government is contractually committed to maintain the tariff rate on sugar at 70% until the end of 2010. The legal agreement providing for this involves the Privatisation Commission as a party as well as the government and the producer, Ramu Sugar Ltd, and is linked to a plan to partially privatise Ramu Sugar Ltd through an initial public offering. From the beginning of 2011 the tariff rate is scheduled to fall to 40%.

In the meantime Ramu Sugar has embarked on a diversification program that involves shifting the emphasis in their production mix from sugar to palm oil, developing beef production, and experimenting with the production of new crops such as cashew nuts. The diversification program is being financed in part from the raising of new capital and in part from the revenue stream attributable to the 70% tariff on sugar. Since the company claims that sugar production is viable with a 40% tariff, it would appear that the difference between the 70% and a 40% tariff represents the proportion of its receipts from sugar sales that is being diverted into financing the diversification program. Papua New Guinea consumers and industrial users of sugar are thus effectively being required to subsidise a rescue package for Ramu Sugar. The diversification strategy appears to be somewhat risky, and success is not assured. Ramu Sugar is located in a remote area where alternative sources of paid employment are not readily available.

The protection provided to Ramu Sugar continues to impose substantial costs on the Papua New Guinea economy. The company indicates that approximately two-thirds of the domestic market is represented by retail sales, with the remaining one-third comprising sales to industrial users of sugar. Sugar is a significant item in the diet of Papua New Guineans and the high price of sugar has a correspondingly significant impact on consumer welfare. As already noted the high price of sugar is adding substantially to the costs of producing goods such as soft drinks, biscuits and ice cream, in some cases fuelling demands for increased tariffs on these goods. The high cost of sugar probably also inhibits the emergence of new sugar-using industries such as a confectionery industry. These costs are likely to greatly outweigh the benefits to Ramu Sugar's shareholders and the relatively high standard of living and employment that Ramu Sugar is able to provide for its approximately 2000 employees.

The company appears to believe that from 2011 the 40% tariff will be maintained indefinitely, although there does not appear to be any legal obligation to this effect on the part of the government. The company indicated that it is uncertain whether sugar production will be viable at tariff rates below 40%. There may be some doubt about the viability of sugar production even at a 40% tariff rate, since if sugar production was profitable under a 40% tariff it is unclear why the company could not have accepted this as the rate to apply at the end of the TRP, rather than seeking a substantial increase in protection and embarking on a risky diversification program

Fresh Produce

Domestically-produced fresh produce generally enjoys prohibitive protection rates. Production of fresh produce for market is clearly of considerable importance to the rural economy of the Highlands. Representatives of the produce growers emphasised

the problems that they face in competing with imports in urban Papua New Guinea markets, due both to high transport costs and the relatively low level of organisation among their suppliers. They argued that because of these handicaps tariffs on the products they produce should be raised even from their current prohibitive levels, and could perhaps be brought down again when their industry is better organised. They are happy for tariffs to be lowered on the products that they do not produce.

It is clear that there are currently significant inefficiencies in the way that the production and marketing of fresh produce is organised. However if government simply accommodates these inefficiencies with higher tariff rates pressure to increase efficiency may be lacking. Other consultations also suggested that the difficulty of competing with imported produce should not be exaggerated, since imported and domestic produce are generally not close substitutes in consumption.

Rice

In one consultation it was argued that protection should be provided for rice production in Papua New Guinea. It was submitted that rice could be potentially produced at an internationally competitive cost in certain parts of Papua New Guinea, but that initial tariff production would be needed until the new production became established.

If it is possible to produce at an internationally competitive cost there should be no need for permanent protection. If the requirement is for support in the initial phases of establishment, this could be more efficiently provided by some form of subsidy, extension services or concessional financing, rather than by means of a tariff that would raise the cost to consumers of this staple food. In general, since many of Papua New Guinea's internationally competitive industries are located in the agricultural sector, there is no case for embarking on the development of new areas of agricultural production that would need substantial protection in order to survive, especially if they involve the production of basic foodstuffs.

6.1.10 Infant Industry Protection and Industry Policy

Staff at the Department of Commerce and Industry continue to advocate extensive use of infant industry protection, to the point where it could be viewed as indistinguishable from some form of industry policy. In consultations it was not always clear what criteria they were advocating for selecting industries to be provided with infant industry status. At times their discussion appeared to imply that the mere demonstration of technical feasibility of production is sufficient to justify infant industry protection. It is difficult to reconcile such views with the emphasis in the MTDS on focusing interventions on economic activities in which Papua New Guinea is internationally competitive.

The experience to date of decisions to provide special protection to specific industries has not been encouraging. Generally these decisions have resulted in the establishment of industries that have needed very high levels of protection over long periods in order to survive, resulting in the imposition of substantial costs on the Papua New Guinea economy. There is no reason to expect better outcomes from

future decisions on infant industry protection unless the basis for making these decisions is radically changed.

The justification for infant industry protection is that the industries concerned will eventually be able to prosper without the need for special protection. One difficulty in assessing the future prospects of proposed infant industries is that there is very little information available that would allow an informed assessment of Papua New Guinea's potential competitiveness in different manufacturing activities. Labour market data useful for this purpose is almost non-existent. Widely varying assessments of the current state of the Papua New Guinea labour market were given during consultations. Data on other costs relevant to manufacturing competitiveness is similarly lacking on any systematic basis. A patient researcher could probably piece together enough information to produce an assessment of Papua New Guinea's potential manufacturing competitiveness, and this would be a useful guide for future policy decisions in this area. The research would need to be undertaken by an institution or firm in a position to compare Papua New Guinea costs with costs in competitor countries, especially in the surrounding region.

6.1.11 Downstream Processing

Downstream processing in Papua New Guinea is generally aimed at export markets, and most downstream processing industries must therefore compete on international markets. A number of downstream processing operations have in fact emerged, including plywood mills, sawmills, laminated balsa wood production, and precut furnishing factories in the forest products industry, tuna canning in the fisheries sector, and palm oil refining in the agricultural sector. There is also some embryonic biofuel production. All of these operations appear to have emerged in response to perceived commercial opportunities.

Convincing explanations were given as to why substantial downstream processing of coffee (other than roasting) and cocoa is unlikely to emerge, based on both technological factors and the nature of the international market for products such as coffee, cocoa and chocolate.

There are a number of competing proposals for the downstream processing of natural gas. There seems to be no reason for supposing that robust commercial competition and the application of sound economic criteria could not produce a satisfactory outcome in these cases.

Contact was made with one downstream processor producing for the domestic market: Tropic Fronds Ltd, a producer of soaps and cosmetics from local materials. The small size of the domestic market is reflected in relatively high production costs, so that tariff protection is essential to its viability. This company is clearly having a difficult time competing with rivals that have no commitment to use of local materials, and who will readily import materials and finished products if this gives them a competitive edge. The company believes that its difficulties are compounded by inadequate monitoring of the duty rates that its competitors are required to pay on their imports. If this can be shown to be the case the customs authorities should be instructed to take firmer action to ensure that these competitors pay the correct rate of duty on their imports.

6.1.12 Technical Skills Training

It was apparent that many manufacturers are providing substantial technical skills training to their employees. Most of this training is of the “on job training” variety, and in many cases it is substituting for the lack of satisfactory training provision at the technical institutes. Some manufacturers are cooperating with technical institutes in the provision of apprenticeship schemes, but most appear to see little value in the training provided by the institutes. Some employers are also sending selected employees overseas for training, particularly multinational companies that are able to arrange attachments with overseas affiliates. The provision of substantial amounts of technical skills training clearly represents an element of social value associated with manufacturing production in Papua New Guinea.

6.2. Effective Rates of Protection

An analysis of the impact of the TRP on effective rates of protection by the Australian Bureau of Agricultural and Resource Economics (ABARE) was included in the 2003 Tariff Review.

Economy-wide analysis of effective rates of protection requires detailed information on the production structure of the economy. For this purpose the ABARE analysis utilised ABARE’s own PNGGEM model of the Papua New Guinea economy, which includes a detailed input-output database for 1998. The study for the 2003 Tariff Review calculated effective rates of protection for 1998, 2001, 2003, and 2006, using projected input-output data for the years subsequent to 1998. Unfortunately the data on which PNGGEM is based was not made available, making assessment of the results of the analysis problematic.

The PNGGEM database contains 38 commodity groups. Each group contains products subject to different rates of protection, and so weighted averages of the tariff rates applicable in each group were used as the basis of the effective rate of protection calculations. The weighted average tariff rates used for 2006 for every group except one were below the 25% TRP rate for finished goods, in most cases well below, and therefore of course below the 40% TRP prohibitive rate by an even greater margin. This means that the effective rates of protection calculated for the groups almost certainly greatly understate the effective rates of protection at the end of the TRP for products within each group that are subject to the full 25% or 40% tariff rates.

A separate table of effective rates of protection for individual commodities also presented in the ABARE study, and apparently produced at the request of the Papua New Guinea government, is likely to provide a more accurate picture of effective rates of protection for more highly-protected commodities. This table is reproduced here as Table 17. While estimated effective rates of protection for most products shown fell during the TRP, for all but two of the products they nevertheless remained very high at the end of the TRP, ranging from 31.91% for steel products to 96.22% for sugar. The figure for sugar is broadly consistent with information supplied to this review by Ramu Sugar Ltd. The wide dispersion in the effective rates of protection shown in the table is also noteworthy.

	1998	2001	2003	2006
	%	%	%	%
Sugar	114.11	98.47	94.92	96.22
Rice	13.65	-0.38	-0.37	-0.30
Salt	16.51	-2.16	97.94	36.55
Flour	86.07	51.91	47.74	36.55
Tinned Fish	122.05	51.91	47.74	36.55
Biscuits	86.07	73.54	72.84	62.37
Soap	107.27	72.38	76.73	63.82
Cooking oil, bottled for retail	27.98	62.01	51.06	38.19
Cooking oil, other	107.27	-0.24	-0.29	-0.25
Clothing	76.90	45.56	44.66	36.57
Steel Products	110.04	45.27	41.75	31.91

The overall picture emerging from the ABARE study can be summarised as follows:

- Effective rates of protection for manufactured goods generally fell as a result of the TRP, but nevertheless remained high at the end of the TRP, especially for products subject to tariffs in the higher TRP bands. High rates of effective protection are an indicator of inefficiency of resource use.
- A wide dispersion of effective rates of protection for manufactured goods remained at the end of the TRP. A wide dispersion in effective rates of protection indicates that tariffs are supporting production activities with widely divergent efficiency of resource use.
- Effective rates of protection on agricultural and mineral export products were negative both at the beginning and the end of the TRP. Negative effective rates of protection indicate the effect of tariffs in acting as a tax on export production. The TRP reduced but did not eliminate this effect.
- By contrast fruit and vegetable production, almost entirely for the local market, continued to enjoy substantial positive effective protection at the end of the TRP, although the rate fell significantly over the period of the TRP.

No database other than PNGGEM suitable for use in estimating economy-wide effective rates of protection in Papua New Guinea has yet been developed. Consequently the ABARE study necessarily remains the only available source of estimates of effective rates of protection on an economy-wide basis.

In the survey of manufacturers carried out in conjunction with this review, manufacturers were asked to provide data on production costs and tariff rates that would allow effective rates of production to be calculated for their principal products. Not all of the relatively small number of respondents provided this information, and in some cases the information was not provided in useable form. The information is probably also of variable accuracy, since the degree of precision with which costs were estimated in each case is not known, and the information was not independently

Product	Type of Product	Tariff on final good %	Tariffs on inputs %	Value Added		Effective Rate of Protection
				at domestic prices %	at world prices %	
A	Basic Foodstuff	25	0	45	20	128%
B	Basic Foodstuff	25	0-70	47	27	72%
C	Basic Foodstuff	25	0-15	55	32	70%
D	Basic Foodstuff	25	0-70	75	56	34%
E	Basic Foodstuff	25	0-15	77	58	33%
F	Basic Foodstuff	20	0-15	93	74	27%
G	Basic Foodstuff	15	0-15	93	79	18%
H	Basic Foodstuff	15	0	108	93	16%
I	Foodstuff	15	0-15	53	45	17%
J	Beverage	40	0-15	53	14	79%
K	Household Accessory	15	0	55	40	38%
L	Household Consumable	25	0-15	39	15	159%
M	Household Durable	25	0	60	35	71%
N	Household Durable	25	0-25	65	47	38%
O	Household Durable	25	0-25	80	62	30%
P	Building Product	15	0	35	20	75%
Q	Building Product	0	0	24	24	0%
R	Chemical-based	15	0	25	10	150%
S	Chemical-based	15	0	35	20	75%
T	Chemical-based	25	0	72	47	53%
U	Chemical-based	25	0	95	70	36%
V	Packaging	25	0	50	25	100%
W	Packaging	15	0	38	23	67%
X	Packaging	15	0	40	25	60%
Y	Packaging	15	0	55	40	38%
Z	Packaging	15	0	56	41	37%
AA	Packaging	0	0	24	24	0%

Source: Survey of members of the Manufacturing Council of PNG, 2007

verified against production or accounting data. While the results, shown in Table 18, must therefore be treated with an appropriate degree of caution, they are nevertheless interesting for the broad confirmation they provide of the picture indicated in Table 17. For confidentiality reasons the firms concerned are not identified and products are described only by the general category into which they fall.

The effective rates of protection of over 100% are especially striking. The effective rates of protection for most products however can be found within the same 30% to

90% range as in Table 17. Six products have effective rates of protection below 30%. The zero effective rate of protection for two products arises because both the finished product and the inputs are imported duty-free.

Table 18 therefore tends to confirm the assessment based on Table 17, that effective rates of protection for manufactured goods at the end of the TRP are generally both high and variable. These two features are related to both the differential between the tariffs on finished goods and inputs, and to variations in value added as a percentage of the final product. Both of these factors are clearly evident in Table 18. A combination of reductions in tariffs on finished goods and a narrowing of the gap between tariffs on finished goods and inputs would result in substantially lower and more uniform effective rates of protection, reflecting more efficient use of resources across the entire manufacturing sector.

6.3. Implementation of the Recommendations of the 2003 Tariff Review

Of the five recommendations of the 2003 Tariff Review, only one has so far been fully implemented, and one has been partially implemented. This section therefore comments both on the impact of those recommendations that have been implemented, and on implications of the non-implementation of those that have not.

Recommendation 1

That the existing schedule of the Tariff Reform Program remains in place.

As will be discussed in more detail below the effects of the TRP have been largely positive for the Papua New Guinea economy and for the achievements of the government's economic objectives. The implementation on schedule of the final step in the TRP has proved to be the correct decision, and the concerns expressed at the time of the 2003 Tariff Review regarding the capacity of the manufacturing sector to absorb the final tariff cut in the program have been shown to be unwarranted.

Recommendation 2

The Government should intensify its efforts to reduce the structural impediments facing Papua New Guinean businesses in the following areas:

- *Law and order;*
- *Physical infrastructure;*
- *Education and training;*
- *The domestic shipping industry;*
- *Public utilities;*
- *Public sector performance; and*
- *Macroeconomic management.*

Implementation of this recommendation was vital to the realisation of the full potential benefits of the TRP, as well as to securing the support of manufacturers for the TRP. Unfortunately this recommendation has been only partially implemented.

As already noted in this report, very substantial progress has been made in the area of macroeconomic management. Inflation has been brought down to low levels, the government's fiscal position has been greatly strengthened, and relatively robust economic growth has been achieved over the past four years. This improvement in the

macroeconomic environment has undoubtedly contributed to improved business conditions, and as a result the manufacturing sector has been better able to absorb the TRP tariff changes than would otherwise have been the case. It is important that the improvement in macroeconomic management should be sustained into the future.

There has been a substantial increase in the allocation of financial resources to improvement in the physical infrastructure, both from the government's own resources and from donors. Rehabilitation of the roading system has attracted substantial financial commitments, and plans are under way for a major upgrade of the port of Lae. Assessments of the degree of success of this effort are varied. Some of those consulted noted that improvements in parts of the road network are already apparent. Others pointed to ongoing problems in ensuring that the funds allocated to infrastructure improvements are actually spent for that purpose. This issue appears to remain a major challenge for the government.

Law and order problems remain a major preoccupation for the private sector. The problems impose serious costs on business. In some areas the problems are also clearly holding back the development of economic activity. Consultations did not produce any suggestion that there have been improvements in this area. Some of those consulted argued that improvements are dependent on the provision of a major increase in economic opportunities for the Papua New Guinea population, and this seems to be a reasonable assessment.

Manufacturers clearly have little faith in the training provided by technical institutes. With some exceptions, they appear to be increasingly moving to provide all training from within their own resources, without the involvement of the technical institutes.

Both manufacturers and exporting sectors continue to complain at the high cost of domestic shipping. An investigation into the domestic shipping industry by the Independent Consumer and Competition Commission (ICCC) has produced little in the way of recommendations for significant change. Private sector representatives expressed disappointment and frustration with the findings of the ICCC report.

The high cost of public utilities continues to be a major focus for private sector dissatisfaction. Manufacturers express outrage that the price of electricity in particular continues to rise while reliability of supply is not improving and may even be deteriorating. The ICCC, which has regulatory authority over electricity prices, argues that substantial investment is required to improve reliability of supply, and claims to be operating on the basis that price rises are approved in exchange for undertakings for new investment designed to improve reliability of supply. Manufacturers' representatives were scornful of this justification, arguing that new investment in electricity could readily be financed through the raising of loan capital without the need to increase prices.

Some sections of the public sector, for example Treasury and Finance and the Bank of Papua New Guinea, continue to perform strongly. Consultations did not however produce any suggestions that the overall performance of the public sector has improved.

Recommendation 3

That the TRP be continued beyond 2006. From 2009, the prohibitive rate and the protective rates should be reduced by 5 per cent every three years until all tariffs are at 15 per cent. All remaining non-ad valorem tariff rates should be converted to the protective rate by 2006. All goods should be subject to the uniform tariff rate of 15 per cent by 2021, except for those where it can be convincingly demonstrated that exceptional circumstances apply and that a higher tariff would be in the 'public interest'.

This recommendation has not yet been implemented. Implementation is not required until 2009. This report will also recommend further reductions in tariffs, using two principles. First, the reductions should be implemented gradually by means of clearly scheduled steps, as was the case with TRP. Second, the reductions should be designed so as to narrow the gaps between the different tariff bands, with a view to yielding lower and more uniform effective rates of protection.

The 2003 Tariff Review recommendation meets both these requirements. The recommended reductions in the protective rate would occur in two steps ending in 2012, and the recommended reductions in the prohibitive rate would occur in five steps ending in 2021. Effective rates of protection would remain above 15% for those industries able to import some or all of their production inputs on a duty-free basis, but both the levels and variability of effective protection rates would be substantially reduced. This recommendation represents a sensible approach to further tariff reductions, although it is of course possible to design alternative programs that would also meet the requirements set out in the preceding paragraph.

In general, ad valorem tariffs are to be preferred to non-ad valorem tariffs on grounds of transparency. There may however be cases where a non-ad valorem tariff may be used to address a particular problem.

Recommendation 4

That the Government should revive the Industry Assistance Board (IAB), and amend the Act to make it an independent statutory body and provide it with a sufficient budgetary allocation to perform its tasks.

As the 2003 Tariff Review notes, this recommendation is “aimed at ensuring that any future changes to tariff rates are transparent and that a proper evaluation process is followed”. The need for a transparent and clearly mandated process for making decisions on tariffs is also strongly endorsed in this report. The revival of the Industries Assistance Board is one approach to this. An alternative approach will also be proposed later in this report.

Recommendation 5

That Customs administration should be improved in the areas of enforcement, monitoring and classification.

Implementation of this recommendation is vital to the integrity and effectiveness of tariff policy. Failure to implement the recommendation will inevitably lead to further loss of confidence in government policy on the part of manufacturers, and could lead in time to the complete breakdown of effective tariff policy. It was clear from

consultation that many problems need to be addressed, including the coordination of the legal responsibilities and powers of the agencies involved, to ensure that effective enforcement is possible in practice. It is understood that some steps aimed at improvement are in train, but consultations indicated that the situation has not yet begun to improve, and may even be deteriorating in some areas. It is vital that stronger support be given to efforts to address the problems of import monitoring.

6.4. Assessment of the TRP and Issues for Future Tariff Reform

6.4.1. Direction of Policy

The government's decision to reduce most tariffs via the TRP was sound. Well-designed tariff reduction programmes encourage greater efficiency and productivity in the private sector through greater exposure to international competition.

The TRP has been an important initiative to move tariff policy in the direction of the strategy adopted in the government's Medium Term Development Strategy (MTDS), with its emphasis on focusing "interventions on resources, products, and commodities in which Papua New Guinea enjoys a competitive advantage in global markets".

High rates of protection are inconsistent with the strategy laid out in the MTDS, because they attract resources into industries whose cost of production is high by international standards, and because they have an effect equivalent to a tax on the export industries that must compete in international markets. They penalise existing and potential export industries by raising their production costs, both directly through increases in the price of their inputs, and indirectly by contributing to a higher cost structure across the domestic economy.

The emphasis on outward-looking policies, including trade policy, in the MTDS is in line with the well-established conclusions of economic analysis and is also supported by a balanced assessment of the historical experience of developing countries. The competitive pressures arising from globalisation reinforce the imperative to focus on economic activities "in which Papua New Guinea enjoys a competitive advantage in global markets"

It is important to emphasise however that trade policy is only one element in the strategy, and that success of the strategy depends on the effective implementation of reform across a broad range of economic policies.

The likelihood that Papua New Guinea will face increasing pressure to remove tariffs on imports from major economic partner countries, through the negotiation of free trade agreements, is a further reason to encourage manufacturers to adjust to lower levels of protection, and to avoid the establishment of new industries that will need to be provided with substantial protection on a long-term basis in order to survive.

6.4.2. Impact of the Tariff Reduction Program on Economic Efficiency

The TRP has achieved substantial reductions in both nominal and effective rates of protection. Consultations with manufacturers indicated that the re-allocation of resources that would be expected to follow from a sustained program of tariff

reduction has in fact been occurring. Firms have discontinued some production lines while introducing other new lines. New technology has been introduced and operations have been reviewed to achieve greater efficiencies. Some firms have expanded while others have contracted. While other factors beside the TRP have also contributed to these changes, this is important evidence that the TRP has been having its intended effect of improving economic efficiency in the private sector.

6.4.3. Impact of the Tariff Reduction Program on the Manufacturing Sector

Over the period of the TRP employment in the manufacturing sector increased more strongly than in any other sector. Consultations confirmed that a number of firms are continuing to confidently implement expansion plans, while others are struggling to cope with lower rates of protection. This variation in experience is to be expected in a period of substantial tariff reform. While buoyant economic conditions are obviously an important factor in the strong performance of the manufacturing sector during the period of the TRP, this outcome also demonstrates that tariff reform need not result in a contraction of the manufacturing sector as a whole. It was encouraging also to hear some manufacturers state that they are planning their future development on the assumption that in the longer term they will enjoy less protection than at present. It is acknowledged that not all manufacturers support tariff reductions, but this is only to be expected, given that the manufacturing sector has been the major beneficiary of high rates of protection in the past.

6.4.4. Design of the Tariff Reduction Program

An important feature of the TRP was its implementation on a gradual basis, using a legislated timetable for phasing tariff reductions over several years. The predictability of policy thus provided has been important for business, providing the opportunity for planned adjustment to the tariff changes. This will undoubtedly have contributed to lowering the transitional costs associated with the tariff changes. Credibility was bestowed on the program by the fact that the timetable for reductions was legislated in advance and by the generally faithful implementation of the program. Policy credibility is important to the effectiveness of policy reform, since the private sector may not respond in the intended way to policies that are not perceived to be credible. Future tariff policy should also be based on gradual implementation over multi-year periods.

6.4.5. Current Tariff Levels and the Future of Tariff Policy

Despite the reductions achieved by the TRP, the protective and prohibitive tariff rates in particular remain high. Furthermore, these rates appear to be associated with effective rates of protection that are still often exceptionally high, as well as being highly variable across products. High effective rates of protection indicate that serious inefficiencies in resource use remain, while the variability of effective rates of protection indicates that the current tariff structure is supporting production activities of widely varying efficiency in resource use. The high and variable rates of effective protection reflect the combined effect of the ongoing high protective and prohibitive tariff rates and the gap between these tariff rates and the tariffs applied to production inputs, which are either dutiable at the intermediate rate of 15% or imported duty-free if they are not produced in Papua New Guinea.

To produce more moderate and uniform effective rates of protection it is necessary both that the protective and prohibitive rates should be reduced further, and that in the process they should be better aligned with the tariff rates applicable to production inputs.

6.4.6. Business Costs and Import Monitoring

Structural impediments resulting in excessive business costs are a serious problem for all businesses in Papua New Guinea, in both the manufacturing and export-oriented sectors. The problem for business is exacerbated by the “Dutch disease” effect that is clearly operating in Papua New Guinea at the present time, manifested primarily in the ability of the natural resource sectors to bid labour, especially skilled labour away from other sectors by offering higher wages or salaries. It was acknowledged from the outset of the TRP that effective action to address the structural impediments and reduce the associated business costs would be essential if the TRP was to fully achieve its objectives. This action was to be especially important in enabling the manufacturing sector to adjust to the tariff changes under the TRP. Since excessive business costs also adversely affect the export industries, action to reduce these costs is also essential if the potentially beneficial effect of tariff reform on the export industries is to be fully realised.

Lack of progress in addressing the structural impediments and associated excessive business costs has economy-wide consequences for the effect of tariff reductions. The adjustment imposed on the manufacturing sector is unnecessarily severe, the positive impact on other sectors including the export sectors is diminished, and investments that might have facilitated the adjustment process are discouraged. The overall effect is to increase the adjustment costs and reduce the benefits associated with tariff reform, so that the full potential benefits of reform are not realised. Inadequate progress in addressing the structural impediments and associated excessive business costs thus constitutes a serious policy failure, which must be rectified if future tariff reform is to produce its desired results.

Key structural impediments are infrastructure deficiencies, the high cost and unreliable supply of public utilities (especially electricity), law and order problems and resulting high security and insurance costs, high costs of road and maritime transport, and inadequate import monitoring. In addition to the adverse impact on the profitability of affected businesses the import monitoring problems threaten to undermine the entire integrity and effectiveness of tariff policy.

Addressing the problems of import monitoring is a complicated task. One set of issues relates to the need for more adequate definition and better coordination of the legal powers of the agencies involved, to ensure that effective enforcement is possible. The need for internal reform and improvements in procedures within agencies such as the Internal Revenue Commission is another key issue. It is acknowledged that efforts in this direction are already being made, at times involving considerable courage on the part of the executives concerned. These efforts need to be much more strongly supported.

6.4.7. Tariff Rates and Business Costs

Manufacturers are increasingly putting forward the view that a principle function of tariffs in Papua New Guinea is to compensate for the excessive costs of doing business. This would imply that the level of tariffs in effect becomes a measure of the extent of excess business costs.

This is an understandable view for manufacturers to hold, given the business conditions under which they operate, but it is a dangerous view to accept as the basis for tariff policy. It implies ongoing acceptance of a serious policy failure, and potentially leads to a “vicious circle” of cost escalation. In this “vicious circle”, structural impediments lead to excessive business costs for both manufacturers and the export industries. Setting tariffs to compensate for these excess costs further raises the cost structure of the economy, penalising exporters in particular. Sooner or later the increasing costs will lead to demands for a further round of tariff increases and the cycle will repeat itself.

It is imperative that the government act to counter this “vicious circle”, by taking decisive steps to bring about reductions in business costs. This is an essential condition for any future tariff reform program to fully achieve its intended results.

Action to reduce excessive business costs is also essential in order to restore manufacturers’ confidence in government’s tariff policy, and to secure their support for future tariff reductions. After their experience of perceived government inaction on business costs over the life of the TRP manufacturers will not be satisfied by mere promises to reduce business costs. They will be looking for concrete steps to be taken by government, and for evidence that these steps are in fact beginning to make an appreciable difference to business costs.

6.4.8. Policy Process

It is important that the policy process by which decisions on tariff policy are made is transparent, and that it is required to reach decisions on the basis of clearly defined criteria, designed to ensure that decisions are consistent with the government’s objectives of improving the efficiency of the economy and encouraging economic activities in which Papua New Guinea enjoys a competitive advantage in global markets. Transparency is important in ensuring that policy remains credible. Lack of transparency in the past has tended to undermine business respect for and confidence in the policy process. Lack of transparency combined with the absence of clearly-defined criteria on which to base decisions appears to have facilitated the making of *ad hoc* decisions, for example in the 2007 Budget, and in particular decisions granting special treatment to specific industries. Very few if any of these decisions would have been made if they had been required to be consistent with criteria emphasising increased efficiency and international competitiveness. Some of the decisions granting special treatment to individual industries have been very costly to the Papua New Guinea economy over long periods of time. A transparent policy process required to reach decisions on clearly defined criteria should result in better decisions being made in future.

6.4.9. Anti-Dumping and Other Trade Remedies

While calls by manufacturers for the introduction of anti-dumping procedures are understandable, it is doubtful that the benefits of doing so would justify the substantial cost involved in operating the procedures needed to comply with WTO rules.

The government already has the power to grant temporary tariff relief in exceptional circumstances, provided the resulting duty does not exceed the WTO bound rate for the product concerned. This power was used for example to introduce temporary tariff increases in the 2007 Budget. Any future requests for such relief should be subject to the transparent decision-making process outlined above, and should be granted only if strict and clearly-defined criteria are shown to be satisfied. Relief of this kind should be strictly temporary, with a firm expiry date, as would be the case in any event with WTO-compatible antidumping or safeguard measures.

6.4.10. Infant Industry Protection and Industry Policy

Infant industry considerations can sometimes justify the provision of special protection of new industries on a temporary basis. However the experience of decisions to grant special protection to new industries in Papua New Guinea is not encouraging. In almost every case these decisions have led to the development of permanently uncompetitive industries that have imposed significant costs on the Papua New Guinea economy over long periods of time. Infant industry protection should be provided only for industries that can be clearly shown to be capable of prospering without special protection within a reasonably short time period. The criteria for deciding on applications for infant industry protection should be designed to ensure that only industries that satisfy this condition are eligible for such protection. In general assistance to industrial development can best be provided by policies designed to encourage overall efficiency in the economy, leaving decisions on investments in specific industries to commercial decisions by the private sector.

The absence of any rigorous assessment of potential manufacturing competitiveness in Papua New Guinea is an obstacle to the evaluation of the potential of any new industries to become internationally competitive. The commissioning of such an assessment by an appropriate international organisation would provide valuable information that could be used as a basic reference in considering any future applications for infant industry protection. One likely conclusion of such an assessment that is already very clear is that the outlook for manufacturing competitiveness in Papua New Guinea will be very poor unless and until the government takes effective action to address the structural impediments that are fuelling excessive business costs in the country.

One case for immediate consideration is the request for increased tariffs on dark-meat tuna, which has been justified as an element in a longer-term strategy aimed at establishing an internationally competitive tuna canning industry in Papua New Guinea. Although the special protection requested is relatively modest, below the TRP's protective tariff rate, the product in question is an important item in the consumption of low-income Papua New Guineans. Before any decision is made on whether the tariff change should be made permanent, a detailed analysis of the tuna canning industry should be commissioned to determine the feasibility of establishing

the industry on an internationally competitive basis, and to identify the changes in government policy that would be needed to make this possible. If the analysis confirms the feasibility of the strategy the government should then decide whether it is prepared to implement the necessary policy changes. If the government is not prepared to implement these changes there is no purpose in continuing to penalise low-income Papua New Guineans with higher tariffs on canned dark-meat tuna.

6.4.11. Tariff Exemptions

The tariff exemption issue highlights contradictions present in current policy settings in Papua New Guinea. On the one hand the government is seeking to attract major investments from internationally mobile investors who are in a position to insist on being able to obtain their materials at internationally competitive costs. On the other hand Papua New Guinea manufacturers, having been encouraged to establish their businesses on the basis of tariff protection, understandably believe that they should not be deprived of the opportunity to supply their products to these new developments.

It does appear that blanket tariff exemptions often cover goods that are already subject to zero duty, and that some other goods covered by the exemptions are not produced in Papua New Guinea and may not have any immediate prospect of being produced in Papua New Guinea. Tariffs on these latter goods could readily be reduced to zero as well. There should be no need for exemptions to cover goods that are already subject to zero duty. If the practice were introduced of considering exemptions only on goods that are subject to tariffs, the scale of the exemptions would not appear so sweeping, and attention could focus on products where genuine questions arise as to the justification for providing tariff exemptions for goods that can be supplied by local manufacturers.

6.4.12. Adjustments to Improve Operation of the Existing Tariff Structure

There are some adjustments that could be made to the current tariff structure to improve its impact. One step that should be taken without question is to provide for duties to be reduced to zero on any goods that are used as inputs by export industries and that are not produced in Papua New Guinea. This could be done on application by exporters.

Another step to consider is the removal of remaining tariffs on any other goods that are currently not produced in Papua New Guinea. This should certainly be done for any finished goods that are not produced in Papua New Guinea. Any proposals later emerging for establishment of an industry to produce these goods could always be considered on infant industry grounds. The issue is less clear-cut for intermediate goods used by protected manufacturers, since removing or reducing tariffs on these goods increases the effective rate of protection for the producer of the finished good. On balance however, given that a substantial proportion of manufacturers' inputs appear to be already subject to zero duty, it is probably sensible to remove tariffs on other intermediate goods that are not produced in Papua New Guinea, especially if the government is intending to implement a further program of tariff reductions, since this will eventually moderate the immediate impact on effective protection rates.

There appear also to be tariff codes that carry the intermediate duty rate of 15% and that cover both goods that are produced locally and goods of a specification that cannot be met by local manufacturers. Tariffs should be removed from such goods where it is shown that local producers cannot meet the required specification. If necessary a new tariff code at the 8-digit or higher level could be created to cover such goods. Consideration should also be given to establishment of a procedure to deal with complaints of intermediate inputs of unacceptable quality supplied by local manufacturers, with a view to removal of tariffs on the products concerned if the complaint of unacceptable quality is substantiated.

Another question concerns non-ad valorem and ad valorem duties. As a general principle non-ad valorem tariffs are undesirable because of their lack of transparency, and remaining non-ad valorem tariffs should be converted to the appropriate ad valorem duties as recommended by the 2003 tariff review. For example the tariff on animal feed should be converted to an ad valorem duty of 15%, the rate applicable to intermediate goods. The government should take advice on whether it makes sense to convert duties to the ad valorem basis for products such as liquor and cigarettes. The conversion should be made unless there are convincing arguments to the contrary. At the same time a convincing case was made during consultations for the use of non-ad valorem duties in specific instances where there is shown to be a serious problem with under-declaration of value for duty purposes and where the product concerned has a readily identifiable international price, as in the case of palm oil. Use of non-ad valorem duties in these cases would remove the incentive for under-declaration. The non-ad valorem duties in these cases should be set to approximate the ad valorem duties that would otherwise apply, and should be reviewed regularly in the light of possible changes in the international price to ensure that this approximate equivalence is maintained.

6.4.13. Policy Toward Industries Enjoying Prohibitive Tariff Rates

Prohibitive tariff rates of 40% or in some cases higher continue to apply to some products. The 2003 Tariff Review recommended that these rates should be gradually reduced to align with the protective rate, which it recommended should also be gradually reduced to the level of the intermediate rate. Although an implied threat of closure of local cigarette and beer production in the event of tariff reductions was noted earlier, threats of closure cannot be automatically treated by governments as grounds for trade policy inaction.

The importance of the industries concerned in the Papua New Guinea economy has been highlighted, and incumbent firms have argued that this constitutes a justification for maintaining prohibitive tariff protection. It could equally be argued however that the importance of the firms in the domestic economy strengthens the case for policies designed to ensure that they operate with an acceptable level of efficiency of resource use. It is also likely, as noted earlier, that maintenance of the current prohibitive tariffs on beer and cigarettes will become increasingly distortionary and contentious if tariffs on other goods are reduced further. For this reason, and because it seems likely that effective rates of protection in the brewing and cigarette industries at least are exceptionally high, it is desirable that the producers concerned accept that they will have to operate under lower levels of protection in the future, and that they should begin planning accordingly. As noted above, the manufacturer of plywood, veneers

and prefabricated buildings has already indicated that forward planning is being done on this basis, while arguing the need for time to adjust to the tariff reductions already accepted under the TRP, which were much greater for this manufacturer than for other manufacturers.

Nevertheless the importance of a number of the industries concerned to local economies does provide grounds for caution in designing tariff programs for these industries, in order to avoid unnecessarily severe or disruptive adjustments. The fresh fruit and produce sector is in this category, as well as the production of beer, cigarettes, plywood, veneers and prefabricated buildings. Revenue considerations may also be a cause for concern to government in the case of the excise industries.

It is proposed that each of these industries should commit itself to a process of consultation with the government, with a view to reaching agreement on a feasible program of tariff reduction to be applied to its products, together with policy actions by government or actions by the firms themselves that are agreed to be necessary accompaniments to the programs. There should be no preconceptions as to the design of the programs, other than that the programs should over time deliver appreciable reductions in protection levels, with a particular emphasis on reducing effective rates of protection to more acceptable levels, in cases where current effective rates of protection are shown to be exceptionally high. Recommendations on this issue are set out in the next chapter of the report.

Sugar is a special case, both because its prohibitive tariff rate of 70% appears to be legally protected until the beginning of 2011, and because of the sustained period of extraordinarily high protection that it has already enjoyed. Given the latter consideration there is no case for further postponement of adjustment in this industry. The reduction of the tariff to 40% should take place as scheduled, and should be followed by further phased tariff reductions to progressively bring the tariff on sugar into line with the protective rate. It would be desirable that government communicate its intention to Ramu Sugar Ltd as soon as possible, so that the firm can begin immediately to plan its future adjustment.

6.4.14. Downstream Processing

Downstream processing for export has generally emerged in response to commercially profitable opportunities. Government can best support these developments by policies aimed at improving the business and investment climate, including the reduction or removal of the tax on export-oriented production represented by tariffs. There is in general no case for encouraging the development of export-oriented downstream processing activities that cannot achieve internationally competitive levels of efficiency. Since the output of the activities must be sold at internationally competitive prices, the result would necessarily be to lower the returns to producers of the raw product, leading in all likelihood to lower levels of production.

Downstream processing for the local market faces the constraint of a small local market, which will often frustrate the achievement of an economic scale of production, so that these ventures will typically need protection in order to survive. This appears to be the experience of the downstream activities aimed at the local

market that have emerged to date. Unless a convincing case can be made to the contrary, the finished goods produced by domestically-oriented downstream processing operations should be protected by tariffs at the TRP protective rate. Should increased protection be requested, the request should be evaluated in accordance with appropriate criteria for infant industry protection or the provision of short term tariff relief. The suggested criteria are discussed in the next chapter.

6.4.15. Technical Skills Training

In the absence of adequate technical training provision by public educational institutions, the provision of substantial amounts of technical skills training clearly represents an element of social value associated with manufacturing production in Papua New Guinea. The existence of this social value will provide a justification for some level assistance to manufacturing as long as the technical institutes continue to be unable to meet the nation's technical training needs.

6.5. Next Steps in Tariff Reform

The government's decision to reduce most tariffs via the TRP was sound, as already stated above. The emphasis in the MTDS on focusing "interventions on resources, products, and commodities in which Papua New Guinea enjoys a competitive advantage in global markets" is also sound. Further reductions in tariffs are desirable, with an emphasis on achieving lower and more uniform effective rates of protection. Future tariff reductions should be scheduled in a series of clearly-timetabled steps that are legislated in advance, in the same way as the TRP.

At the same time it is very clear that tariff reform will not fully achieve its objectives unless it is accompanied by measures to address the structural impediments in the Papua New Guinea economy in order to reduce excess business costs, and by a continuation and further strengthening of the recent improvements in macroeconomic management. Evidence of progress in addressing business costs will also be an important factor in determining the degree of business support for tariff reform.

The installation of a new government following this year's election offers an opportunity to make a fresh start on the business cost issue as well as on tariff policy.

The implementation of the final step of the TRP has left a vacuum in tariff policy. It is very desirable for that vacuum to be filled by a government statement of its intention that tariffs are to be further reduced, so that business is left in no doubt as to the future direction of tariff policy. The government should indicate that steps to implement this intention will be announced in the 2009 Budget, after consultations with stakeholders.

The government should also move immediately to implement credible measures aimed at reducing business costs. Recognising that evidence of improvement in this area is important for securing acceptance of further tariff reform, it should aim to be able to demonstrate tangible progress by the time of the 2009 Budget.

CHAPTER 7

RECOMMENDATIONS

Setting the Future Direction of Tariff Policy

- 1. The government should announce an intention to implement further tariff reductions, aimed at achieving more uniform as well as lower tariff rates, through measures to be announced at the time of the 2009 Budget, after consultations with stakeholders.**

It is important to do this at an early stage, to avoid leaving an undesirable vacuum in tariff policy and to ensure that business is in no doubt over the future direction of tariff policy. It is also important to emphasise that stakeholders will have the opportunity to make submissions on the new program before its design is finalised.

Design of Future Tariff Reductions

- 2. Reductions in tariffs are best achieved through the gradual reduction of tariffs over several years, through a series of clearly scheduled steps that are legislated in advance. Lower and more uniform tariff rates will also produce the desirable result of lower and more uniform effective rates of protection. This can be achieved by progressively lowering the protective and prohibitive tariff rates until they are aligned more closely with the intermediate tariff rate.**

The program of further tariff reductions recommended in the 2003 Tariff Review provides an example of how this could be done. The government could decide to adopt these recommendations, or it could design an alternative set of tariff reductions, perhaps varying the timing of the steps and the size of the reductions at each step to achieve an acceptable trade-off between improving efficiency and avoiding unnecessarily disruptive adjustments. As far as possible it would be desirable to maintain the target of gradually eliminating the difference between the protective and intermediate rates. The extent of the reduction in the prohibitive rate would depend on the outcome of implementing Recommendation 11, if that Recommendation is adopted. Recommendation 11 could also produce some divergence in tariff rates for products currently subject to the existing prohibitive rate. The government could also consider whether there should be any reductions in the intermediate tariff rate as well as in the protective and prohibitive rates, bearing in mind however that if the intermediate rate is reduced larger reductions in the protective and prohibitive rates would be needed to achieve any given reduction in the effective rate of protection for each affected product.

Reducing Business Costs

- 3. The government should implement a set of concrete steps to address the excessive cost of business in Papua New Guinea through the reduction of structural impediments in the economy.**

This should be done as quickly as possible. In implementing these measures government should make clear that it recognises that measures to reduce business costs are an essential accompaniment to tariff reform. The target should be for these measures to begin producing tangible results before the 2009 Budget. The impediments to be addressed by these measures should include but not be limited to the following:

- infrastructure deficiencies
- high cost and unreliable supply of public utilities (especially electricity)
- law and order
- high domestic shipping costs
- road transport costs.

Import Monitoring

- 4. The government should give a high priority to improving the effectiveness of import monitoring.**

It is important that the government indicate its recognition of the seriousness of the problems in this area by moving quickly to implement credible steps to improve the situation. **Specific steps to be taken include:**

- **clarification and better coordination of the legal powers of the relevant agencies, to ensure that effective enforcement is possible**
- **stronger support for efforts to achieve needed internal reforms and improvements in procedures within the agencies, including the Internal Revenue Commission.**

Macroeconomic Management

- 5. The government should give a high priority to maintaining and building upon the recent improvements in macroeconomic management.**

This is essential for maintaining an economic environment where tariff reforms and other necessary economic reforms can be successfully implemented and achieve their intended results.

Transparent Decision-Making Process for Tariff Policy Decisions

- 6. The government should establish a new body (here called the “tariff review body”) with mandated authority to make recommendations to the National Executive Council on all applications for changes or variations in current tariff rates or in any new set of tariff rates such as those that may be introduced in the 2009 Budget. It should be a requirement that all such applications be referred to the “tariff review body” for review and**

recommendations. The change sought in each application should be publicly advertised and interested stakeholders should have the opportunity to make submissions on the proposed changes. The “tariff review body” should be required to arrive at its recommendations on the basis of clearly-defined criteria. These criteria, and the recommendations of the “tariff review body”, should be publicly available, along with any other submissions or information considered in the process of reaching its conclusions. Since tariffs are a tax, responsibility for the “tariff review body” should be located in the portfolio of the Minister for Treasury, and the members of the “tariff review body” should be appointed by the Minister. The “tariff review body” must have a sufficient budgetary allocation to carry out its proposed functions.

The essential principles of this recommendation are that an agency or authority must be established with a mandate to review and make recommendations on all applications for changes to the tariff rates in force at any given time, that this new body should be required to undertake the reviews and make its recommendations on the basis of clearly-defined and publicly disclosed criteria, and that the review and decision-making processes should be fully transparent.

The generic term “tariff review body” is used here to describe this new body, in order to leave open the form it should take. One possibility is that the “tariff review body” could consist of a reconstituted Industries Assistance Board, as recommended by the 2003 Tariff Review. Another possibility is that it could be established as a subcommittee of the “Impediments Committee”. This may be a preferable option, as it would avoid the need for establishment of a new bureaucratic apparatus, and it would provide a link between the “tariff review body” and the important work of the “Impediments Committee”. However the “tariff review body” is constituted it is essential that it should have sufficient authority and independence to carry out its proposed functions effectively.

Membership of the “Tariff Review Body”

7. Members of the “tariff review body” should have responsibility for assessing specific aspects of the proposals being considered. The assessments provided by the members should be publicly available along with the recommendations of the “tariff review body”. Membership of the “tariff review body” should include the following:

- **A representative of Treasury, required to evaluate implications for economic efficiency and international competitiveness.**
- **A private sector representative, required to evaluate commercial implications, including impact on other businesses.**
- **A representative of the export industries, required to evaluate the impact on export industries.**
- **A representative of the Independent Consumer and Competition Commission, required to evaluate implications for competition and consumer welfare.**
- **A representative of the Department of Commerce and Industry, required to evaluate implications for industry development.**

The “tariff review body” should be chaired by the Treasury representative.

The “tariff review body” should have the power to obtain advice where necessary from appropriate experts on specific aspects of the applications. The “tariff review body” should take advice from the Department of Foreign Affairs and Trade on implications of proposed changes for Papua New Guinea’s international obligations, and from the Internal Revenue Commission on revenue and import monitoring implications.

Special assistance to be temporary

8. It should be a basic principle that any special protection introduced on infant industry grounds or as tariff relief should be provided on a temporary basis only, with a finite expiry date.

Criteria for recommendations by the “tariff review body”

9. The criteria for recommendations by the “tariff review body” should reflect the following:
 - Implications for efficiency and competitiveness
 - Implications for competition and consumer welfare
 - Impact on other industries using the product in question
 - Impact on export industries
 - Implications for employment

The “tariff review body” should be required to arrive at recommendations based on a “public interest” test after taking the above and any other relevant considerations into account.

In addition to the above:

- No application for infant industry protection should be supported unless it is accompanied by a credible business plan demonstrating that the industry will be able to operate successfully without infant industry protection within an acceptable period of time.
- No application for tariff relief should be supported unless a careful assessment confirms the existence of a situation that is seriously anomalous and/or that could not have been reasonably foreseen by the applicant, and unless the applicant demonstrates that adjustments are being planned that will render the tariff relief unnecessary beyond the normal expiry date for such relief.

In the case of proposals with significant implications for the economy as a whole the “tariff review body” should be authorised to call for a study of the industry concerned if it considers this necessary to assist it in reaching conclusions.

Study on manufacturing competitiveness

10. The government should commission a study on Papua New Guinea’s potential manufacturing competitiveness. The purpose of the study would be to identify the manufacturing activities that have the potential to operate in Papua New Guinea at internationally competitive costs, the conditions under which this could be achieved, and any changes in government policy that would be needed to make this possible.

The results of this study should be used as a reference in all future discussions on industry development, and should also be used as a reference by the “tariff review body” when assessing applications for infant industry protection.

Adjustments to existing tariff settings

11. The following adjustments should be made:

- **Remaining tariffs should be removed on goods that are used as production inputs by export industries and that are not produced in Papua New Guinea. Remaining tariffs on other goods not produced in Papua New Guinea should also be removed, except in specific cases where sound reasons can be identified for not doing so.**
- **A procedure should be established whereby application can be made for removal of tariffs in cases where the local manufacturer cannot supply the specification required by the user, or where it can be demonstrated that the quality of the product supplied by the local manufacturer is unacceptable. The “tariff review body” should have the responsibility of reviewing and making recommendations on these applications.**
- **Remaining non-ad valorem tariffs should be converted to appropriate ad valorem rates except in cases where there are compelling reasons to the contrary.**
- **Consideration should be given to converting ad valorem tariffs to non-ad valorem duties in specific instances where there is shown to be a serious problem with under-declaration of value for duty purposes and where the product concerned has a readily identifiable international price, as in the case of palm oil. The non-ad valorem duties in these cases should be set to approximate the ad valorem duties that would otherwise apply, and should be reviewed regularly in the light of possible changes in the international price to ensure that this approximate equivalence is maintained.**

Treatment of Prohibitive Tariffs

- 12. The producers of beer, cigarettes, fresh fruit and produce, and plywood, veneers and prefabricated houses should each be invited to enter into a process of consultation with the government, with a view to reaching agreement on a feasible program of tariff reduction to be applied to their products, together with policy actions by government or actions by the firms themselves that are agreed to be necessary accompaniments to the programs. In the event that a producer declines to enter into consultations, the government should proceed unilaterally to include tariff reductions for the products in question in the proposed tariff reductions to be implemented in the 2009 Budget, based on its assessment of the producer’s capacity to absorb the reductions.**

The consultations should be conducted on the understanding that the resulting programs should over time deliver appreciable reductions in protection levels, with a particular emphasis on reducing effective rates of protection to more acceptable levels, in cases where current effective rates of protection are shown

to be exceptionally high. The government should consider appointing an independent commissioner to carry out the consultations on its behalf. The companies would be expected to supply information that might be requested on their production costs, along with other information deemed relevant to the purpose of the consultation. Information sufficient to allow the calculation of effective rates of protection will be especially important.

Sugar

- 13. In the case of sugar the reduction of the tariff to 40% at the beginning of 2011 should proceed as scheduled, and should be followed thereafter by further tariff reductions at regular intervals, aligned as far as possible with any new program of tariff reductions implemented by the government.**

Continuation of Tariff Increases Introduced in the 2007 Budget

- 14. Before making a decision on whether the increased tariff on dark-meat tuna should be extended, a detailed analysis of the tuna canning industry should be commissioned to determine the feasibility of establishing the industry on an internationally competitive basis, and to identify the changes in government policy that would be needed to make this possible. If the analysis confirms the feasibility of the strategy the government should then decide whether it is prepared to implement the necessary policy changes. If the government is not prepared to implement these changes there is no purpose in continuing to penalise low-income Papua New Guineans with higher tariffs on canned dark-meat tuna.**

The procedures outlined in recommendations 6-9 above should be followed in deciding whether to extend the other tariff increases introduced in the 2007 Budget.

In cases where decisions on these matters or any other decisions on tariff matters need to be made prior to the establishment of the “tariff review body” as recommended in Recommendation 6, the criteria set out in Recommendation 9 should be used as the basis for the decisions. The procedures set out in Recommendation 6 for public advertisement of proposed changes, opportunity for submissions by interested parties, and publication of the recommended decisions on the proposed changes and the criteria on which the decisions are based, should also be followed in such cases.

REFERENCES

- Alam Investments (2005), A Report on the Oil Palm Industry Survey Results Prepared for the Palm Oil Producers Association (Port Moresby)
- Asian Development Bank (2005), Country Strategy and Program Update 2005-2006: Papua New Guinea
- Bank of Papua New Guinea, Quarterly Economic Bulletin, various issues
- British American Tobacco Ltd. (2007), PNG Tobacco Industry: Industry Update and Excise Proposal (April)
- Cocoa Cola Amatil (2007), Submission on Review of the Tariff Reform Programme (April)
- Department of Foreign Affairs and Trade, Objectives of the Exercise on Special Products/Special Safeguard Mechanism and Linkages to Other Policies/Activities (Port Moresby)
- Department of Foreign Affairs and Trade (2004), Papua New Guinea: The Road Ahead (Canberra, Economic Analytical Unit)
- Department of Labour and Industrial Relations (2001), Labour Statistics in Papua New Guinea (Port Moresby)
- Department of Labour and Industrial Relations, Towards a Skilled Papua New Guinean Workforce: Strategic Directions 2005-2007 (Port Moresby)
- Faal, E. (2006), Growth and Productivity in Papua New Guinea (International Monetary Fund Working Paper WP/06/113, Washington DC)
- Independent Consumer and Competition Commission (2006), Review of the PNG Air Transport Industry (Port Moresby)
- Independent Consumer and Competition Commission (2007), Review of the PNG Coastal Shipping Industry (Port Moresby)
- Independent State of Papua New Guinea (2003), 2003 Tariff Review: A Review of the Tariff Reduction Program (Port Moresby)
- Independent State of Papua New Guinea (2004), Medium Term Development Strategy 2005-2010
- Independent State of Papua New Guinea (2006), 2007 Budget Speech, delivered by the Minister for Treasury to Parliament, November 14 2006 (Port Moresby)
- Independent State of Papua New Guinea (2006), Volume 1, Economic and Development Policies, presented by the Minister for Treasury to Parliament, November 14 2006 (Port Moresby)

Internal Revenue Commission (1997), White Paper on the Tariff Reform Program (Washington)

Internal Revenue Commission, Papua New Guinea Import and Export Customs Tariff (Port Moresby)

International Monetary Fund (2007), Country Report No 07/112: Papua New Guinea Selected Issues Paper and Statistical Appendix (Washington DC, March)

International Monetary Fund (2007), Country Report No 07/111 March 2007 PNG: 2006 Article IV Consultation: Staff Report; and Public Information Notice on the Executive Board Discussion for Papua New Guinea (Washington DC, March)

Manufacturers Council of Papua New Guinea (2003), Review of the Tariff, VAT and Excise Reforms (Port Moresby)

Minister for Finance and Treasury (2005), Tariff Issues Relating to Carbonated Soft Drinks (Port Moresby, July)

Minister for Treasury, Budget Strategy Paper 2006

National Statistical Office, 2000 National Census National Report (Port Moresby)

National Statistical Office, Census of Business Activity 2001

New Zealand Institute of Economic Research (2006), Papua New Guinea Agriculture: Issues and Options (Institute of National Affairs, Port Moresby)

Papua New Guinea Growers Association (2007), Submission to 2007 Tariff Review (Kokopo 10-11 April)

PNG Taiheiyo Cement Ltd (2006), Additional Information to Support the Tariff Increase Submission

Price Waterhouse Coopers (2004), A Study of the Benefits of the South Pacific Brewery to the Papua New Guinea Economy (October)

South Pacific Breweries Ltd (2007), Beer Import Duty Submission (Port Moresby April)

UNCTAD (2006), Papua New Guinea Trade Policy Framework (Geneva)

APPENDIX A
SUMMARY OF RESPONSES TO SURVEY OF MEMBERS OF
MANUFACTURERS COUNCIL OF PAPUA NEW GUINEA

Table A.1	
Responses on Changes in Production and Employment	
(a) Discontinuation/introduction of production lines/processes	
	Percent
Discontinued some production lines/processes, introduced others	44.4%
Discontinued some production lines/processes	16.7%
Introduced some production lines/processes	27.8%
No change	11.1%
(b) Changes in employment	
	Percent
Employment increased (% range from 5% to 50%)	50.0%
Employment decreased (% range from 10% to 35%)	43.8%
No change	6.3%
(c) Reasons for Discontinuing Production Lines/Process	
(1.5 Scale: 1 = Not important at all, 5 = Very important)	
Competition	5.0
Competition from inferior imports/imports that have evaded duty	5.0
Cost of Doing Business	4.4
Changing market demands	3.7
TRP	3.6
Commodity Prices - Resources (Minerals and Petroleum)	2.3
New production technology	2.0
Exchange rates	1.6
Commodity Prices - Agricultural	1.5
(d) Reasons for Introducing Production Lines/Processes	
(1.5 Scale: 1 = Not important at all, 5 = Very important)	
To Remain Competitive against imports	5.0
Changing market demands	4.4
New product	3.8
Diversification strategy	3.5
TRP	3.2
New production technology	2.4
Commodity Prices - Resources (Minerals and Petroleum)	1.6
Commodity Prices - Agricultural	1.5
Exchange rates	1.5
Result of merger or acquisition	4.0
Counter competition from MSG countries	5.0
(e) Reasons for Declining Employment	
(1.5 Scale: 1 = Not important at all, 5 = Very important)	
Cost of Doing Business	3.7
Rising Wage Costs	3.0
New Technology - mechanisation/automation	3.0
Efficiency gains	3.0
TRP	3.0
Changing market demands	2.9
Exchange rates	2.3
New technology - other	2.2

Tables A2: Views on Tariffs and TRP	
(a) Views on Tariff Structure at End of TRP	
(1 to 5 Scale: 1 = strongly disagree, 5 = strongly agree)	
Need to widen the gap between rates for different categories	3.5
Current structure about right	3.1
Reduce exceptional tariffs to align with standard rates	3.0
Need to narrow the gap between rates for different categories	2.4
(b) Positive and Negative Features of TRP	
(1 to 5 Scale: 1 = very negative, 5 = very positive)	
Clear timetable for reductions	3.9
Spread reductions over several years	3.8
Maintenance of some prohibitive tariffs	3.7
Consolidation of rates into four bands	3.5
Classification of tariffs for each band	3.5
Zero tariffs for goods not produced in PNG	3.4
Level of protective tariff rate at end of TRP	3.3
Willingness to consider "special deals"	3.2
Level of intermediate tariff rate at end of TRP	3.1
Fairness/unfairness of burdens/pressures across industries	2.9
Implementation of most tariff changes as planned	2.4
(c) Views on Future Tariff Changes	
(1 to 5 Scale: 1 = strongly disagree, 5 = strongly agree)	
Need more protection to survive unless business costs reduced	4.2
No further reductions under any circumstances	3.7
Reductions desirable but proceed only with other reforms	3.5
Current rates approximately offset excessive business costs	2.8
Need more protection to survive even if business costs reduced	2.4
No delay because of lack of progress on other reforms	2.0
Continue to progressively reduce tariffs	1.9
(d) Views on Future Approach to Tariff Policy	
(1 to 5 Scale: 1 = strongly disagree, 5 = strongly agree)	
Set policy for several years at a time - be prepared to change if nec	3.8
Set policy for several years at a time - resist pressure to change	3.4
Review at regular intervals, say every 5 years	3.3
Decide policy at each Budget in light of prevailing conditions	1.8

Table A3: Views on Business Impediments	
(1-5 Scale: 1 = Not important at all, 5 = Very important)	
Infrastructure deficiencies	4.4
High cost of utilities	4.4
Inadequate law and order/cost of security	4.3
High internal transport costs: coastal shipping	4.2
High internal transport costs: road	4.2
Inadequate customs enforcement	3.8
High costs/delays clearing goods through ports	3.7
Tariffs on products too low	3.7
Dumped imports	3.3
Work permit issues	3.3
Visa issues	3.2
Shortage of skilled labour	3.2
Government policies	3.1
Excessive government red tape	3.1
High internal transport costs: air	2.8
Exchange rate fluctuations	2.6
Tariffs on inputs too high	2.5
Counterfeit imports	2.3
Changes in business ethics	2.2

APPENDIX B

EFFECTIVE RATES OF PROTECTION

The basic formula for the effective rate of protection (e.r.p.) is

$$\text{e.r.p.} = \frac{VA_d - VA_w}{VA_w}$$

Where

- VA = value added in domestic manufacturing i.e. the difference between the price of the finished goods and the cost of imported inputs
- VA_d = value added under the tariff regime i.e. the difference between the price of the finished goods and the cost of imported inputs with any applicable tariffs added in both cases
- VA_w = value added under free trade i.e. the difference between the duty-free price of the finished goods and the duty-free cost of imported inputs.

Effective rates of protection will be higher than nominal rates of protection whenever the tariff on finished goods is higher than the tariff on intermediate inputs. The larger the gap between the tariff on finished goods and the tariff on intermediate inputs, the greater the margin by which effective rate of protection will exceed the nominal rate of protection. For a given set of tariffs, the effective rate of protection will be higher, the smaller the share of domestic value in the total value of the product.

Negative rates of effective protection for exporters occur when there are tariffs on intermediate inputs used by exporters. They indicate how exporters are penalised by the higher cost of protected intermediate inputs.

The following table provides some hypothetical effective rates of protection calculated under the above formula, using the current TRP tariff rates, depending on the percentage of the value of the finished good (duty-free basis) that is accounted for by imported inputs (also on the duty-free basis)

Duty Rate on Finished Goods	% of imported or protected input cost in value of finished product (duty free basis)	e.r.p with 15% duty on inputs (TRP intermediate rate)	e.r.p with zero duty on inputs
25%	50%	35%	50%
25%	60%	40%	63%
25%	75%	55%	100%
25%	80%	65%	125%