INDEPENDENT CONSUMER & COMPETITION COMMISSION

2015 RICE INDUSTRY PRICING REVIEW

Final Report

January, 2016

Enquiries

Enquiries regarding this review should be directed to Mr Brian Ivosa, Executive Manager for Prices and Productivity Division, on telephone 325 2144 or by fax on 325 3980 or via email on bivosa@iccc.gov.pg.

Submissions received from the rice industry review by the Commission as part of this review are available for public inspection unless the Commission, based on a request from the relevant stakeholder(s), considers that all or part of the submission should remain confidential. However, in accordance with the provisions of the ICCC Act, the Commission intends to make this review process as transparent as possible, and to this end, submissions are normally available for public inspection unless there are exceptional commercial-in-confidence reasons as to why submissions should be held in confidence.

About the ICCC

The Independent Consumer & Competition Commission (the Commission) is a statutory body established under the provisions of the Independent Consumer and Competition Commission Act 2002 (the ICCC Act) to promote competition and fair trading, to regulate prices of certain declared goods and services, to protect consumers' interests and for other related purposes.

The Commission is empowered under the ICCC Act to have one full-time Commissioner and two part-time Commissioners, which forms the Commission's Board. At the time of this report, the Board comprised of:

Mr Paulus Ain	**–**	**Commissioner and CEO**
Dr Eric Omuru	**–**	**Associate Commissioner (Resident)**
Mr Edward Willett	**–**	**Associate Commissioner (Non-Resident)**

FOREWORD

Rice is one of the main sources of carbohydrates in most semi-urban and urban communities in PNG and is becoming a larger component of people's diets in rural and remote areas. In urban areas, the price of rice is important as rice consumption constitutes a considerable portion of the average household budget.

Prior to 2003, PNG's rice industry was dominated by one company, Trukai Industries Limited, which was responsible for almost all rice in the supply chain. While Trukai remains the largest player in the rice industry, the lack of barriers to entry into the rice market means new importers have entered the market. New entrants to the rice market have seen the range of rice products available in the wholesale and retail sector almost double in recent times. In addition to rice imports, investment in local production has also increased. Most local production is consumed by households. However, a small amount of 'garden rice' has entered the supply chain.

Possible substitutes for rice are widely available in PNG and include flour-based substitutes such as noodles, pasta, biscuits and bread as well as local products such as locally grown 'garden rice', taro, kaukau, yams, sago and bananas.

With increasing competition in the markets for carbohydrates, the Commission has, over the past decade, considerably reduced the extent to which prices in these markets are regulated. In 2005, the Commission undertook a comprehensive review into the price setting arrangements for rice products. Following this review, the Minister for Treasury determined that prices of Roots Rice (from Trukai) should be monitored under the provisions of the Prices Regulations Act (Chapter 320) (PR Act) and the Independent Consumer and Competition Commission Act 2002 (ICCC Act). This meant a move away from price setting regulation to a price monitoring approach. Price monitoring is a relatively light-handed approach used by regulators and one step removed from complete deregulation.

In 2010, the Commission carried out a further five-year review. The Commission decided at that time to continue the monitoring arrangements that were put in place in 2005. The 2010 decision on price monitoring will expire on 31st December, 2015.

As such, the Commission has now finally determined the appropriate regulatory oversight for the next regulatory period commencing 01st January, 2016.

The Commission delivered a public open and transparent process in establishing the appropriate form of regulation for the rice industry. Hence, as part of the final process, the Commission has released this Final Report to the consumers, government agencies, rice industry participants and the general public.

Whilst input and technical advice had been sought from relevant stakeholders, the final outcome in this Final Report remains the decision of the Commission.

Mr. Paulus Ain
Commissioner/Chief Executive Officer
Independent Consumer & Competition Commission

January, 2016

ABBREVIATIONS AND GLOSSARY

ABS	Australian Bureau of Statistics
FGP	factory gate price
FAO	Food and Agriculture Organisation
Homestate	Co-operation Limited
ICCC	Independent Consumer & Competition Commission
ICCC Act	Independent Consumer and Competition Commission Act 2002
LNG project	ExxonMobil liquefied natural gas project
NRD	National Rice Distributors
PNG	Papua New Guinea
PR Act	Prices Regulation Act (Chapter 320)
Trukai	Industries Limited

Definitions

Domestic rice	Rice that is grown in PNG.
Garden rice	Rice grown by individuals for their own use. Not traded in the market. Garden rice is a subset of domestic rice.
Rice Policy	The Government's proposed national policy on rice.

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1 EXECUTIVE SUMMARY

The Commission has carried out its five-year review of rice prices within PNG. Three markets for rice were identified as:

- rice
- carbohydrates in Port Moresby
- carbohydrates in the rest of PNG.

Findings on competition

The Commission has determined, based upon the evidence available, that all three markets are competitive at all levels of the value chain. This is supported by the view that:

- substitutes are available for all three markets
- retailers have countervailing market power
- retailers and consumers have choices between rice suppliers
- there are no barriers to entry for new rice growers and importers
- there is evidence of competitive behavior between importers and local rice processors.

The Commission has noted that, in some regions, land availability or site availability may be a barrier to entry for new growers and to the development of new retail outlets.

The Commission notes that Trukai has increased its market share but that there is **no** evidence that Trukai has any market power.

Government Rice Policy

The Commission has noted that the Government is proposing to introduce a new Rice Policy to promote food security for PNG. The Commission has therefore considered the outlook for the availability of rice on the international market. There appears to be no evidence or firm opinion that there is any substantial risk that PNG will not be able to continue to import rice to meet its requirements.

The Commission has evaluated the likely effects that this Rice Policy will have and found that it has the potential to have major negative effects upon consumers and competition in the rice market in PNG. The Commission found that the Rice Policy in its current form will:

- increase prices that consumers will pay for rice
- decrease the quantity of rice consumed in PNG
- increase the profits of domestic rice producers
- not protect consumers at all from the effects of price shocks in the international markets – this is true even if PNG becomes 100% self-sufficient, because black-market trading would be likely to undermine lower domestic prices.

While the policy in its current form, if successful, will deliver an increase in domestic rice production, this will be paid for by consumers. Because of tax incentives, the PNG Government will not receive any financial benefits from the policy.

If the Government seeks to introduce policies to increase domestic rice production, the Commission recommends that the Government modifies the proposed policy so that it:

- considers alternatives such as subsidies to encourage domestic rice production because this will not harm consumers and does not clash with the Commission's mandate
- does not make use of quota or tariffs because these will be detrimental to consumers and will also introduce market rents
- does not introduce export controls because this would reduce the efficiency of local production to the detriment of consumers and the community
- ensures that effective competition continues to operate among domestic rice growers – it is essential that no domestic rice monopoly is created by the issuing of 'pioneer status' to only one rice grower.

The Commission notes that it is required under the ICCC Act to protect consumers and to promote competition. It is therefore required by law to take the position outlined in this report.

If a domestic monopoly is created for rice production, the Commission would need to introduce price controls for this monopoly. Under these circumstances, the Commission would consider options such as the use of an international benchmark to set prices for such a monopoly. This would require the monopoly to be internationally competitive in order to survive.

Ongoing regulation

The Commission has determined to modify its current monitoring arrangements. In the new arrangements, the Commission will:

- monitor the ex-factory gate weighted average price (inclusive of all discounts) of Trukai 1 kilogram packaged rice with the Roots Rice brand
- monitor prices in retail stores across PNG of Trukai Roots Rice brand in 1 kilogram packages.

This will enable the Commission to monitor the relative changes in retail margin over the next regulatory period.

2 INTRODUCTION AND BACKGROUND

The current price monitoring regulatory arrangements for the rice industry began on 1 January 2006. In 2010, the Commission carried out a review of the arrangements and decided to keep them in place for a further five-year regulatory period. These arrangements are scheduled to cease at the end of 2015. The Commission has therefore carried out another review to evaluate the current state of the rice market in PNG. The purpose of this review was to decide whether or not some form of ongoing regulation is required.

This document represents the Commission's final determination. The Commission has sought submissions, data and input from various industry operators and has held meetings with some of them. The Commission has taken these inputs from these various parties into account in making this determination.

2.1 2005 review of the rice industry

In 2005, the Commission undertook a comprehensive pricing review of the rice industry under the provisions of section 25A (6) of the Prices Regulation Act (PR Act) to determine whether price regulation of rice was still necessary given changes in industry circumstances at that time.

The main findings of that review are summarised below:

- The Commission determined that price regulation would continue for the price-sensitive segment of the domestic rice market, namely Roots Rice products from Trukai Industries Limited (Trukai) only, and that price regulation would be removed for all other rice products.
- For Trukai's Roots Rice products, the Commission established a price monitoring arrangement. The price monitoring arrangement included:

    - the ex-factory gate price of Roots Rice products under the provisions of section 32A of the PR Act as compared against a comparator index based on an Australian Bureau of Statistics (ABS) benchmark index
    - sea and road freight charges for the main delivery of Trukai products under the provisions of section 32A of the PR Act.
- The prior price control for wholesale and retail margins of 10% and 11% respectively was also retained by declaration of these price components under section 10 of the PR Act.

2.2 2009 Wholesale and Retail Industry Review

In 2009, the Commission undertook the Wholesale and Retail Industry Review. As a result of that review, price control of wholesale and retail margins under section 10 of the PR Act was revoked. However, the two monitoring processes were continued.

2.3 2008 information request

Between mid-2008 and mid-2009, the Commission's price monitoring showed a rapid increase in Roots Rice prices compared to the ABS benchmark index established under the price monitoring arrangements. In accordance with section 32A of the PR Act and the findings of the 2005 rice industry pricing review, the Commission issued an information request to Trukai asking for an explanation of the reasons for the divergence between the ABS index and the prices of Roots Rice products.

A preliminary assessment of the information provided by Trukai indicated that the divergence was due to a range of factors. In particular, a drought in Australia affected rice production. There was also a spike in international prices of medium grain rice at that time. Given the short time until the conclusion of the regulatory period at that time, the Commission determined that these matters would be considered as part of the 2010 comprehensive review.

2.4 2010 review

In the 2010 review, the Commission determined that it would keep the monitoring arrangements in place. Overall, the Commission thought that competition in the rice market in PNG was growing with an increasing number of separate parties importing rice. However, the Commission was concerned about various economic pressures, particularly the ExxonMobil liquefied natural gas project (LNG project) and thought it best to continue to monitor prices.

2.5 Legislative requirements

The current regulatory arrangements applying to the rice industry are governed under sections 10 and 32A of the PR Act. Under Section 10 of the PR Act, the Government, through the Minister for Treasury, has the power to declare that it is necessary that the price of any good (such as rice) or service can be regulated until such time that there is a public disbenefit from regulation. Under section 32A of the PR Act, the Government, through the Minister for Treasury, has the power to declare that it is necessary that the price of any good (such as rice) or service can be monitored for the purpose of reporting such price movements to the Minister from time to time. Where price movements suggest it is necessary, the Commission can recommend to the Minister that price regulation should resume, or not.

The declaration by the Minister under section 32A of the PR Act provides the Commission's power to monitor the ex-factory gate price of Roots Rice and the applicable in-country sea and road freight charges associated with the transport of rice to major sea and road destinations. Since late 2009 when the Commission recommended the revocation of the Minister's declaration in relation to wholesale and retail margins for Roots Rice products, there has been no regulation declared for rice goods under section 10 of the PR Act.

The provisions of section 25A(6) of the PR Act provides for the Commission to initiate a review on its own accord when it considers it to be appropriate. Section 25B outlines the process by which a review of a Pricing Order can be undertaken including:

- the timelines for such reviews to be undertaken
- the requirement to publish details of its decision
- the form of decision that can be made as a consequence of such review.

Furthermore, section 25C(3) of the PR Act specifies that, as a result of a review, the Commission may decide to:

- continue to operate the existing price control arrangements in their present form
- vary the existing price control arrangements
- terminate the present price control arrangements via a recommendation to the Minister.

The provisions of the PR Act provide the Commission with some degree of flexibility in undertaking reviews. Under a price monitoring arrangement, if it is evident that price movements are not reflective of appropriate competitive market benchmarks, the Commission can recommend to the Minister for Treasury that the relevant goods or services be re-declared for full price control.

The Commission, in undertaking this review in accordance with the above provisions of the PR Act, will have regard to the confidentiality and public disclosure provisions of the ICCC Act on information received through submissions and the current and prospective operating environment of the rice industry in PNG.

Under section 32A of the PR Act, the Government through the Minister for Treasury has declared the following will be subject to price monitoring:

- Roots Rice in sizes of 20 kg
- Roots Rice in sizes of 10 kg
- Roots Rice in sizes of 5 kg
- Roots Rice in sizes of 1 kg
- Roots Rice in sizes of 500 g

2.6 Review Process

This review was initiated under the provisions of section 25A (6) of the PR Act.

The process followed by the Commission to facilitate public comment and transparency at all stages of the review was as follows:

Stage	Action	Date
1	Public announcement of the inquiry and invitation for submissions to be made to the Commission	16 March, 2015
2	Release of public notice discussing aspects of the review and major issues that the Commission believes need to be considered and requesting information and comment from stakeholders including the public	16 March, 2015

3	Release of a Draft Report and Draft Determination and the invitation of submissions on that Draft Report and Draft Determination – completed	07 September, 2015
4	Close of comments and submissions to the Draft Report and Draft Determination due	09 October, 2015
5	Release of the Final Report and Final Determination (including Final Pricing Order)	31 December, 2015

Copies of submissions received by the Commission in the conduct of this review (unless treated as confidential) are available for public viewing at the Commission's office on a public file, or copies can be obtained from the Commission at a nominal cost for photocopying. This Final Report is also a public document and can be obtained from the Commission's office or through the Commission's website on www.iccc.gov.pg

2.7 Submissions received

The Commission received two submissions in response to the public announcement of the inquiry (16 March 2015), which were from Homestate Co-operation Limited and Trukai Industries Limited. In response to the Draft Report, the Commission received only one submission, which was from Trukai Industries Limited.

The Commission specifically requested that the Department of Agriculture and Livestock make a submission. However, no submission has been received.

2.8 Trukai's submission

Trukai's submission was generally supportive of the Commission's findings in the Draft Report:

> *Trukai welcomes the considered and principled approach that the ICCC has adopted in undertaking the analysis necessary to prepare the Draft Report. The Draft Report reflects the significant work that the ICCC has undertaken in the rice industry over the past 5–10 years.*[1]

Trukai agreed with the Commission's overall findings:

> *Trukai considers that the findings set out in the Draft Report support a conclusion that there is no need for any form of regulation, or government intervention in relation to the supply, of rice products in PNG. However, if the ICCC is minded to require some form of regulation, then the price monitoring set out in the Draft Report represents a reasonable approach.*[2]

However, Trukai did raise some concerns about some of the ICCC recommendations:

> … the ICCC "recommends that Government considers alternatives such as the use of subsidies to promote large scale domestic rice production" because this "will not harm consumers. Trukai respectfully requests the ICCC to reconsider (or at least carefully

[1] Submission by Trukai Industries Limited, 28 September 2015, page 5.
[2] Submission by Trukai Industries Limited, 28 September 2015, page 2.

qualify) this recommendation further as, in Trukai's view, there is a significant risk that subsidies could also harm PNG consumers.[3]

The Commission has considered Trukai's comments, and these are discussed in section 9.11.

[3] Submission by Trukai Industries Limited, 28 September 2015, page 3.

3 RICE DEMAND IN PNG

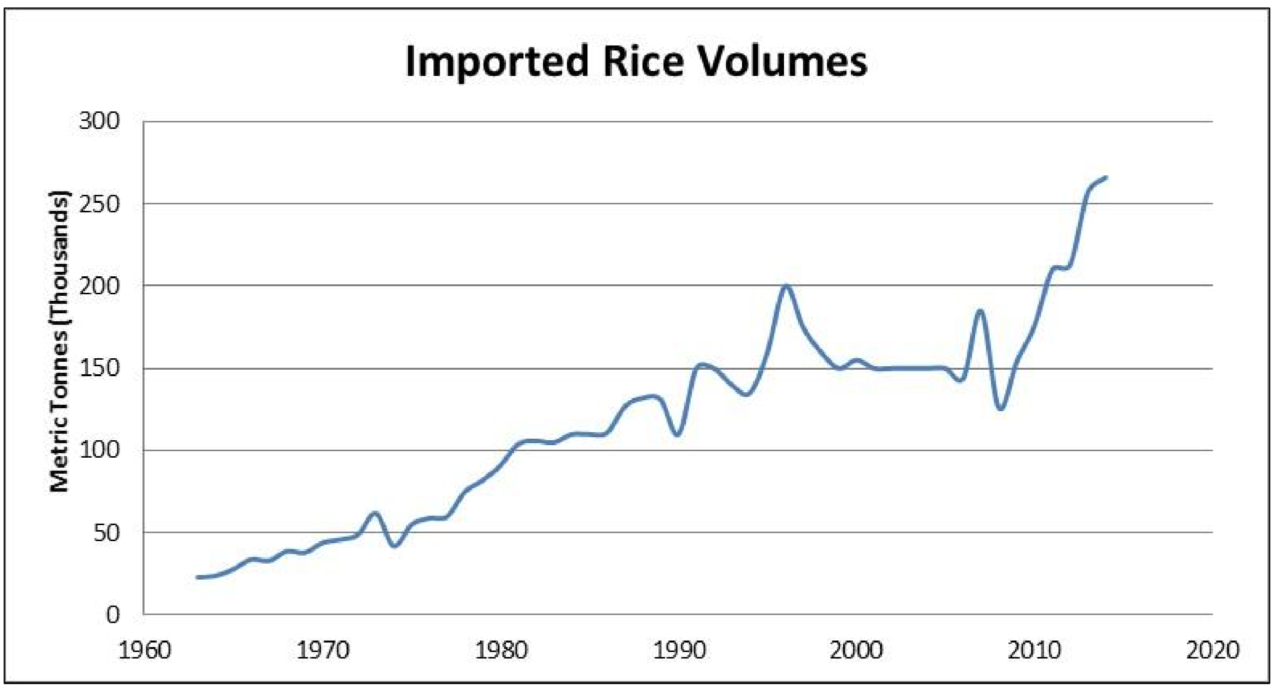
It is difficult to estimate total demand for rice in PNG because precise data is not available. Supply is made up of:

- imported rice
- domestically grown traded rice – this is rice that is supplied to the retail market
- garden rice – this is rice grown by individuals for their own use and is therefore not sold in the retail market.

While statistics on imported rice are available, there is no publicly available data on domestically grown volumes, volumes sold in retail stores or estimates of the quantity of garden rice produced.

Figure 1 shows the estimated volumes of imported rice since 1960.[4]

Figure 1: Volume of imported rice



Source: Index Mundi5 and Author's calculations from data reported in Gibson, J. 2001. Food Security and Food Policy in Papua New Guinea. Institute of National Affairs, Discussions Paper, Port Moresby.

It is interesting to note various peaks and troughs on the graph:

- In 1972/73, the peak reflects large quantities of imported rice into the country due to frost and drought.

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[4] It should be noted that, while the Commission has updated the chart presented in the 2010 review, the current Commission staff do not know where the historical data came from. They have also not been able to find the source of the previous chart.

[5] http://www.indexmundi.com/agriculture/?country=pg&commodity=milled-rice&graph=imports

- The upward growing trend of imported rice in 1986 was as a result of the coffee price rise.
- The peak in 1997/98 reflects the large quantities of rice that were supplied into the country due to the El Nino drought.
- In 2007/08, imported rice quantities fell presumably because of decreased supply from Australia.
- Since 2009, quantities of imported rice are estimated to have increased by about 120,000 tonnes per year or by about 75%.

The quantity of domestically grown traded rice is assumed by industry stakeholders to be about 10% of the total. However, the Commission is not aware of any evidence to support this assumption. Taking a broader view, the Commission has assumed it could be anywhere between 5% and 15% of the total volume.

There is also no information available to the Commission about the quantity of garden rice produced.

Using these assumptions, the Commission has estimated that rice consumption in PNG is between 310,000 and 350,000 tonnes per annum (see Table 1).

Table 1: Total rice consumption

	Low estimate	High estimate
Imported rice	266,000	266,000
Domestic production	31,000	71,000
Total rice consumption	**313,000**	**355,000**

In the 2010 review, the Fresh Produce Development Agency estimated that, of PNG's 2010 domestic production:

> … some 20 per cent enters the cash economy, another 10 per cent is bartered and 70 per cent is for subsistence family consumption.[6]

Applying these numbers to these assumptions about domestic production gives the numbers shown in Table 2.

Table 2: Distribution of domestic production

	Low estimate	High estimate
Bartered	3,000	7,000
Subsistence family consumption	22,000	50,000
Cash economy	6,000	14,000
Total domestic production	**31,000**	**71,000**

[6] Fresh Produce Development Agency Submission on 2010 Rice Industry Pricing Review Issues Paper, 20 July 2010.

4 SUBSTITUTION

The existence of substitute products can reduce the ability of a producer to take advantage of market power. Substitutes are effectively competitors to producers' products. They place limits on the ability of a firm to exercise any market power that they may or may not have.

In evaluating whether or not a business has market power, it is necessary to first define the market in which a company operates. The most common approach to defining markets for regulatory purposes is to identify the presence of substitutes in that market.

4.1 2010 determination

In the 2010 price review, the Commission concluded:

> In urban centres outside Port Moresby and rural environments there are a range of substitutes, and due to their relative affordability, they represent a real alternative to imported rice. However, in Port Moresby where local substitutes are relatively expensive, the Commission maintains its position that it is unlikely that the range of substitutes available are able to exert sufficient pressure on rice prices to ensure that they always reflected the underlying cost of production.[7]

In this 2015 review, the Commission needs to identify whether or not this has changed.

4.2 Market definition

The term "market" is defined in Section 45 (2) of the. ICCC Act as follows:

"is a reference to a market in the whole of Papua New Guinea for goods or services as well as other goods and services that, as a matter of fact and commercial common sense, are substitutable for them, including imports."

There are normally two dimensions to the definition of a market: a product dimension and a geographical dimension. The products that should be included in the relevant market, and the geographic boundaries of that market, are determined by the extent to which customers can readily switch between substitute products, or suppliers can readily switch their facilities between the supply of alternative products. The key to market definition is substitutability.

The most common tool for assessing the scope of markets is the "hypothetical monopolist" or SSNIP test. Applying this test, it is necessary to determine whether a hypothetical monopolist could profitably impose a SSNIP. At the heart of this test is substitutability on both the demand-side (will customers switch?) and supply-side (will businesses switch production?). The principal focus is usually on the demand-side.

[7] ICCC 2010 Rice Industry Review – Final Report, 22 December 2010, page 33.

The test starts with the narrowest possible market. If imposing a SSNIP would be profitable, then this is the relevant market. If it is not profitable, then the market is widened and the test re-applied, until it is passed.

The following explains these questions with reference to the geographic dimension of market definition:

- on the demand-side, can a business in a chosen geographic area increase prices without consumers switching to a nearby supplier of a substitute good or service in sufficient numbers so as to render the price increase unprofitable?
- on the supply-side, can the business increase prices without attracting supply from other firms outside the chosen geographic area in sufficient quantities so as to render the price increase unprofitable?

If the answer to these two questions is 'yes', then it is likely that a hypothetical monopolist in the relevant area could profitably impose a SSNIP. The relevant geographic market therefore is likely to be the area tested. If the answer to one or both of these questions is 'no', then the area would be increased in size and the test re-applied.

With this definition, the relevant market under consideration would be the supply and demand of rice in the whole of Papua New Guinea.

Markets can typically be defined over multiple dimensions. Table 3 identifies a set of dimensions and provides comments on each one.

Table 3: Market dimensions

Dimension	**Comments**
Product	Rice has several possible uses. Internationally, about 83% is used for food. About 3% is used as an animal feed. The remaining 14% is used for various things such as producing rice oil, biofuel and as an insulator during steel manufacturing. The Commission is only considering rice as a food item. As a food item, rice is primarily considered to be a carbohydrate, although it does contain other food groups. The primary substitutes would therefore be other carbohydrates. There are several varieties of rice. These are mostly distinguished as either long grain or short/medium grain. The Commission has identified two markets from a product perspective. Some customers will purchase rice because they want rice. Other will be even more particular in that they want a particular variety of rice (e.g. brown rice),

Dimension	Comments
	while others will purchase rice as a carbohydrate.
Geographic	In the 2010 review, the Commission identified that the rice market did have a geographic dimension. In urban PNG, substitute food groups such as taro and yams were less available due to the high cost of domestic transport. Also, in smaller centres and rural areas, it was more likely that consumers would have the option of growing their own vegetables or growing their own rice. The Commission believes that this has not changed.
Customer	As the Commission is primarily focused on rice as a food group, the customers under consideration would be wholesalers, retailers and consumers. Hence there are three (3) types of customer groups. While consumer incomes may differ, the Commission is of the view that this still constitutes a single market.
Supplier dimension	Suppliers can be split into: • domestic growers • importers of pre-packaged product • millers who import unprocessed or partly processed rice. Millers can either import unprocessed or partly processed rice or they can purchase domestically produced product. In the Commission's view, domestic growers are suppliers of millers rather than competitors. Therefore, the Commission does not think that there is a supplier dimension to the market definition for rice as a food.
Pricing	The Commission did not identify any pricing structure elements that create a separate market for rice. However, higher transport costs for fresh foods in some larger centres do have an effect on the availability of substitutes. If a food item is significantly more expensive, it will not be a viable substitute for rice.
Time	Rice by nature can be stored and kept for some time. Because of this property, the Commission does not think there is a time element that would create a separate market for rice.

From this analysis, the Commission identified three potential markets for rice:

- Retail – separate geographic markets for rice products in each of the major centres.
- Retail – separate regional markets for carbohydrate products in isolated areas where the costs of transporting rice increase rice prices. In regional markets, locally grown produce is more readily available, and perhaps different consumer traditions/preferences mean that substitution to these wider products is more likely.
- Wholesale – a national market for rice.

4.3 Substitutes available

If a customer wishes to purchase rice specifically, in the Commission' view, there is no substitute for rice.

Different varieties of rice will compete for this customer's business, but no other food group can substitute for rice if rice is what the customer wants to buy.

However, in the two carbohydrate markets identified by the Commission, there are potentially a variety of substitutes available to customers as shown in Table 4 .

Table 4: Possible carbohydrate substitutes for imported rice

Main centres	All other areas
Flour Bread Noodles and pasta	Flour Bread Noodles and pasta Yams Cassava Potatoes Sago Garden rice Kaukau Taro Bananas

In the 2010 price review, the Commission received a submission from the Fresh Produce Development Agency supporting this view of substitution. The Agency said that, when the price for rice increased then customers would purchase other foods as substitutes:

> The trigger for domestic competition to affect the level of rice sold occurred when the supermarket price of rice rose above K3.00 a kilo.[8]

The Commission is of the view that this has not changed. In both the main centre market (Port Moresby) and other areas, there is a range of substitutes. While the range of affordable substitutes may be less in the main centres, there are still substitutes in those centres.

In the 2010 price review, the Commission concluded that:

> *… in Port Moresby where local substitutes are relatively expensive, the Commission stated that it thought it unlikely that the range of substitutes available was able to exert sufficient pressure on rice prices to ensure that they always reflected the underlying cost of production.*[9]

[8] Fresh Produce Development Agency Submission on 2010 Rice Industry Pricing Review Issues Paper, 20 July 2010.
[9] ICCC 2010 Rice Industry Review – Final Report, 22 December 2010, page 33.

The Commission therefore needed to decide if this is still the case and, if it is, whether there are other factors that prevent a rice supplier from exerting market power.

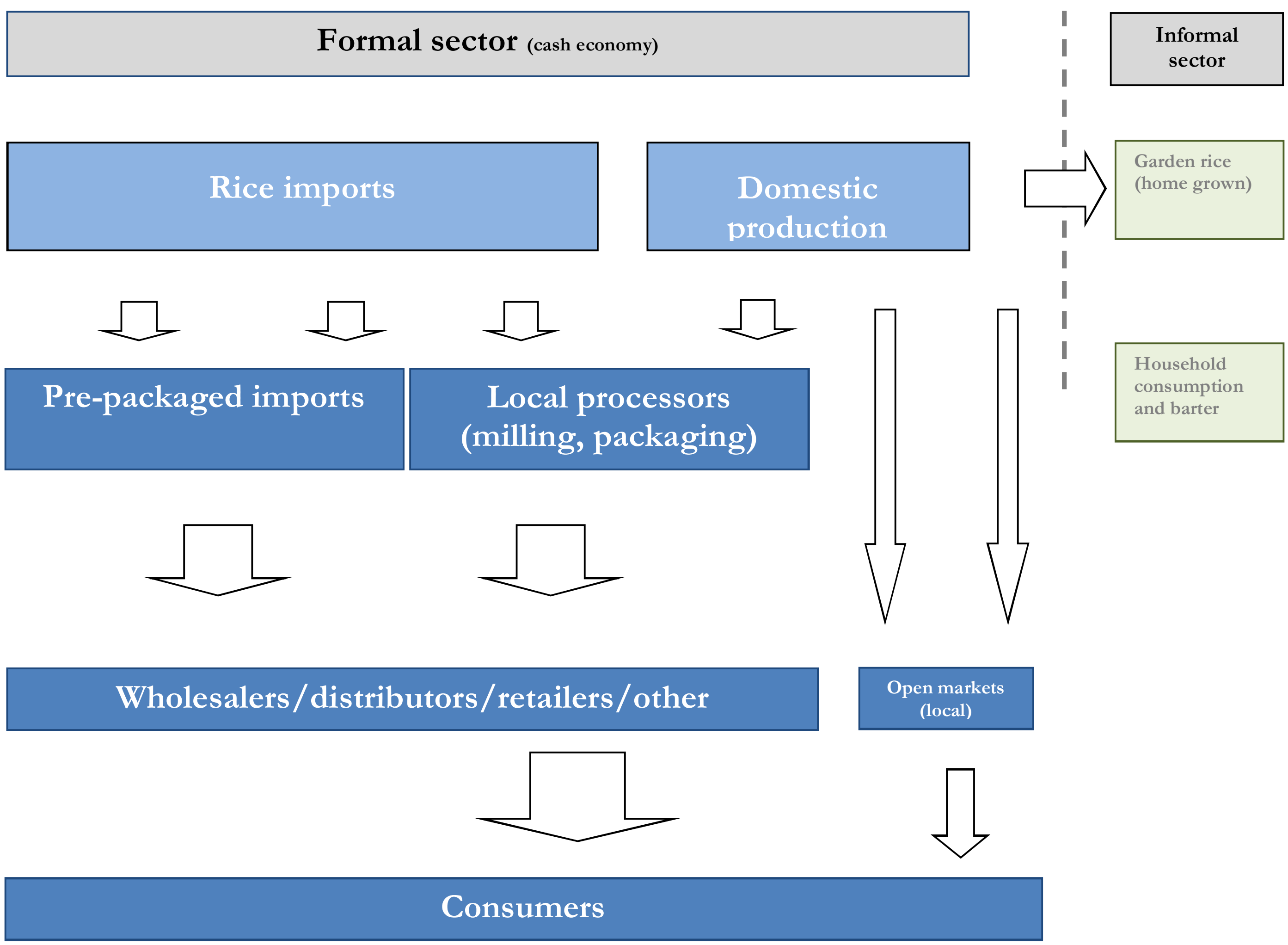
5 RICE SUPPLY IN PNG

The structure of the rice distribution chain is illustrated in Figure 2. From this, it can be seen that there is both a formal and informal sector to the rice market in PNG.

In the formal sector, some operators have significant investment in processing capacity. This includes rice mills and packaging equipment. In the Commission's view, this is an important component of the PNG rice industry and represents a significant contributor to the industry expertise and technological capability for rice production. If PNG were to lose this capability, it would make it significantly harder for domestic rice production to develop and grow within PNG.

Local processors are generally vertically integrated in the market. They normally import their own rice and distribute it to retailers and wholesalers around PNG. However, some are also currently or have previously been involved in growing rice within PNG.

Figure 2: PNG market structure for rice



There are a large number of importers in PNG. However, the larger importers are:

- Trukai
- Homestate Co-operation Limited
- National Rice Distributors (NRD)
- Lam's Trading.

Trukai has a milling and packaging plant located in Lae. Homestate also has a packaging plant located in PNG. All other importers import pre-packaged rice.

There are a large number of wholesalers and retailers who supply rice to both commercial and household consumers including garden rice in some areas of PNG.

Rice is currently grown in the Eastern Highlands, Enga, Central, Morobe, East New Britain, Manus, Western Highlands, Jiwaka and the two Sepik Provinces.

5.1 Importers

Importers source their rice from Australia, Thailand, Southern China, Vietnam, the United States, Malaysia and the Middle East. Quantities coming from different countries will change from year to year depending upon crop yields in particular countries. Yields have a major impact upon prices. The Commission notes that importers seek the lowest possible rice price and so sources can vary from month to month.

Imports of rice, unlike some other commodities in PNG, are not subject to tariffs or quotas. The Commission has identified 122 importers who have been active in PNG in the years 2010–2014 and 53 importers active in 2014.[10]

The four largest importers are described in Table 5.

Table 5: Four largest rice importers

Importer	Comments
Trukai Industries Limited	Trukai is a PNG-based company part owned by Rice Grower's Cooperative Limited of Australia and part owned by the Melanesian Trustee Services Limited as Trustee for the Pacific Balance Fund. It operates a processing facility in Lae, where it undertakes blending and packaging of rice grain. Trukai is the most established brand of rice in PNG and has operated in PNG since 1970. Trukai's imports include short grain, medium grain and long grain rice, which it sources from the international market. Trukai has five brands including Trukai Rice, Roots Rice, Natural Brown Rice, Trukai Jasmine and Trukai Long Grain. Trukai operates a national price list that sees it charge the same price for each variety in the main ports of Lae, Goroka, Port Moresby, Rabaul and across all of PNG, irrespective of differences in the cost of supplying rice to these

[10] A new distributor, POGE, has recently entered the market and was referred to in submissions and also in discussions the Commission has undertaken as part of the review to date. The Commission understands that Bougainville POGE Development Corporation is a public/private partnership. (The Commission understands that POGE stand for Programs of Global Excellence.)

Importer	Comments
	areas due to differing freight costs.
Homestate Co-operation Limited	Homestate is a Thai-owned company that is based in Lae. Homestate primarily imports rice from Thailand and distributes its product from depots in Lae, Port Moresby and Mt Hagen as well as through other wholesalers. Homestate has seven rice brands: Jasmine, Jazmine Good White, Good Brown, Star Rice, Super A-1 and Sweet Rice. Star Rice and Super A-1 brands are medium grain rice, and all other brands are long grain. All rice is sold ex-factory gate from Lae with transport charged on at cost.
National Rice Distributors	National Rice Distributors (NRD) is based in Lae. NRD imports pre-packaged long grain rice from Thailand and sells it to wholesalers and retailers from its depots in Lae and Port Moresby. NRD has been selling its Ezycook rice brands in PNG since 2003. As with Homestate, NRD sells rice at factory gate prices and charges transport at cost.
Lam's Trading	Lam's Trading entered the PNG market in early 2010. It imports rice primarily from Thailand and sells it under the Phoenix Rice brand in urban areas including in the cities and highlands.

Importers either import rice that is pre-packaged or in bulk quantities for milling and/or packaging in PNG. Rice comes in pack sizes ranging from 500g to 25kg. It is distributed to major customers such as caterers, wholesalers and retail outlets/supermarkets as a variety of brands (see Table 6).

Table 6: Common brands of rice sold in PNG

Brand	Company	Rice variety	Country of origin (primary source)
Roots	Trukai	Medium and long grain	Aust/US/China
Trukai	Trukai	Medium grain	Aust/US/China
Natural Brown	Trukai	Medium grain	Aust/US/China
Trukai Jasmine	Trukai	Long grain	Aust/US/China
Star	Homestate	Long grain broken	Thailand
Super A-1	Homestate	Long grain broken	Thailand
Star Jasmine	Homestate	Long grain	Thailand
Good White	Homestate	Long grain	Thailand
Good Brown	Homestate	Long grain	Thailand
Sweet Rice	Homestate	Long grain	Thailand
Frangipani Rice	Homestate	Long grain	Thailand
Jazmine	Homestate	Long grain	Thailand
Ezycook	NRD	Long grain	Thailand
Yummi	NRD	Long grain	Thailand
Royal Jasmine	NRD	Long grain	Thailand
Trucook	NRD	Long grain	Thailand
King Rice	Seeto Kui	Short and medium grain	Australia
Golden Phoenix Jasmine	Lam's Trading	Long grain	Thailand
Golden Phoenix Rice Jasmine Blue	Lam's Trading	Long grain	Thailand

Source: Data updated from 2010 review from consultations

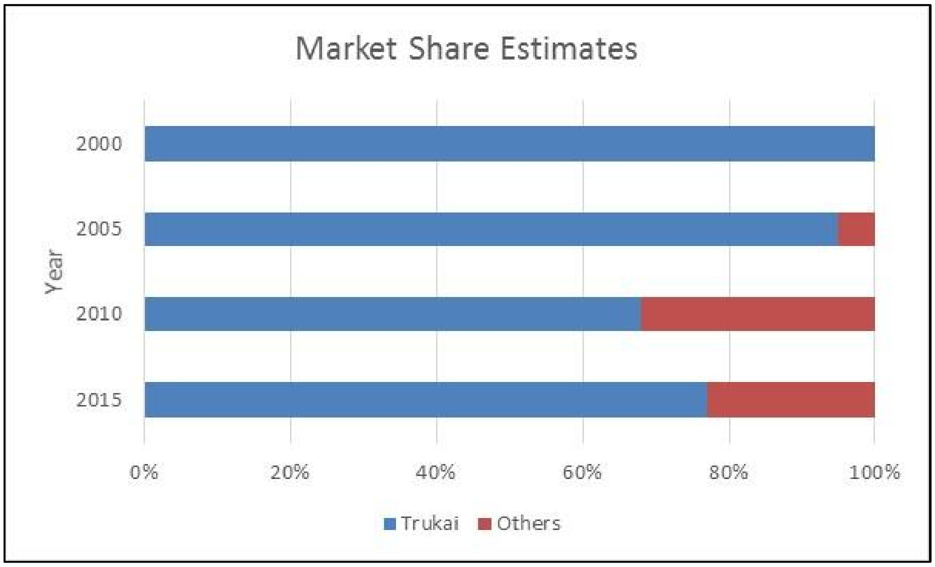
5.2 Importer market share

Market share is an important indicator of the competitiveness of a market. It will change from time to time according to customer preferences and responses to suppliers offerings.

The Commission observes that, from month to month, quantities imported by individual companies fluctuate.

Trukai holds the largest market share in PNG. For this reason, the Commission is particularly interested to observe changes in its position. In the 2010 review, the Commission observed that Trukai's market share was declining. However, in 2015, Trukai's market share has increased.

Figure 3: Market share estimates



Note: Exact figures on market share in the PNG rice market are commercial-in-confidence.

The Commission notes there can be a variety of reasons why a company may have a dominant market share position even in a competitive market with a level playing field, including:

- economies of scale
- established preferred brand
- higher quality product
- sources of supply.

The market shares shown in Figure 3 are national figures. In discussions with the Commission, Trukai said that their market share was substantially lower in some parts of PNG. Their explanation for this was the presence of much cheaper competing brands of rice in those markets. The Commission observes that it is common in markets where the largest provider uses standard national pricing for a new entrant to supply cheaper prices in areas where distribution costs are low.

5.3 Wholesale and retail rice markets

The wholesale rice market in PNG contains companies who both import and wholesale product and others who only wholesale. Importers have been discussed in section 5.1 above.

These companies have established warehouses/depots in larger centres such as Port Moresby and Lae. Rice is then distributed to other centres and locations around the country through their depots and authorised outlets.

The following wholesale businesses purchase from the importers and then on-sell:

- Seeto Kui Holdings Limited (Seeto Kui)
- Patricks
- BNG Trading
- TST Trading
- Super Value Stores (SVS)
- CPL Stop N Shops
- Garamut Enterprises Limited
- RH Trading Limited.

These businesses and other wholesalers supply a wide variety of household products and food items to retailers, including rice. In addition to supplying rice to consumers, Seeto Kui has established its own brand – King Rice – a medium grain rice that is purchased from Trukai. It is sold through Seeto Kui distribution networks to other wholesalers as well as retailers.

The retail sector in PNG consists of all formal and informal businesses responsible for selling household products to consumers. The provision and sale of rice products at the retail level is undertaken by supermarkets and smaller stores. Retailing activities are independent from the operations of importers' activities. However, in certain cases, retailers also directly import rice and sell it to consumers.

Wholesale and retail margins were previously regulated at 10% and 11% respectively. This price control was removed after the Commission's 2009 Wholesale and Retail Industry Review.

In addition to rice sold in retail stores, open markets also sell rice directly to consumers. The Commission understands that, at this time, the only rice product sold in open markets is domestically grown rice known as garden rice.

5.4 Distribution channels to market

Rice is normally imported to main depots in Lae (and to a lesser extent Port Moresby) and then distributed to more regional centres using domestic coastal sea and inland road transportation networks. In a limited number of cases, importers import directly to coastal depots, for example, Rabaul.

Wholesalers and retailers then purchase rice from these depots and resell it through their various networks. In general, wholesalers and retailers purchase rice at the importer's factory gate[11] with freight arranged and paid for by the rice purchaser. Land deliveries are managed by trucking companies with coastal shipping companies managing sea transport.

[11] Some importers, such as Trukai, offer a standard national price from their network of distribution points, so in this case, freight costs incurred are from the nearest supplier sales centre, not from the "factory" location.

6 COMPETITION

6.1 Rationale for competition as the basis for assessment

The primary objectives of the Commission are specified in section 5 of the Independent Consumer and Competition Commission Act 2002 (ICCC Act) and in section 21(2A) of the price regulation Act. They are:

- to enhance the welfare of the people of Papua New Guinea through the promotion of competition, fair trading and the protection of consumers' interests
- to promote economic efficiency in industry structure, investment and conduct
- to protect the long-term interests of the people of Papua New Guinea with regard to the price, quality and reliability of significant goods and services.

Competition is normally the most effective way to ensure that the interests of consumers are protected and enhanced. Where competition is effective, there is generally no need for price regulation. Regulated prices will almost always be an imperfect substitute for prices determined by competitive processes. Regulation is likely to impose costs and distortions not present in a competitive market. Because regulators have imperfect information, regulated prices are more likely to be set either too low or too high. If they are too low, they will deter investment and innovation. If they are too high, this is to the detriment of consumers. Further, regulated prices often lack the flexibility of market prices. Price regulation is only justified where markets are not competitive, where regulation can improve market outcomes and where the benefits exceed the costs.

Section 5 of the ICCC Act also notes that, in seeking to achieve its primary objectives, the Commission shall have regard to the facilitating objectives to:

- promote and protect the bona fide interests of consumers with regard to the price, quality and reliability of goods and services
- ensure that users and consumers (including low-income or vulnerable consumers) benefit from competition and efficiency
- facilitate effective competition and promote competitive market conduct
- prevent the misuse of market power
- promote and encourage the efficient operation of industries and efficient investment in industries
- ensure that regulatory decision making has regard to any applicable health, safety, environmental and social legislation
- promote and encourage fair trading practices and a fair market.

The common theme of the Commission's primary and facilitating objectives is competition. Competition in the provision of a product exists where there is rivalry (or potential rivalry) between two or more businesses seeking to secure the business of a customer. In order to obtain the business of any individual customer, the businesses are under pressure to offer the most attractive product in terms of price and quality.

Competition drives companies to continually seek new and improved ways of providing products and services. Competition can be thought of as delivering more efficient production in three ways.

Productive efficiency: Competition for customers requires that companies continually seek the lowest cost way of producing their products and services. If a new business can enter a market and produce and sell the same product at a lower price, any existing businesses can expect to lose market share and may be forced out of business. Competition therefore compels businesses to continually seek to reduce costs.

Allocative efficiency: Competition for inputs among businesses selling differing products directs resources of the economy to where they are most valuable. This ensures that society as a whole is better off because the limited resources of the economy are being used in the most effective and efficient manner.

Dynamic efficiency: Competition compels businesses to seek new and improved ways of doing things. For example, if a business is able to invent a new and more efficient way of manufacturing its product (or create an entirely new product), it will benefit by attracting additional customers.

The overall effect of competition is to drive businesses to:

- produce goods and services at least cost
- allocate the labour and material inputs to the production of goods and services to where they are most valued
- seek new and improved ways of serving customers.

However, competition is not an end in itself. Rather, competition is in most situations the most effective mechanism by which customers receive low-priced, high-quality products suited to their needs.

Based on the primary objectives and facilitating objectives of the ICCC Act and the above discussion, it is the Commission's view that competition in the provision of a good, such as rice, is the most effective way to protect the long-term interests of consumers and deliver efficient prices to customers. It is for this reason that the Commission is considering the competitive state of the PNG rice market as the most important issue when assessing whether to continue, alter or cease the existing pricing monitoring arrangements.

6.2 What is a competitive market?

The definition of a perfect competitive market described in textbooks exists rarely, if at all, in the real world. As such, it is necessary for the Commission to adopt a real-world definition that can be applied usefully.

The approach often adopted is to consider whether a market is 'effectively competitive'. Where a market is 'effectively competitive' (sometimes also referred to as 'workably competitive'):

- there is sufficient rivalry between businesses to ensure that they strive to deliver the goods and services consumers demand at least cost
- resources move relatively freely between and within markets in response to consumer demand and price signals
- consumers will have access to a reasonable degree of information to allow them to make choices and participate in the market
- businesses may have a degree of market power associated with product differentiation or innovation, but that market power will not be substantial or sustainable and will be subject to competitive erosion over time
- at any particular point in time, resources may not be employed in their most valuable use, prices may deviate from costs and technologies can deviate from the most efficient ones available, however, over time, effective competition will drive the market towards efficient outcomes
- businesses will continuously strive for competitive advantage against actual and potential rivals and seek out new profit opportunities to deliver the goods and services consumers want, and the market may always appear to be in a state of disequilibrium and change.

The Commission's approach to evaluating effective competition is guided by the approach adopted in the development and application of competition law and policy. The following definition of effective competition has been applied by the Australian Competition Tribunal:

> *As was said by the U.S. Attorney General's National Committee to study the Antitrust Laws in its report of 1955 (at p. 320): "The basic characteristic of effective competition in the economic sense is that no one seller, and no group of sellers acting in concert, has the power to choose its level of profits by giving less and charging more. Where there is workable competition, rival sellers, whether existing competitors or new or potential entrants in the field, would keep this power in check by offering or threatening to offer effective inducements…"*[12]

Conversely, the Hilmer Committee identified the characteristics of markets in which effective competition does not exist:

Where the conditions for workable competition are absent – such as where a firm has a legislated or natural monopoly, or the market is otherwise poorly contestable – firms may be able to charge prices above the efficient level for periods beyond those justified by past investments and risks taken or beyond a time when competitive response might reasonably be expected. Such 'monopoly pricing' is seen as detrimental to consumers and to the community as a whole.[13]

The extent of competition within a market may also vary over time. Maturing markets can be characterised as progressing towards a more competitive state as shown in Figure 4.

Figure 4: The continuum of competition

In addition, the dynamic nature of markets over time demands that a forward-looking approach to the state of a market be adopted. Clearly, regard must be had to evidence of what has actually been happening in a market, but the most important question is: what is likely to happen going forward? With the absence of decisions under Papua New Guinea law in relation to the ICCC Act, the Commission has been guided in its analysis by the forward-looking approach of the High Court and Federal Court of Australia and the Australian Competition Tribunal. These entities identified the benefits of analysing competition using a forward-looking approach:

> In our judgment, given the policy objectives of the legislation [the Trade Practices Act], it serves no useful purpose to focus attention upon a short-run, transitory situation… This does not mean we seek to prophecy the shape of the future – to speculate upon how community tastes, or institutions, or technology might change. Rather, we ask of the evidence what is likely to happen to patterns of consumption and production were existing suppliers to raise price or, more generally, offer a poorer deal. For the market is a field of actual or potential rivalry between firms.[14]

The Commission, in its assessment of the PNG rice market, will be guided by the definition of an effectively competitive market while noting that markets change and evolve over time and that a forward-looking approach is appropriate.

The Commission has used the assessment criteria of:

- substitute products
- barriers to entry for new participants

[14] National Competition Policy Review Report, The Hilmer Report, 25 August 1993, page xxxiii.

- competition between existing market participants
- countervailing market power
- exercise of choice by customers.

The Commission has already identified the markets for rice and the substitutes available to those markets in section 4 of this report.

6.3 Barriers to entry for new participants

In any typical market, barriers to entry can be detrimental to effective competition. This is because barriers to entry restrict the ability of new businesses to enter a market and compete against existing participants. If barriers to entry are high, competitive constraints will depend on existing rivals. Barriers to entry can be artificial, natural or intrinsic, regulatory, strategic and the effects and expansion due to factors such as regulation (for example, government monopoly, tariffs, intellectual property rights, licensing, health and safety standards, consumer protection standards, subsidies, tax relief) or economies of scale in production.

Sunk costs, a potential barrier to exit, can also be a barrier to market entry. Any potential firm considering a large investment in plant infrastructure, advertising, research and development would also consider its potential costs associated with its exit from the market. If these potential costs were significant, it may reconsider entering the market.

Imported goods can compete with those produced locally. A business that can import a product can avoid the need to establish its own operations locally and may therefore potentially avoid the factors contributing to the barriers to entry and exit discussed above. The extent to which imports may contribute to an effectively competitive market depends on the cost of importing these goods. This is driven by factors such as the cost of shipping and tariffs.

The threat of competition via imports, without the actual delivery of goods can also increase the efficiency and competitiveness of a market. For example, an existing market participant may be constrained in their actions because an importer may be able to quickly arrange a shipment and undercut any inflated prices.

Import competition and the potential threat of import competition may even be a more effective check on uncompetitive behaviour than the threat of direct market entry and competition. An importer may be able to source products quickly and without having to incur the costs associated with establishing a factory, thereby avoiding the barriers to entry and exit identified above.

Potential barriers to entry for new participants are discussed in Table 7.

Table 7: Barriers to entry

Potential barriers	Comments
Tariffs	There are currently no tariffs applicable to the import of processed or

Potential barriers	Comments
	unprocessed rice into PNG. As such, there are no artificial barriers to entry for an importer considering entering the PNG market relative to a local manufacturer. A potential importer can swiftly enter the market as long as it can source rice that meets PNG health standards for vitamin enrichment and can successfully arrange for import, storage, distribution and marketing of its product.
Vitamin enrichment	It is a current legal requirement that all rice sold in the retail market must be enriched with vitamins. In the 2010 review, the Commission investigated whether this created a barrier to imports or domestic production. Consultation with rice importers determined that the vitamin enrichment process is relatively simple, and inputs are widely available. This means that potential importers can easily source vitamin-enriched rice that meets PNG's import standards. As such, the Commission determined that vitamin enrichment does not represent a significant barrier to entry.
International sources	A new importer would need to find a source of rice, prior to entering the market. The Commission has reviewed the international supply of rice in section 8 of this report. It appears that rice can easily be sourced on the world market and that rice available for international trade is likely to increase over the next five years. Trukai also confirmed in discussions with the Commission that new sources for purchasing rice on the international market could easily be found. This also seems to be supported by the large number of parties who have imported rice into PNG in the last 12 months.
Infrastructure	A new entrant must be able to arrange shipping, transport, storage and distribution of their product in order to compete in the market. The Commission is not aware of any barriers that would prevent a new entrant gaining equal access to their requirements, as is currently available to existing rice suppliers.
Domestic production	Unlike importing rice, growing rice appears to be more difficult in PNG. In particular, gaining access to land is likely to be difficult at least on a larger scale. The cost of acquiring or leasing land may be too high to enable a local grower to compete effectively with imports. However, the Commission does not have firm data on land prices or availability and nor has the Commission identified the cost of growing rice domestically.
Processing for domestic production	A domestic rice grower must be able to mill their product in order to supply it to the local market. The Commission is only aware of one rice mill in PNG. This is owned by Trukai. This means that any new domestic grower would need to either sell the rice to Trukai or build their own rice mill. The Commission understands that rice milling equipment can be purchased to handle small or large quantities, so this may not be a large barrier for a new grower. A new grower could start with a small mill and then scale up as their crop sizes increased. The Commission therefore expects that this is unlikely to form a major barrier to a new grower.

In the 2010 review, the Commission determined that there were no barriers to entry. It appears that there have been no changes to this finding since that time. A potential new importer can swiftly enter the market if they choose to. This is supported by the number of new importers that have brought rice in to PNG since 2010.

Error! Not a valid bookmark self-reference. shows the number of importers that have imported rice in to PNG that were not importers in 2010. There have also been changes in the number of major brands (see Table 9).

Table 8: Number of new rice importers

New importers since 2010 (2011–2014)	New importers 2014
42	22

Table 9: Number of major brands observed in the market

Importer	Number of brands 2005	Number of brands 2010	Number of brands 2015
Trukai	6	5	4
Homestate	2	6	8
NRD	1	4	4
Lam's Trading	0	2	2
King	0	1	1
Total	**10**	**19**	**20**

6.4 Competition between existing market participants

Competition between existing market participants is characterised by activities such as businesses actively seeking new customers and businesses developing new products and services. While Trukai remains the dominant player in the market, importers are actively seeking to maintain and expand their market shares.

The Commission monitors retail rice prices on a monthly basis in regions around PNG. Prices vary between retail outlets, locations and with the type of rice being sold. Analysis undertaken by the Commission demonstrates that brands directly competing with Trukai are often cheaper than Trukai's products.

Homestate believes that its Star Rice Brand is the main competitor to Roots Rice. The Commission has observed that Star Rice has been consistently cheaper than Roots Rice in three of the four regions analysed by the Commission. In the fourth region, it has also recently become cheaper than Roots Rice as well. The Commission views the pricing of Star Rice at this level as an indication of price competition between market participants.

As stated earlier, competition between existing suppliers is also characterised by the offering of new and differentiated products and services. In the case of rice, a range of varieties are available. These include medium grain, jasmine rice, brown rice, long grain and glutinous rice. In discussions with rice suppliers, the Commission noted comments made by various parties about the quality of their product and how this differed from their competitors. Some suppliers also discussed the trade-off between blending cheaper sources of rice into their products in order to get costs down and the impact this had on customer preference for their rice brands. Clearly, when product quality was lowered, this had an impact upon their market share.

The Commission also takes into consideration the possibility of price coordination effects among the rival suppliers. This is also known as tacit collusion. Suppliers may not coordinate directly, but using price signals among the parties to give effect to parallel increase in price. This is done by one supplier despite the quality of its rice products, will increase the price, hence, rest will follow. This usually happens in a concentrated oligopoly market like the current market for rice in PNG and when there is weak or no barriers to entry as stated elsewhere in the report. Additionally, it will be in a supplier's interest to go along with the prevailing behavior as it will be costly to deviate from it after or if it defers. However, despite these characteristics in the rice market, the Commission is satisfied that there is no tacit collusion among the suppliers as this is infrequent which the notion of interdependence is ceased to hold.

In discussions with suppliers, the Commission noted that different suppliers had different approaches to acquiring and maintaining their market share. Some suppliers focused heavily upon advertising and had increased their advertising spend over the last five years. Other suppliers focused on offering low prices or high-quality product. Offering of price discounts was also prevalent.

The Commission concluded that price competition as well as advertising and marketing initiatives indicated that there is competition between existing suppliers in the market. However, there was limited evidence to show that competition had increased since 2010.

6.5 Countervailing market power

Countervailing market power exists where a consumer either directly or indirectly demands or induces some degree of influence to cause the supplier to amend its supply arrangement or vary the price of its good by succumbing to the demands of the consumers. Countervailing market power exists normally where a customer is a major customer or consumer of the good supplied. As such, it may be the case that some, but not all, customers have a degree of countervailing market power.

The extent of this countervailing power is reliant on the availability of alternative supply options of similar quality and quantity. Countervailing market power is most likely to exist for large customers although individuals can potentially exert countervailing powers through their consumption behaviour.

The Commission notes that:

- there is a variety of rice importers
- rice is easily and widely distributed across PNG
- larger customer can directly import rice if they choose to, and there is some evidence that they do so in the import statistics
- wholesalers and retailers have the ability to exercise countervailing market power by negotiating with suppliers for discounts or to tailor supply arrangements to meet their needs

- consumers can choose between different retail outlets in areas where multiple outlets exist.

It is clear to the Commission that larger customers, retailers and wholesalers have alternative supply arrangements available to them and therefore have countervailing market power. However, household consumers may not. The consumer can choose to go to another retail outlet if one is available. However, if transport is limited, a consumer may have a limited choice about where they purchase rice, even in a larger urban area.

Retailers will not pass on cost savings to consumers unless consumers have a choice of retailers. If this choice is limited, consumers will not have countervailing market power. While a consumer might choose to buy a substitute product for rice, the supplier of the substitute is likely to be the same retail provider where they would otherwise purchase rice, so in this case, the availability of substitutes does not provide countervailing market power for consumers.

The Commission's position is that wholesalers and retailers have countervailing market power but household consumers do not.

6.6 The exercise of choice by customers

Competitive markets are normally characterised by an ability of customers to access relevant information and exercise choice in their purchases. The ability of customers to exercise choice and switch between competing products compels producers to offer goods at competitive prices and with a higher level of service. If a producer does not offer goods at competitive prices, a decision by customers to switch to alternative suppliers offering more competitively priced goods will lead to a loss of market share and may lead to a producer going out of business. The more active customers are in responding to the offers of businesses, the greater the pressure on businesses to set efficient prices.

Medium grain is the preferred rice variety for the majority of PNG consumers. While figures vary depending on world supply and price, it normally makes up 45–70% of total rice sales in PNG. The Commission is particularly interested in this because medium grain rice is also generally more expensive on the world market than long grain rice varieties.

Medium grain rice is the main ingredient of Trukai's Roots Rice brand. Roots Rice's popularity comes from Trukai being the main importer in PNG for so long.

One hypothesis for this is that, over 45 years of supplying rice to PNG, Trukai has conditioned the market to prefer medium grain rice. An alternative hypothesis would be that Trukai has supplied medium grain rice to the market because this is what customers prefer. However, medium grain is the variety produced by Trukai's major shareholder in Australia, so it is only natural that Trukai will prefer to supply medium grain.

Because customers do have a choice and because long grain rice varieties are generally cheaper on the world market, this creates a limit to how much of a pricing premium Trukai can charge for medium grain rice. Confidential financial data presented to the Commission by Trukai provided evidence of these limitations. There have been specific occasions when international prices for medium grain rice have increased significantly, but Trukai has not passed these increases on to customers in the PNG market.

The Commission also notes that market share has changed over the course of the last five years. Again, this is evidence of customers making a choice. The Commission would normally prefer to have seen the market shares of other suppliers increase in order to be confident that the market was becoming more competitive. However, the Commission has not found any evidence that customers do not have a choice.

6.7 Trukai's submission

In its submission, Trukai outlines five points that they see as indicating that there is a significant amount of competition in relation to the supply of rice in PNG.[15] These points, and the Commission's evaluation of them, are presented in Table 10.

Table 10: Trukai submission regarding competition

Trukai submission	Commission's view
Volumes have increased substantially in the last six years. If Trukai had market power, it could exercise it to reduce the volumes of rice it supplies or distributes in PNG in order to extract a higher price. Instead, volumes supplied by Trukai have increased substantially, despite the price premium associated with medium grain rice internationally.	The fact that volumes have increased substantially does not prove that no market power exists. The rising demand in PNG would potentially raise the volume at which a supplier with market power could optimise their returns.
Trukai's margins have been low and have remained low even as Trukai's share of the supply of rice has increased. Margins have been particularly low considering the volatility of the trading environment in PNG compared to other countries. (Margin data was provided by Trukai to support this claim.)	Margin data provided to the Commission did indicate relatively low net margins, though gross margins appear acceptable.
SunRice's transfer price in 2014 was below the US California Medium Grain Rice FOB price.	Trukai presented evidence to support its claim that the transfer pricing from SunRice is fair, and the Commission has accepted the evidence.
The recent 0.39 kina/kg international price increase for medium grain rice was not passed on fully to Trukai customers. When the absolute increase in price between 2011 and 2015 was compared across the US California medium grain rice and Trukai's brands, Trukai only increased the price of its Roots Rice brand slightly and decreased the price of its Trukai brand when the international US California medium grain rice price increased.	The Commission accepts that Trukai has not fully passed on increases in international prices at times.
Trukai's marketing spend has increased significantly between 2010 and 2014 as a percentage of revenue.	The Commission acknowledges that marketing spend has increased substantially and that this is

[15] RBB Economics Rice Industry Review: Economic Report, submitted by Trukai, page 3.

Trukai submission	Commission's view
	evidence of competition.

The Commission's conclusion is that Trukai does not have market power. The Commission's view with respect to Trukai's market share increase is that it is a result of Trukai's efforts to improve its distribution network and market its brands. Trukai is a strong, well-managed business with a strong customer-oriented approach to the market.

6.8 Commission's draft assessment of competition

Table 11 provides a summary of the Commission's findings on competition.

Table 11: Summary of competition assessment criteria

Criteria	Growers	Importers and processors	Retailers
Substitution			Substitutes are available in the carbohydrate market but there is no substitute product for rice if a customer specifically wants rice. However, there is scope for substitution between different rice suppliers.
Barriers to entry	Land is likely to be a barrier.	No barriers to entry.	Good retail locations are likely to be a barrier in some areas.
Countervailing market power	Able to invest in their own milling equipment.	Retailers can choose between suppliers or import product directly and so have countervailing market power.	Most consumers have no countervailing market power.
Competition between existing operators	Compete with others in their immediate region. Must compete with imports.	Competition with domestic growers and other importers.	Competition limited to the number of stores within easy transport distances of each other.
Customer choice	Processors can choose to import or purchase domestically grown rice.	Retailers and wholesalers can choose between importers or can import their own.	Limited to the number of stores available in a region or the presence of markets selling garden rice.

From its analysis, the commission has concluded that:

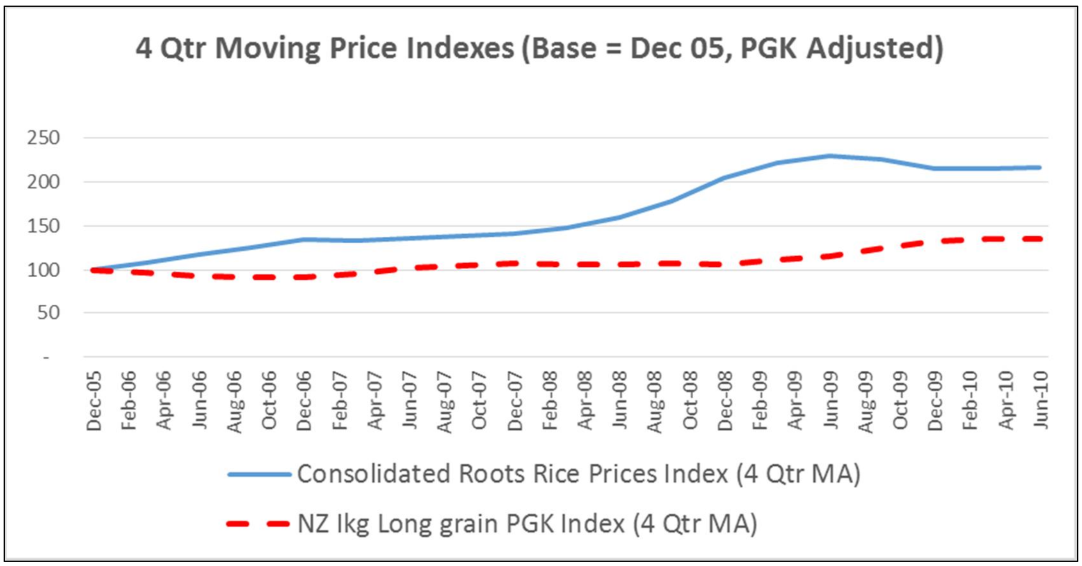
- there is effective competition in the wholesale and retail supply of rice in PNG
- no evidence was found of a lack of competition in the retail market – however, the Commission notes that there may be some areas where competition is limited due to the small number of retail outlets.

7 PRICING

7.1 Review of factory gate prices in 2010

In 2005, the Commission developed a price monitoring arrangement based on the ex-factory gate price of Roots Rice.[16] Roots Rice is considered to be a medium grain rice. The price was monitored against an index based on the price of long grain rice in Australia as reported by the Australian Bureau of Statistics (ABS) on a quarterly basis. The data source used was ABS series 6403.0.55.001 *Average Retail Price of Selected Items, Eight Capital Cities.* However, this data series was discontinued in mid-2011. The Commission therefore changed the source of its price data to data from Statistics New Zealand. The consolidated results of the price monitoring data, based on the Statistics New Zealand data from late 2005 to 2010, are shown in Figure 5.

Figure 5: Consolidated price monitoring results



Note: This figure is produced using the Statistics New Zealand data plus data from a chart in the 2010 report.

The 2010 Final Report noted that, due to the divergence between the Roots Rice index and the ABS index (reproduced with similar results in Figure 5 using the NZ index), the Commission was compelled to investigate the reasons for this divergence.

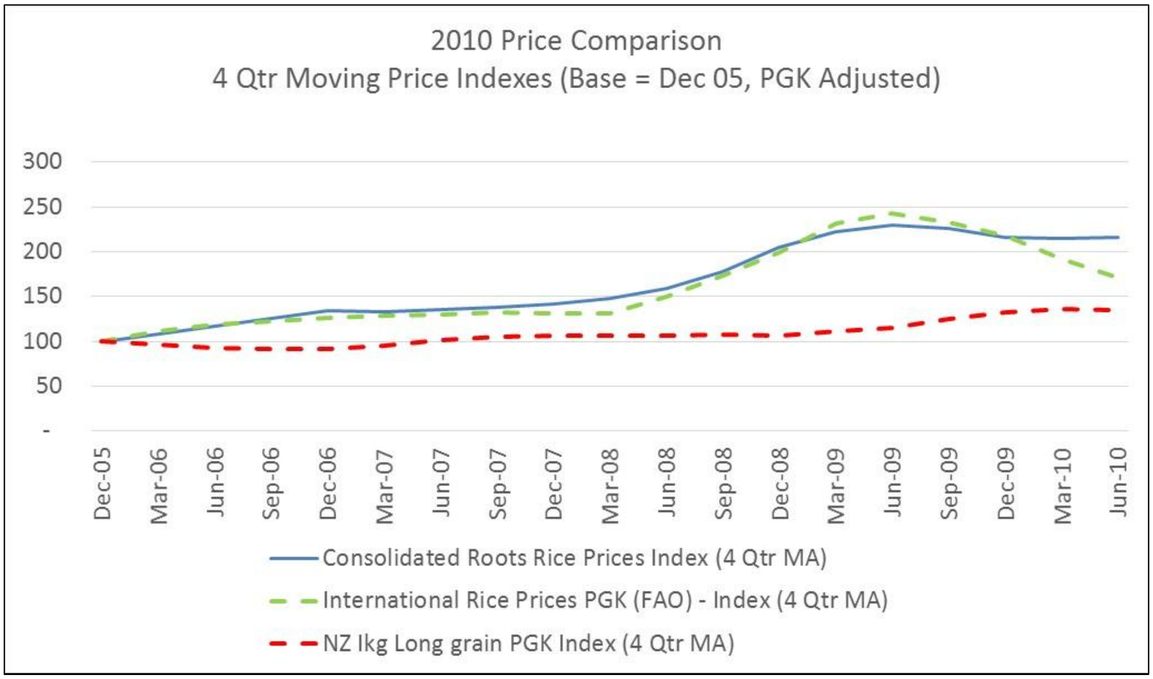
7.2 FAO medium grain rice prices

In order to better analyse the combination of factors with respect to its price monitoring arrangements, the Commission in 2010 calculated the international price of medium grain rice based on FAO (Food and Agriculture Organisation of the United Nations) statistics and converted it to PGK to create a medium grain index. The index was used to supplement the ABS long grain price monitoring arrangements. The information from the three indexes was

[16] It should be noted that the Commission's discussions with Trukai indicate that blending of rice within products occurs, so Roots Rice is likely to be a mixture of medium and long grain rice.

combined into a single figure. Figure 6 reproduces this using the NZ index. This chart is very similar to the chart from the 2010 report.

Figure 6: FAO medium grain and price monitoring indexes



In 2010, the Commission concluded that the divergence between the Roots Rice index and the ABS index was explained by:

- uncertainty in the international market leading to a medium grain (Japonica) price spike
- purchasing strategies employed by Trukai to guarantee supply.

In addition, it was realised that the ABS index was based on a long grain rice product and that there were worldwide differences in pricing for different rice grain and types.

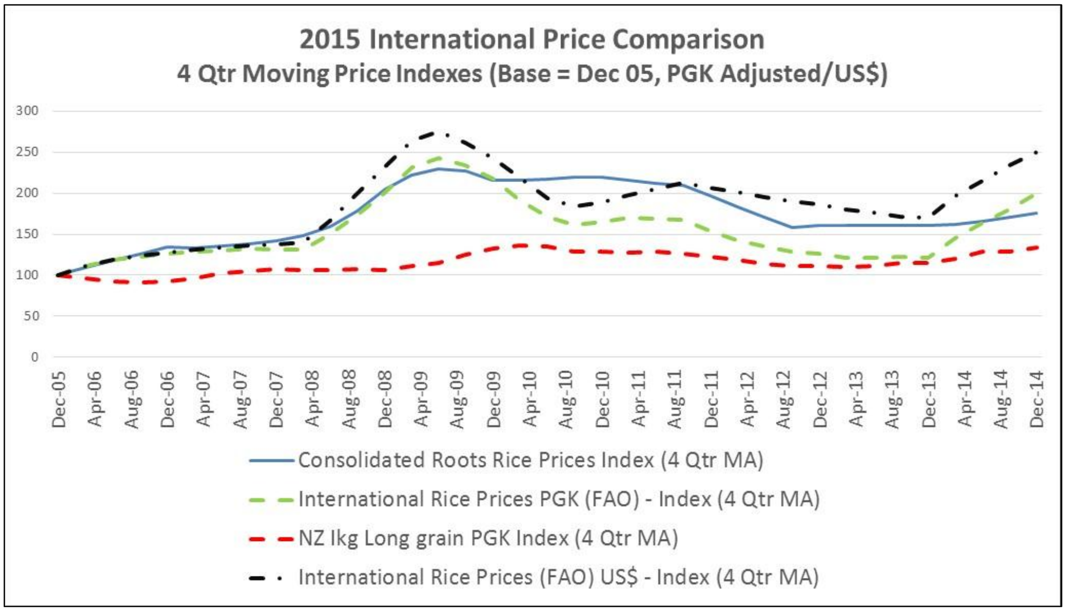
Other factors that affected medium grain rice differently included an Australian drought, rice export constraints in some countries and the worldwide commodity boom.

The Commission expected Trukai would come under increased competitive pressure if it continued to price above the index and see an erosion of market share. The Commission therefore saw value in continuing with a form of price monitoring. It had concerns that reduced international prices had not yet been passed on to consumers. It was also concerned about the impact of economy-wide factors such as increased landing and in-country costs and uncertainty due to investments such as the LNG project.

7.3 Analysis of factory gate prices 2010–2014

The price monitoring results, with the addition of the data collected by the Commission covering the period to the end of 2014, is presented in Figure 7.

Figure 7: Updated consolidated price monitoring results



A comparison of the movement of each index in Figure 7 is shown in Table 12.

Table 12: Comparison of index movements

Period	**Roots index**	**NZ index**	**PGK FAO index**
Mid 2010 to 2012	Relatively stable until around September 2011 then declines sharply	Relatively stable	Rises slightly
2012 to 2013	Relatively stable	Modest decline	Declines steadily
2013 to end 2014	Starts to rise but remains below 2010 levels	Steady upward movement to reach similar level to 2010 peak	Climbs sharply

This comparison is impacted by currency movements. When the FAO index in US$ is compared to the Roots index, the FAO index declines less sharply from mid-2001 than does the Roots index.

The Roots and NZ indexes move in a generally similar manner, with the absolute difference between the two declining from September 2011. While the Commission would have preferred to see the absolute difference between the two indexes decline further, the observed comparison appears reasonable. Given the fact that the NZ index tracks long grain rice, the comparison of the medium grain rice FAO index to the Roots index is also an important test that the Roots Rice pricing is following underlying world market trends.

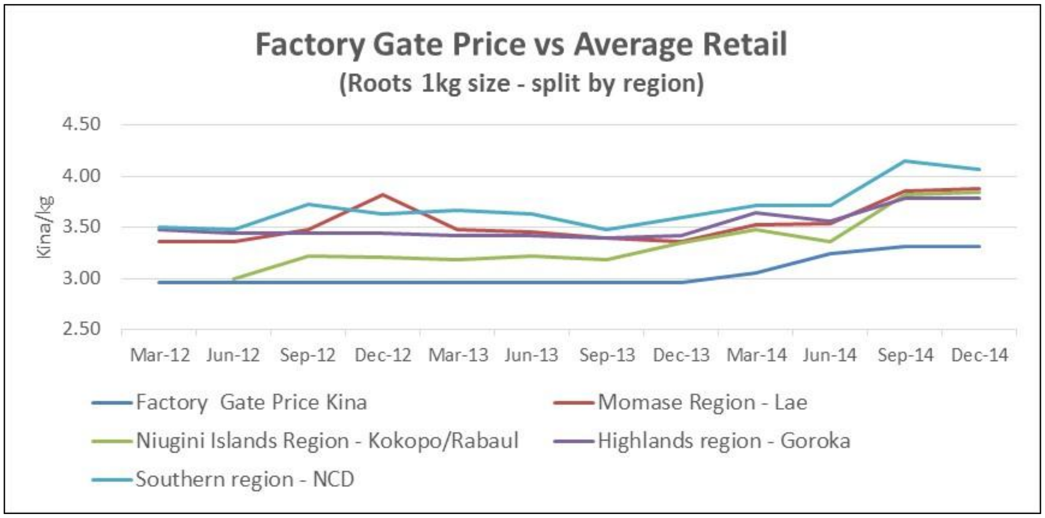
If Trukai is subject to competition or the threat of competition from imports, its prices will need to follow international trends. For example, if international prices fall and Trukai does not lower its prices, it will lose market share. The analysis indicated that Trukai's prices do follow international trends.

The Commission is of the view that Roots prices have behaved in a way that is consistent with the conclusion that Trukai does not have market power.

7.4 Retail prices

The Commission has been collecting retail price data for Roots Rice and some other rice brands for approximately three years. The data is collected across the Momase (Lae), Niugini Islands (Kokopo/Rabual), Highlands (Goroka) and Southern (NCD) regions. The factory gate and retail price data collected by the Commission for the 1 kilogram pack size is shown in Figure 8.

Figure 8: Factory gate and retail prices



The factory gate price appears to be the nominal price and not an actual weighted price that takes accounts of any discounts offered for volume or other factors. As Trukai operates a national pricing policy throughout its 12 distribution areas,[17] the factory gate price (FGP) does not vary by region. From the collected price monitoring results, the Commission observes the following:

- Prices and margins above factory gate price vary by region.
- Price relativities vary by region over time. For example, Momase has the highest retail price in December 2012 but has the second-lowest retail price in December 2013.
- Retail prices do not necessarily move in concert with the FGP. In June 14, the FGP rose by 6% compared to the previous quarter, but two regions held their previous quarter's price and two reduced their prices.
- Margins at the end of 2014 are not significantly different from their average for the overall period for three regions. While the Niugini Islands region margins are significantly higher in December 2014 than their average, they are similar to Momase and Highlands regions.

[17] Trukai stated that it operates a national pricing policy in discussions with the Commission and in a subsequent written response to the ICCC's additional information request dated 17 June 2015.

Variations in retail prices are to be expected given variations in cost factors such as road and coastal shipping from the distribution point to the retail outlet. The price and margin variations, both at a point in time and over time for a particular region, are also evidence of competition, given prices of substitutes will tend to vary by region. In a competitive retail market, retailers will vary prices from time to time to promote particular products.

With respect to gross margin above FGP, the commission notes that:

- the overall range of margins over the period analysed is between around 1% and 29%
- regional average margins for the period range from 9.5% to 21.2%
- while the FGP held constant between March 2012 and December 2013, retail margins continued to vary considerably across the regions – both the highest and lowest observed margins occurred during this period.

In Table 13, the Commission has estimated the retail margins in December 2014.

Table 13: Retail margin and cost component estimates by region

	Momase	Niugini Islands	Highlands	Southern
Imported raw material	2.20 kina	2.20 kina	2.20 kina	2.20 kina
Local processing	1.11 kina	1.11 kina	1.11 kina	1.11 kina
Local transport	0.05 kina	0.08 kina	0.05 kina	0.05 kina
Retail margin	0.52 kina	0.45 kina	0.42 kina	0.71 kina
Retail price	3.88 kina	3.84 kina	3.78 kina	4.07 kina
% retail margin	15%	13%	13%	21%

From this analysis, the Commission notes that retail margins appear to range from between 13% and 21% of the cost of delivering the rice to the retailers' door. It should be noted that the estimated transport costs are only relevant to the sampled outlets. Costs to outlets in other areas, further from supplier distribution centres, would be expected to be higher, leading to higher retail prices, lower retail margins or a combination of both.

From this analysis, the Commission observes two things:

- Margins vary from one region to another.
- Retail margins do not appear to be excessive.

It is expected that margins will vary from region to region depending upon the intensity of competition in each area. That margins are higher in the Southern district might possibly indicate that competition is less intense in this region than in the other regions. However, if higher margins continue to exist in this region, the Commission would expect that new entrants would enter and that this additional margin will be competed away.

The Commission has concluded that its findings about retail margins are consistent with markets that demonstrate effective competition.

8 WORLD SUPPLY

Because of the Government's Rice Policy and because of PNG's current dependence upon imports, the Commission thought it important to have a view of the world supply of rice. The Government Rice Policy objectives and goals have been developed because of a stated belief that reliance upon imported rice will become increasingly risky.

This report does not provide a comprehensive view of the world. Instead, it provides a brief snapshot of the current international rice supply. This provides a context within which this price review is being carried out.

8.1 Description of world supply

Table 14 shows the major rice producers around the world. From this, we can see that the top four producers produce 67% of the world's rice and the top two produce half of the world rice supply.

Table 14: Rice production by country

Country	2014 production (million tonnes milled)	% of world production
China	143.5	30%
India	103.0	22%
Indonesia	37.8	8%
Bangladesh	34.6	7%
Vietnam	28.1	6%
Thailand	20.1	4%
Others	70.3	15%
Total world	**475.9**	**100%**

However, most of the large rice producers consume most of what they produce, so large producers are not necessarily large exporters. Table 15 shows the world's largest exporters. 48% of the world's exports come from just two countries.

Table 15: Rice exports by country

Country	2014 exports (million tonnes milled)	% of world production
India	9.7	24%
Thailand	9.5	24%
Vietnam	6.4	19%
Pakistan	3.7	16%
USA	3.0	9%
Total world	**40.2**	**100%**

Australia has traditionally supplied much of PNG's rice and is principally a supplier of medium grain rice, which is the variety preferred by PNG consumers. Australia's exports are normally about 2 million tonnes. Table 15 shows that Australia is not one of the larger rice exporters.

Table 16 provides an overview of how rice is consumed around the world.

Table 16: World rice statistics[18]

	2013/14	2014/15 estimated
Production	497	495
Supply	715	720
Utilisation	490	500
Food use	408	414
Feed use	14	15
Other uses	68	72
Trade	43	42
Ending stocks	182	177
Global stock to use ratio	36%	35%
Trade to production ratio	8.62%	8.49%

From Table 16, we can see that about 8.5% of world rice production is traded internationally.

It is also interesting to note that the world stockpiles rice and that these stockpiles add up to more than one-third of a year's production.

8.2 Factors that affect supply and prices

World production volumes and trade volumes of rice are affected by a range of factors. Here, we list some of them:

- Land availability: Land use for rice production has increased by 3% in the last five years.
- Productivity: Yield per hectare varies from between 1.3 and 8 tonnes per hectare. The world average is 3 tonnes per hectare.
- Weather: Annual crops are heavily dependent upon water availability from either rain (monsoons) or irrigation. This is a major factor in the variability of crop sizes from one year to the next.
- Government protection: For food security purposes, governments tend to protect their domestic rice growers. The form of protection varies widely from country to country but include tariffs, import and export quotas, and subsidies.
- Alternatives available to rice growers: If other crops provide higher returns, farmers may start to plant different crops. Equally, if rice prices are high, it is likely that more farmers will start to grow rice.

[18] FAO (Food and Agriculture Organisation of the United Nations) – Rice Market Monitor – July 2015.

- Prices farmers receive: If prices are low, farmers will tend to produce less. Conversely, if prices are high, farmers will increase production. Some countries also provide subsidies to farmers to encourage increased production.

Demand for rice is also likely to be affected by a range of factors:

- Relative wealth of consumers: There is evidence that, in China, consumption of rice is declining as average incomes grow. As consumers are able to afford it, they are eating a wider variety of food.
- Unavailability: If traditional food crops or food sources decline for some reason (usually weather events), local populations may become more reliant on rice to fill the gap. However, if rice is not available, they will choose the most readily available food they are able to source.

Rice prices behave like any other internationally traded commodity. World trade prices are mostly driven by supply and demand. However, government protectionist measures do also impact the price. For example, import tariffs tend to depress international prices because exporters must set their prices lower in order to be able to compete with the domestic product that is protected by tariffs.

Where markets are allowed to trade freely, market forces will ultimately drive the quantities produced, level of consumption and price paid. It appears to the Commission that the international rice market is essentially a free market. Each country can choose to what extent they want to allow international market forces to drive their domestic rice market.

Because markets always react to shortages or excess supply, in the long run, prices will tend to average out. However, this does not mean that there will not be temporary high or low prices.

8.3 Five-year forecast

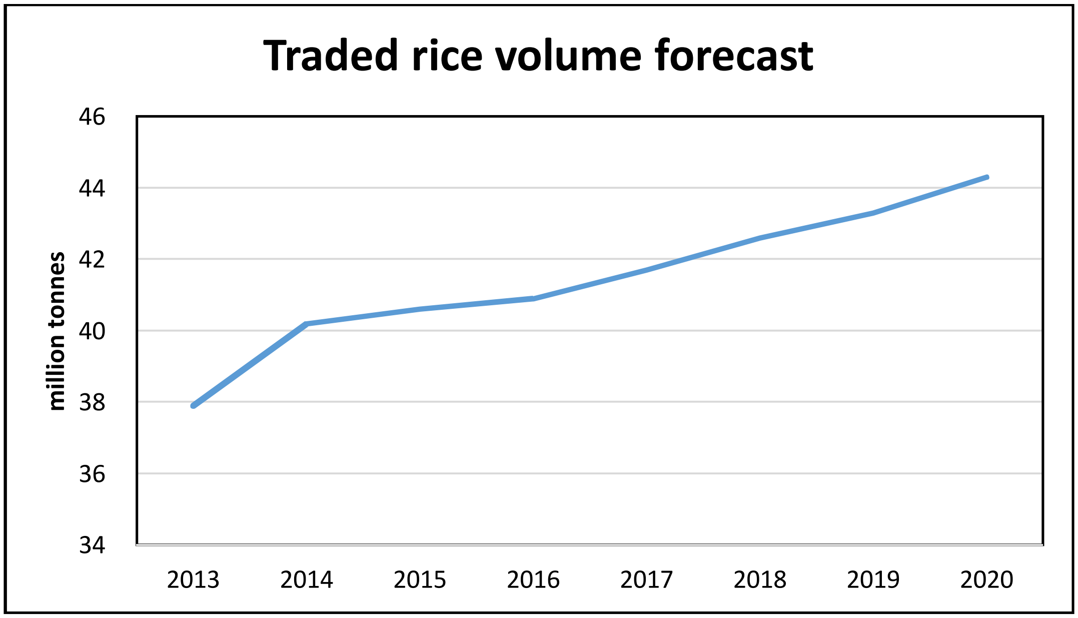
There are no expectations that rice will be difficult to purchase on international markets over the next five years.

> *Global rice trade is seen reaching a record of 40.6m t in calendar 2015. Not only would this be a new high, volumes would be 30% larger than five years earlier, driven by expanding shipments of white and parboiled varieties to markets in Far East Asia and sub-Saharan Africa. Over the medium term, rising deliveries to those same regions are expected to underpin growth, but at a less pronounced rate than in the past. Traded volumes are projected to reach 44.3m t in 2020, representing an annual average increase of 1.7% during the next five years (compared to 5.5% between 2010 and 2015).*[19]

Figure 9 shows the International Grains Council's forecast increase in traded rice volumes out till 2020.

[19] International Grains Council – Five-year global supply and demand projections, December 2014.

Figure 9: International Grains Council forecast of traded volumes



The Commission notes that this is a different view from what has been presented by the Government Rice Policy. The Government Rice Policy makes the following statements: [20]

> The land area under rice in the world is decreasing due to floods and atlernate land use in many of the current rice growing areas like China, Japan Thailand, Viet Nam and the Philippines.

This statement is misleading as actual land area being used to cultivate rice has increased by 3% over the last five years.

> Rice exporting countries are now indicating that they will reduce their rice imports to take care of their own domestic rice needs.

Actual international traded volumes have increased by 5.5% per year since 2010 and are forecast to increase by 1.7% per year for the next five years. The policy statement may or may not be factually correct, but in practice, it is likely that actual volumes available to PNG to import will increase.

> *Traditional allies like Australia who had under written PNG's rice supply security since 1975 ceased export rice to PNG in 2007.*

This is not correct. To the Commission's knowledge, there has only been one year when Australia did not supply rice to PNG. This was in 2011 due to the impact of drought on the

[20] Government Policy Paper – Chapter 5, page 32.

Australian rice crop. Since that time, Australia has resumed its exports of rice to PNG. In 2013, it is estimated that 37% of Australia's rice crop was sold in PNG.

> *The net effect of the global trends is that rice supply is likely to decrease significantly in the world market resulting in price increases.*

This statement appears to be unsubstantiated by fact or by expert opinion. The Government policy paper does not quote any source for this opinion.

8.4 Outlook to 2030

Long-term forecasts of supply and demand for any commodity are difficult. For example, 10 years ago, many were predicting that oil supplies were on the verge of dwindling. However, since that time, supply has significantly increased and demand has significantly decreased.

This report has already identified a set of factors that will drive the international supply of rice. A change in a combination of these factors could have drastic effects upon the international supply of rice.

The Commission could not find any long-term forecast of international rice supply. However, the Government policy paper says the following[21] (no source was quoted for this statement):

> *Outlook for 2030 shows that the global demand will be in the range of 503-544 metric tonnes. This is equivalent to a relative growth rate of 1% per year relative to the total consumption in 2010 of 439 million tonnes. This demand growth is divided by population growth and also influenced by changing consumption patterns. Forecast for Asian consumption will account for two thirds of this total increase in demand. Additional demand for Asian rice production will come from export markets. An increase of 5-7 million tonnes is projected for rice export from Asia between 2013 and 2022, and an additional 2-3 million tonnes are projected to be imported by Africa. Overall, the world rice trade (export) in 2022 is estimated to be around 46 million tonnes which represent an increase of 8-9 million tonnes over 2013.*

The Commission notes that this is mostly consistent with the forecast from the International Grains Council discussed earlier.[22]

However, the Commission does not believe that these forecasts provide any indication that PNG will not be able to continue to import most of its rice requirements if it chooses to.

[21] Government Rice Policy Paper – section 6.2.1 page 51.
[22] International Grains Council – Five-year global supply and demand projections, December 2014.

9 GOVERNMENT RICE POLICY

The local production of rice has been encouraged by the PNG Government since 1998 with various policies and programmes. Over the years, assistance has been provided to rice growers by the Department of Agriculture and Livestock, aid agencies and church/NGO groups.

The primary reason for the Government's emphasis on local production is for household food security.

Increased rice production has been identified as a way to address food security issues in PNG because:

- it can be grown and harvested three times a year
- when properly milled, treated and stored, it can last for up to three years.

The Government has recently released documents outlining its current thinking about its future Rice Policy. The Commission understands that (at the time of writing the Draft Report) the Rice Policy had not yet been fully approved. However, Agriculture Minister Tommy Tomscoll has introduced the National Rice Policy into Parliament.

If the Rice Policy is approved and implemented, this will have a substantial impact upon all the factors that the ICCC is required to consider in order to protect consumers, which are:

- the price that consumers pay for rice
- the availability of rice
- competition in the rice market.

For this reason, the Commission has devoted a substantial portion of this report to examining the likely effects of the policy.

9.1 Policy background

The Rice Policy recognises that the consumption of rice has gradually been rising in Papua New Guinea and rice is becoming established as a staple food, not only in urban areas, but also in the rural villages. However, most consumption depends on imported rice from other countries such as Australia and Thailand.

Both the current and previous Governments of PNG have realised the necessity of food security. They have therefore introduced a variety of programmes that have focused upon increasing domestic rice production:

- In 1996, the PNG Government signed the FAO Rome declaration on food security.
- In 1996, PNG joined the World Trade Organization.

- The 1998 National Rice Policy encouraged small rice farmers to shift from semi-commercial to full commercial production. This included a number of other measures including trade liberalisation. The policy is believed to have failed due to erratic funding.
- The 2000 National Food Security Policy recognised rice and grain as one of the 14 components necessary for food security. This policy had a target to reduce rice imports by 20% by 2010 using irrigated rice production systems. The policy was not implemented and lacked government funding.
- The National Agriculture Development Strategy Horizon (2002–2012) focused upon the infrastructure requirements to increase agricultural production. According to the Government Rice Policy Paper,[23] it was allocated a budget of K100 million but failed to deliver any of the intended outcomes.
- The National Rice Policy (2003–2012) was influenced by a 2002 Japan International Cooperation Agency-sponsored study investigating small holder rice projects. The policy focused on providing small farmers with resources they needed to increase production: "The policy has delivered mixed results with successful outcomes in seed distribution, training and extension only where donor partners were involved. Again, Inadequate funding commitment by the Government and challenges from the lack of enablers like infrastructures, credit, markets and extension contributed to poor outcomes."[24]

9.2 Objectives of the Government Rice Policy

The Commission understands the objectives of the Government are to:

- reduce dependency on imported rice and achieve self-sufficiency by 2030
- guarantee national food security through domestic rice production and mechanisms such as a price stabilisation quota scheme, monetary security bonds, rice warehouse stockpile and disaster relief schemes
- develop a modern sustainable local commercial rice industry.

The Commission notes the objectives of the policy. The Commission also notes that it is not the role of the Commission to have an opinion on Government policy objectives. However, it is the role of the Commission to protect consumers. As far as the Rice Policy is concerned, this means that the Commission is concerned with issues that affect rice prices, rice availability and competition among rice producers and suppliers. The focus of this report is therefore to assist the Government to achieve its objectives while also achieving the objectives of the Commission.

[23] Government Rice Policy Paper – section 4.2.3 page 28.
[24] Government Rice Policy Paper – section 4.2.4 page 30.

9.3 How the proposed Rice Policy is intended to work

The following points outline the various elements of the policy that the Commission believes are relevant to supply, price and competition issues. The general points of the policy are as follows:

- Self-sufficiency will be achieved by private investment in large-scale commercial mechanised irrigated rice farms.
- Investors who invest more than 200 million kina will be given pioneer status, which will include import quotas.
- Access to land will be encouraged by allowing landowners up to 30% equity in commercial rice farms.
- The Government will control the quantities of rice that are imported and exported by issuing import and export quotas.
- There will be two types of import quota and there will be a maximum total volume set every year:
    - A quota rice import permit will be given to entities who invest more than 200 million kina in rice farms. This quota will be duty free and will also have tax incentives. The quota will last for a 10-year period.
    - A standard import quota will be subject to import duty and will not provide any tax incentives.
- The Government will stabilise rice prices by buying rice when prices are low and selling rice when prices are high. Rice purchased in this way will be held as a stockpile, which will also increase national food security.
- The Government will hold a stockpile of rice that will be able to be used for disaster relief as well as for price stabilisation activity.

9.4 Domestic monopoly

It is not clear to the Commission whether or not the Rice Policy envisages having a single pioneer investor or multiple pioneer investors. The Rice Policy document implies that there will be one large investor and also discusses 'elimination of barriers to domestic monopoly'. [25] The paper notes that: "The rice trade has been dominated by Trukai Industries Ltd over the last 40 years."[26] However, the paper also says: "In terms of the current rice regime, there is no monopoly and there is fair play."[27]

The Commission would be extremely concerned if the Government were proposing to create a domestic monopoly for rice production. Monopolies usually have incentives to restrict supply to consumers in order to drive up prices. The interests of consumers are usually best protected by competition. Indeed, this is the underlying premise behind the establishment of the Commission under the ICCC Act.

[25] Government Rice Policy Paper – section 6.1.5 page 50.
[26] Government Rice Policy Paper – section 7 page 84.
[27] Government Rice Policy Paper – section 6.1.5 page 50.

If the Government were to establish a domestic monopoly in any form, the Commission would have no choice but to regulate domestic rice prices using the powers invested in the Commission under the ICCC Act. In order for this not to be true, the Government would need to introduce special legislation that specifically removed rice from the jurisdiction of the ICCC.

The mechanism that the Commission might choose to control prices would be to use either:

- an international benchmark for rice prices or
- a cost-based pricing regime.

It is worth noting that, if the Commission used an international benchmark to set prices, the monopoly would need to be internationally competitive in order to survive financially. If this were not the case and the Commission used a cost-based method for setting prices, consumers would end up paying higher prices for rice. These higher prices would be in direct proportion to the level of the monopoly's inefficiency.

The Commission believes that introducing a domestic monopoly would be in conflict with the objectives of the Government Rice Policy. The policy seeks to promote food security. In the Commission's view, creating reliance upon a single party reduces the country's security and increases the risk of supply failure.

Because of the requirements of the ICCC Act, the Commission can not recommend or support the establishment of a domestic monopoly for rice.

9.5 Pioneer investor requirements

The Commission is also not completely sure of the exact requirements to become a pioneer investor, but the Government Rice Policy Paper does say that pioneer investors need to make a substantial investment. Public media releases seem to indicate that the required minimum investment is K200 million. However, on page 54 of the Government Rice Policy Paper, it says:

> *Pioneering status will be granted to the investor willing to commit over US$2 billion and establish large scale (100,000 ha) highly mechanized irrigated rice farms with the capacity to produce over 300,000 tonnes of rice locally by 2030.*

The Commission notes that the size of this investment would probably exclude all current rice suppliers from becoming pioneer investors. This would appear to be a risky approach. Most of PNG's current expertise and infrastructure for rice milling, packaging and distribution is currently provided by these suppliers. Excluding them from the domestic market would most likely have the effect of reducing PNG's current capability to supply rice to its citizens.

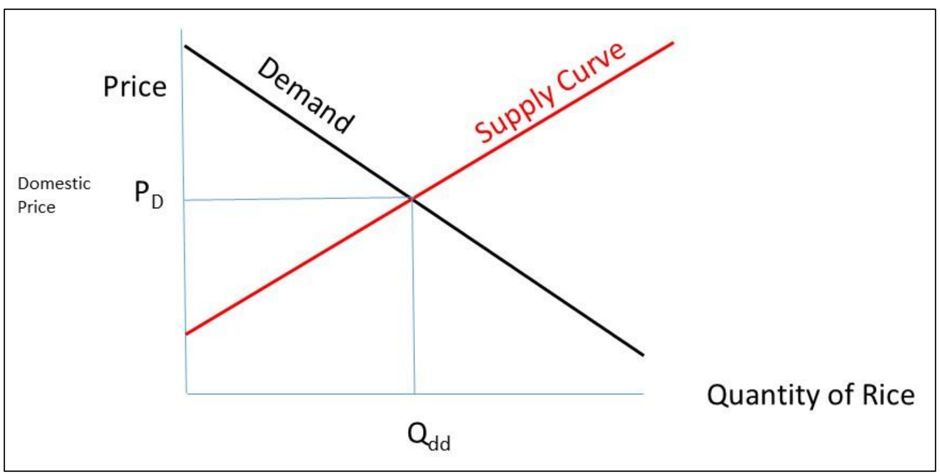
The Commission would therefore recommend that the Government reduce the size of the commitment required to become a pioneer investor so that existing participants could at least choose to continue to invest in and to operate in PNG. The Commission believes this is in the interests of consumers and that it is also more likely to achieve the goals of the Government Rice Policy to increase food security.

The Commission also notes that 300,000 tonnes would supply most of PNG's current rice demand but that it is also likely that, by 2030, PNG will consume more than this. It would be essential that PNG were able to source supplies of rice in addition to that supplied by the pioneer investor.

9.6 Import quotas and tariffs

Economic theory explains the interaction between supply and demand in markets using supply and demand curve diagrams of the sort shown in
Figure 10.

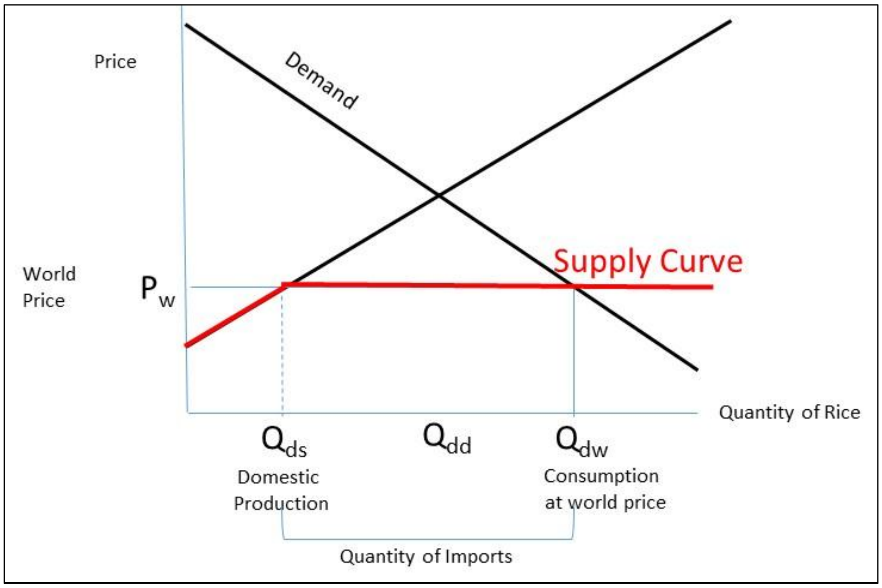
Figure 10: Supply curve for a domestic market with no imports



This is the relationship we expect in a simple market such as a domestic market with no imports. Economic theory assumes that, as the quantity supplied increases, the cost per unit of supply also increases, so suppliers will continue to increase their supply until the cost of production is equal to the price they can receive in the market. This is the point at which the supply curve crosses the demand curve. From
Figure 10, we can see that, in a stable market, the domestic price will be P_D and the quantity produced by suppliers will be Q_{dd} (the domestic quantity at the domestic price).

However, if we allow imports into this market, several things will change. The changes are illustrated in
Figure 11.

Figure 11: Supply curve with imports



If the price of imports is set by the world market price (P_W), the world market price will become the price in the local domestic market. The quantity consumed by customers will increase to Q_{dw} (the domestic quantity at the world price). The quantity supplied by local producers will decrease. Only the most cost-efficient producers will be able to compete at the world price, so the quantity produced locally will be Q_{ds} (quantity of domestic supply) or where the original domestic supply curve equals the world price. The supply curve now becomes the curve shown in red.

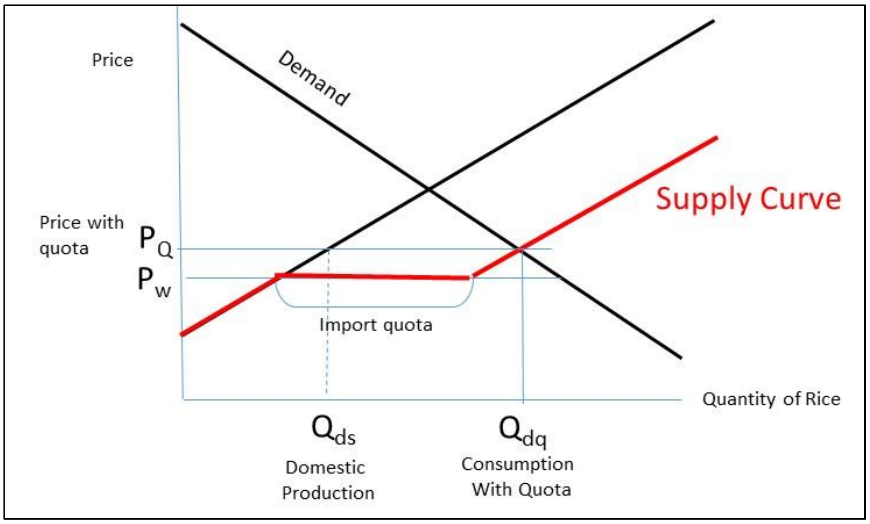
The quantity of imports is the difference between the total domestic quantity consumed (Q_{dw}) and the quantity of domestic supply (Q_{ds}).

We should note here that, by allowing imports into the market, we have increased the consumer surplus. The economic definition of consumer surplus is the amount that customers save by paying less than they were willing to pay. It is essentially the gap between the demand curve and the price line (P_W). If the consumer surplus has increased, this means that customers are better off. They receive more for their money.

We also note that domestic producers are worse off. The producer surplus has reduced. The economic definition of producer surplus is the amount that a producer profits by selling their goods for more than the minimum price they were willing to sell them for. In
Figure 11, it is the gap between the supply curve and the price line (P_W).

Now suppose that the Government puts an import quota system in place and restricts the quantity of imports that can be sold in the country. The effect on our supply and demand curve can be seen in Figure 12.

Figure 12: Supply curve with quota



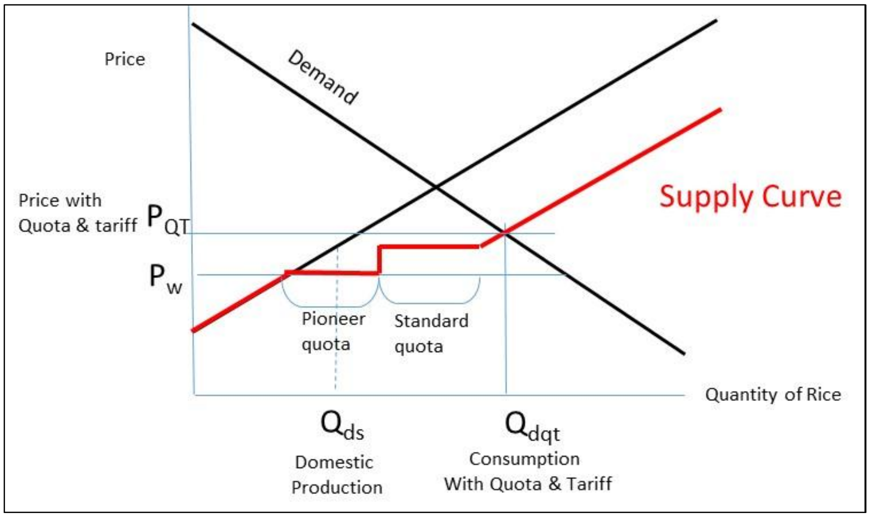
The introduction of a quota results in several changes:

- The domestic market price is increased from P_W to P_Q.
- The consumer surplus is decreased, so consumers are worse off and get a lower quantity of rice for their money.
- Imported quantities are reduced and domestic production is increased.
- The domestic producer surplus is increased, so producers make higher profits.
- Economic rents are introduced into the market for those that control the quota. The cost of imported product is less than the price those with quota can sell the product for. The presence of these economic rents creates an opportunity for the government to auction off quota to the highest bidder. The Rice Policy says this will occur via an "open transparent public tender exercise guided by an EOI to promote large scale mechanized and irrigated commercial rice farming".[28] The alternatives to this are likely to create opportunities for corruption.
- The total quantity consumed in the market is decreased. This is a deadweight loss or allocative inefficiency. Essentially, lower quantities are delivered to the market than the market would otherwise consume.
- In summary, the people of PNG will pay more for their rice and get less rice delivered.

The Rice Policy is proposing to have two types of quota. Quota issued to pioneer investors will be tariff free, while all other quota will incur a tariff. Figure 13 shows how this will affect the supply and demand curve.

[28] Government Rice Policy Paper – section 6.2.2 page 55.

Figure 13: Supply curve with quota and tariff

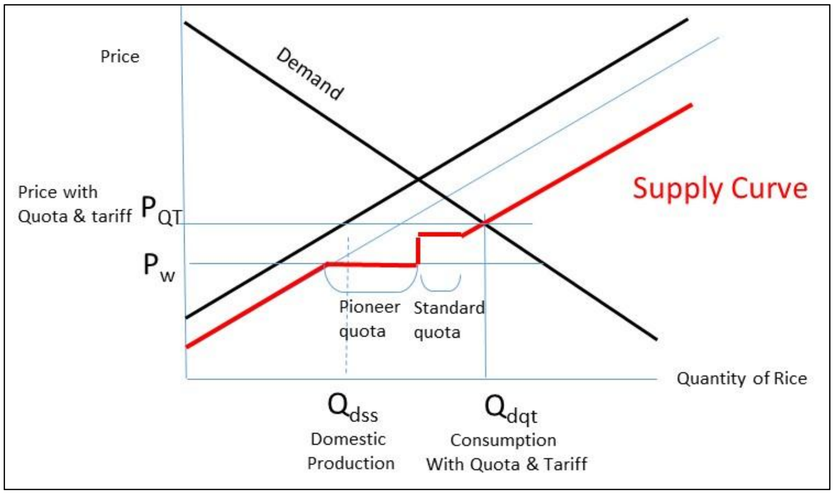


From Figure 13, we can see the following effects:

- The market price is further increased to P_{QT} (price with quota and tariff).
- Consumers are worse off because consumer surplus has been reduced further.
- Domestic consumption is further reduced. The result is that the deadweight loss is also increased and allocative efficiency decreases.
- Domestic producers make higher profits with an increased producer surplus.
- Those with pioneer quota will make higher profits than those with standard quota.
- However, both pioneer quota and standard quota will have associated economic rents, so it would be important that, if this was implemented, both types of quota were issued via a transparent public tender process to avoid corruption.

The Rice Policy also proposes to give tax incentives to pioneer investors. The Commission assumes that these tax incentives will only apply to quantities which are produced in PNG. This will have the same effect as a subsidy on local produce. The effect on the supply curve is shown in
Figure 14.

Figure 14: Supply curve with tax subsidy, quota and tariff



The introduction of the tax incentives will encourage increased domestic production, which is one of the Government's objectives in implementing the policy. In effect, the tax lowers the supply curve for local production. Overall, the following effects will occur with the introduction of the subsidy or tax incentive on domestic production:

- Prices do not change, so consumer surplus remains unaffected.
- The total quantity consumed by the market will not change (provided demand is met)
- Domestic production will increase. This is likely to be accompanied by an equivalent reduction in standard quota.
- Domestic producers' profits will be increased (i.e. an increase in producer surplus).
- Economic rent will also have decreased. Effectively, the Government will have reduced economic rent but paid out more in the form of a subsidy.

The findings of the analysis of the Government Rice Policy the Commission has presented here can be summarised as follows:

- Consumers will pay higher prices.
- Consumers will purchase less rice. They will get less for their money.
- Domestic producers will make higher profits.
- Quotas will have value in their own right because of the higher profits they will provide to importers.
- Resources in PNG will be allocated less efficiently. More resources will be used for rice than would otherwise occur. This means fewer resources will be available for other things such as cocoa or coffee.
- Domestic production will increase, provided producers have the opportunity to increase production.

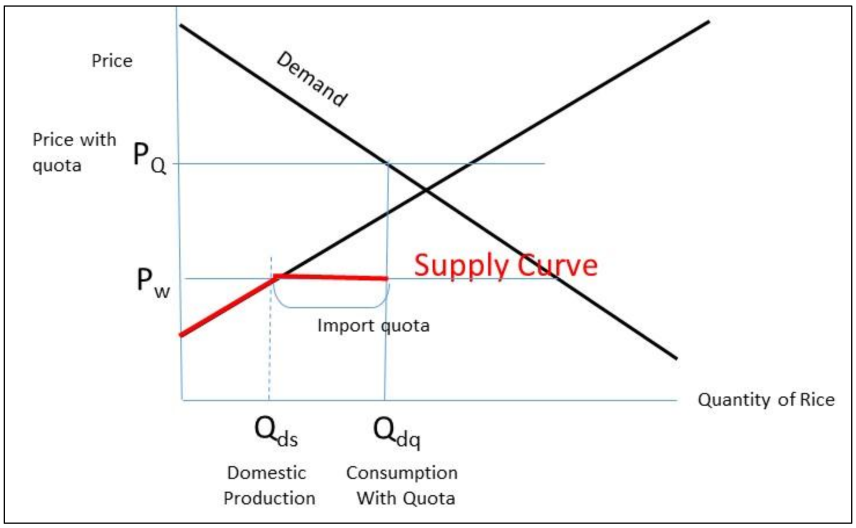
9.7 How much quota to issue

The Commission notes that various media releases have understated the quantity of rice currently imported into PNG. The Commission notes that, in 2014, the total quantity of imports was around 266,000 tonnes. However, the Government Rice Policy Paper states:

> *In 2014-2015, the Government will set the import quota at 150,000 tonnes which is the estimated total domestic demand for rice in the country.*[29]

This is about 120,000 tonnes less than current import quantities. The Commission is extremely concerned that the Government will not issue sufficient quota to meet current demand. The effect of this is shown in Figure 15.

Figure 15: Price and supply with insufficient quota



If there is insufficient quota to meet customer demand, the quantity will be reduced to Q_{dq} as shown. In the short term, local producers will not be able to meet demand, so the price will increase to the point where the line above Q_{dq} crosses the demand curve or P_Q.

Under these conditions, prices can suddenly increase by large magnitudes. Shortages of sugar have occurred in PNG on several occasions. Experience shows that prices can then increase by up to 500%. The magnitude of the price rise would depend upon the extent that the quota fell short of actual demand.

Any attempt by the ICCC or the Government to control prices under such circumstances would create a black market. No one will sell rice for a regulated K4 a bag when they know someone is prepared to pay K20 a bag. If rice were in short supply and prices were regulated at an artificially low price, those who were lucky enough to purchase at the regulated price would be likely to sell it privately at elevated prices. Whether or not the price is regulated, the price will increase accordingly to match the demand curve.

[29] Government Rice Policy Paper – section 6.2.2 page 55.

From this analysis, the Commission concludes that the consequences of not issuing sufficient quota to meet domestic demand are extremely adverse for consumers but very profitable for domestic rice producers. To avoid this occurring, the Government has two options:

- Do not place any restrictions on the quantity of imports that incur a tariff (i.e. the equivalent of standard quota).
- Issue more standard quota than the Government considers is necessary to ensure demand is fully met.

The Commission would recommend the first of these options. However, if the Government is convinced that domestic production can't expand without protection via a quota system, it is essential that the Government issues sufficient quota to meet demand.

Under either option, the Government could purchase any excess production from local producers.

9.8 Infant industry theory

> The infant industry argument is an economic rationale for trade protectionism. The core of the argument is that nascent industries often do not have the economies of scale that their older competitors from other countries may have, and thus need to be protected until they can attain similar economies of scale. The argument was first fully articulated by Alexander Hamilton in his 1790 Report on Manufactures …
>
> Many countries have successfully industrialized behind tariff barriers. For example, from 1816 through 1945, tariffs in the USA were among the highest in the world. According to Ha-Joon Chang, "Almost all of today's rich countries used tariff protection and subsidies to develop their industries.
>
> *Despite this, infant industry protection is controversial as a policy recommendation. As with the other economic rationales for protectionism, it is often abused by rent seeking interests. Even when infant industry protection is well–intentioned, it is difficult for governments to know which industries they should protect; "infant" industries may never "grow up" relative to "adult" foreign competitors. For example, during the 1980s Brazil enforced strict controls on the import of foreign computers in an effort to nurture its own "infant" computer industry. This industry never matured; the technological gap between Brazil and the rest of the world actually widened, while the protected industries merely copied low-end foreign computers and sold them at inflated prices. In addition, countries that put up barriers to imports will often face retaliatory barriers to their exports, potentially hurting the same industries that infant industry protection is intended to help.*[30]

The infant industry theory is very relevant to the PNG rice industry. At present, there is no large-scale rice production. The question for the PNG Government to answer is whether, by

[30] https://en.wikipedia.org/wiki/Infant_industry_argument

providing protection, an industry can be developed that has sufficient scale and efficiency that it can then survive against international competition.

In the Commission's view, it will be important that any protected businesses have sufficient incentives to be efficient. Domestic competition will be important to ensure efficiency incentives are present.

9.9 Implications for PNG consumers

Because domestic rice production capability is being developed from a very low base and there are likely significant costs of doing this, the tariff level can be expected to be significant. The increase in rice prices will reduce the quantities consumed in PNG, and consequently the import quota will fall below current import levels.

In terms of tariff level, flour imports to PNG prior to 2003 were subject to a 40% tariff, designed to protect the local flour milling industry in its infant stages. [31] While the Commission does not know what tariff level the Government is proposing for rice under the policy, it seems reasonable to expect that it would be 25% or more. Analysis shows that the imported cost of rice is around 63% of the retail price. Assuming the price of imported rice represents 50–65% of the retail price, this suggests a 25% increase in the cost of rice would translate to a 13–31% increase in retail prices, assuming other costs remained the same.[32]

The Government has stated in the proposed Rice Policy that it will set the import quota for 2015/16 at 170,000 tonnes. The Commission's estimate of total import volumes for 2014 is around 270,000 tonnes, and local production is currently estimated at around 30,000 tonnes. The proposed quota would, therefore, in the Commission's estimation, represent a drop of around 37% in current imported volumes.

The Commission estimates that local production would need to increase by over 333% to replace this drop. However, as previously discussed, total PNG consumption would drop below the current level as price rose. These figures suggest that consumption would need to drop quite sharply and that the shortage of supply would drive up market price for rice by considerably more than the suggested 13–31% above current prices.

A further consideration, in terms of the impact on consumers, is the type of rice available in the market. Currently, medium grain rice is a significant part of the total volume of rice imported to PNG and appears to have varied between around 45% and 70% of the total market volumes over the period 2010–2014. There appears to be a preference among PNG consumers for medium grain rice or at least brands that contain a significant amount of medium grain rice. However, locally grown rice is expected to be all long grain, which will

[31] ICCC Flour Pricing Review Final Report July 2005, page 11.
[32] The FAO rice price in December 2014 was 2.45 kina/kg, while the average retail price from Commission monitoring was 3.89 kina/kg.

mean consumers will also need to adjust their tastes and consume smaller quantities of medium grain rice.

The likely impact of the policy on consumers in PNG is as follows:

- Significantly higher prices for rice, driven by the new tariff.
- A significant reduction in the availability of rice, which will drive a change in diet. Rice shortages are likely to drive a further, potentially significant, increase in the price of rice.
- A change in the proportion of medium grain rice available, which will impact the choice consumers have in terms of the type of rice they consume.
- Sharp increases in the price of rice are likely to drive increases in the prices of some rice substitutes, such as domestically produced vegetables.

9.10 Rice Policy effectiveness

The principal reason for introducing the Government Rice Policy is to protect PNG against worldwide shortages of rice. To test the effectiveness of the policy, the Commission has considered alternative scenarios to understand what would happen in each scenario if a world rice shortage occurred:

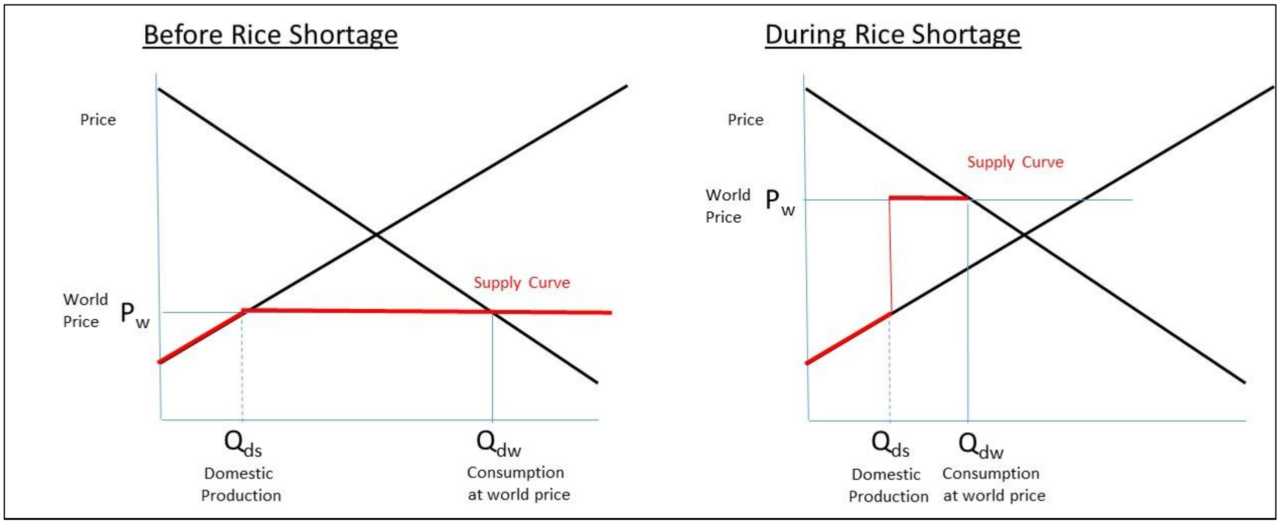
- Scenario 1: There are no restrictions or tariffs placed on imports of rice, and it is assumed that locally grown rice continues to provide around 10% of total rice consumption (the status quo).
- Scenario 2: PNG has developed, via the imposition of an import tariff and quota, the ability to produce enough rice to meet the current PNG demand level at the current PNG market price (self-sufficiency).
- Scenario 3: PNG has increased its domestic rice production significantly by implementing the Government Rice Policy but still imports 50% of its rice (Rice Policy without self-sufficiency).

The Commission has considered what would happen to supply and demand under each scenario.

9.10.1 Scenario 1: Status quo

Figure 16 shows how the supply and demand situation would change in PNG if a world rice shortage occurred in the current market.

Figure 16: Scenario 1: Impact of rice shortage on supply



From Figure 16, we can see the following:

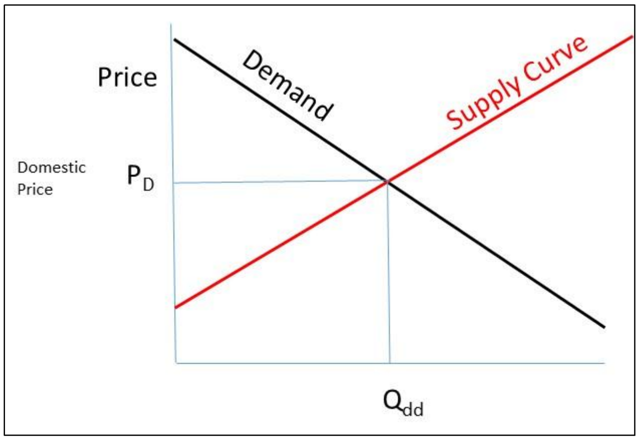
- Supplies of imported rice will dramatically reduce, while prices will increase significantly.
- Domestic producers will make significantly higher profits because their costs will not have changed but the price they receive for their rice will increase substantially. All locally produced rice will sell at the new world import price.
- PNG consumption of rice per person will drop significantly and people will turn to substitute products.
- Rice substitutes may increase in price depending upon whether or not they are domestically produced or imported.
- If the shortage is likely to prevail for some time, an expansion of local rice production will occur provided that resources are available to do so. Even if local production expands, many consumers will not be able to afford it at the new world price. If production expands sufficiently, this will create export opportunities for domestic producers.

9.10.2 Scenario 2: Self-sufficiency

Figure 17 shows the supply and demand curve if PNG was self-sufficient in rice production. In this scenario, we assume that the Government blocks export of rice in order to protect the interests of PNG consumers. Under these circumstances, a major change in world prices will have no effect upon the PNG rice market.

However, we also note that attractive world prices would provide incentives for rice to be smuggled out of the country.

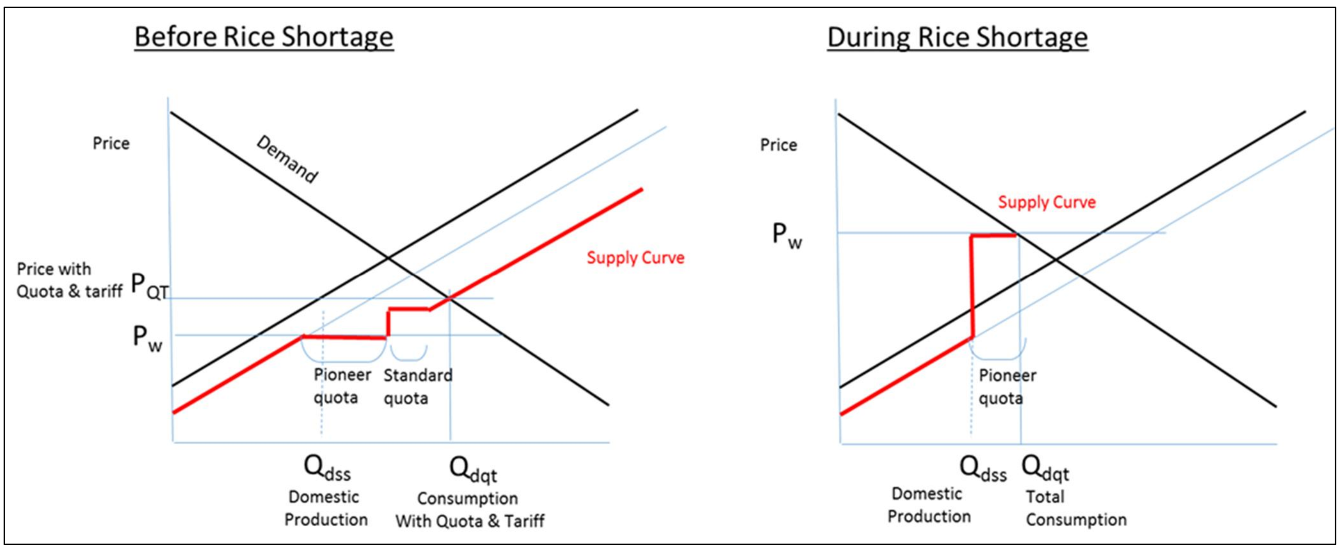
Figure 17: Supply and demand with self-sufficiency



9.10.3 Scenario 3: Rice Policy without self-sufficiency

Figure 18 shows the impact a worldwide rice shortage would have on supply and demand if the Rice Policy was to be implemented and PNG was not self-sufficient. Under this scenario, we have assumed that the Government will block exports of rice.

Figure 18: Scenario 3 impact of world rice shortage on supply



Under this scenario, the following would occur:

- Importers wanting to import rice under the quota will face significantly increased prices. Because PNG is not self-sufficient, the world price will become the domestic price for all rice within PNG.
- If the Government has stockpiles of rice available, they may be able to supply the market at lower prices until stocks run out.
- It is likely that only those with pioneer quota will be able to sell imported rice because the tariff will make those with standard quota uncompetitive, and even the pioneer investors will not be able to sell their entire quota if prices have been driven high enough to sufficiently reduce demand.

- PNG consumption of rice per person will drop significantly, and consumers will turn to other products. Domestically produced rice substitutes are likely to also increase in price if their supply cannot be increased.
- Domestic producers will substantially increase their profits, because while their production costs have not changed, the prices they receive for their rice will increase substantially.
- If resources are available, there will be incentives for domestic producers to expand production.

9.10.4 Summary of findings on Rice Policy effectiveness

Table 17: Comparison of the three scenarios

Scenario 1: Status quo	Scenario 2: Self-sufficiency	Scenario 3: Rice Policy without self-sufficiency
Prices increase to world price	No change	Prices increase to world price
Quantities consumed reduce	No change	Quantities consumed reduce
Domestic producers increase profits	No change	Domestic producers increase profits

The Commission's analysis shows that, even if a quota and tariff does succeed in significantly expanding locally grown rice, this will still not advantage consumers unless PNG becomes 100% self-sufficient in rice production.

If PNG does not become 100% self-sufficient with domestic production, the Rice Policy will make no difference to consumers if a world rice shortage occurs. Consumers will pay the same prices and consume the same quantities of rice regardless of whether or not the Rice Policy was put in place.

The only advantage the rice policy creates for PNG is that rice producers will make higher profits. However, the Commission notes that this is not one of the objectives for the Government in implementing this policy. Whether or not PNG benefits from higher profits will depend upon who the pioneer investors are. If the Government has removed any requirement for pioneer investors to pay tax, the Government will not benefit from the policy, and if the pioneer investor is an overseas entity or individual and profits are transferred offshore, PNG will receive no benefit at all.

In summary, the Commission finds that, in its current, form the Rice Policy will not provide any benefit (apart from increased employment) to PNG, but it will cost PNG consumers more under normal world market circumstances. In the Commission's view, the policy in its current form is risky, expensive and unlikely to be in the public interest.

9.11 Other alternatives

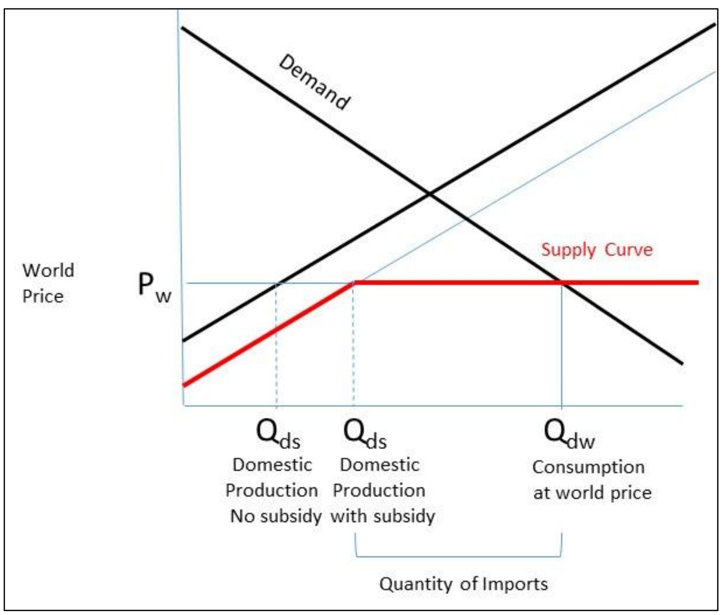
The Commission understands that the primary objective of the Rice Policy is to increase the food security of PNG. The Commission supports this provided it is done in such a way as to protect the interests of consumers.

The Commission believes that it is important that effective competition is maintained among rice growers in PNG as this will continue to protect the interests of consumers. As already noted in this report, the Commission is required under the ICCC Act to protect consumers and promote competition.

The Commission does not see any reason why the introduction of a domestic monopoly on rice production is necessary to achieve the Government's objectives for food security. Therefore, the Commission recommends to the Government that any policy should be implemented in such a way as to ensure that there is always more than one major grower in the PNG market.

The Commission recommends that the Government considers alternatives such as the use of subsidies to promote large-scale domestic rice production. Figure 19 shows the supply and demand curve when subsidies are used.

Figure 19: Supply curve with subsidy



It should be noted that using a subsidy:

- increases the profitability of domestic production
- increases the quantity of domestic production
- does not impact retail prices.

The Commission believes that subsidies will promote the development of domestic rice production without the negative impact upon consumers and competition. Subsidies can take many forms, including tax incentives, as is currently proposed under the Rice Policy.

Subsidies also ensure that no one receives any benefits from the policy unless they deliver the intended objectives of the policy. This will not necessarily be the case under the Rice Policy as it stands. Under the current proposed policy, a company might receive quota benefits without ever successfully growing large quantities of rice.

Using subsidies also has the benefit that they do not immediately disrupt current market supply mechanisms. It is important to ensure that rice continues to be readily available to consumers during the transition period while a new policy becomes effective. The use of quotas has a high risk of disrupting current market supply to the detriment of consumers.

Subsidies are used extensively in other countries. Malaysia is a notable example, where various protections have been in place for many years.

If the Government chose to implement a subsidy-based scheme to promote food security, the Commission would not oppose it, because subsidies would not clash with the Commission's mandate. However, the Commission would want to see that subsidies were:

- available to all suppliers who meet objectively reasonable requirements for investment in local rice production
- expressly linked to level of investment in domestic production
- did not distort competition.

9.12 Trukai's submission on subsidies

In response to the Commissions comments on subsidies in the Draft Report, Trukai said:

> Trukai respectfully requested the ICCC in its draft report submission to reconsider (or at least carefully qualify) this recommendation further as, in Trukai's view, there is a significant risk that subsidies could also harm PNG consumers (either through higher prices, inefficient uses of PNG tax payer money or through cut-backs to other important public services) unless those subsidies are:
>
> (a) limited in scope (i.e. they are not set at a level that could distort competition in favour of inefficient producers at the expense of more efficient, lower cost suppliers);
>
> (b) available to all suppliers who meet objectively reasonable requirements for investment in local rice production (i.e. it is essential that "Pioneer investor" status, or the practical availability of any subsidy, is not limited to one rice grower, as this could clearly risk a reduction in competition over time); and
>
> (c) expressly linked to level of investment in domestic production and/or the performance of those investments in terms of domestic rice supply. It is imperative that public funds are not allocated to support inefficient or unsustainable enterprises.

> Trukai notes that the ICCC appears to make similar observations, and raise similar potential concerns, in relation to tax incentives for local production.
>
> Trukai considers it important that these critical qualifications are reflected in the ICCC's recommendation.[33]

The Commission agrees with Trukai's submission and has added additional qualifications to its recommendation in section 9.11. The Commission also notes that subsidies will support less-efficient suppliers. However, the Commission believes they can be implemented in such a way as not to disadvantage efficient suppliers.

9.13 Summary of the Commission's findings on the proposed Rice Policy

The Commission has noted that the Government is proposing to introduce a new Rice Policy to promote food security for PNG. The Commission has therefore considered the outlook for the availability of rice on the international market. There appears to be no evidence or firm opinion that there is any substantial risk that PNG will not be able to continue to import rice to meet it requirements.

The Commission has evaluated the likely effects this Rice Policy will have. The evaluation shows that the policy is highly likely to have major negative effects upon consumers and competition in the rice market in PNG. The Commission found that the Rice Policy in its current form will:

- increase prices that consumers will pay for rice
- decrease the quantity of rice consumed in PNG
- increase the profits of domestic rice producers
- not protect consumers at all from the effects of price shocks in the international markets unless PNG is 100% self-sufficient
- only address food security issues to the extent that PNG did become self-sufficient.

While the policy in its current form will deliver increased domestic rice producers, this will be paid for by consumers. Because of tax incentives, the PNG Government will not receive any financial benefits from the policy.

The Commission recommends that the Government modifies the proposed policy so that it:

- considers the use of subsidies to encourage domestic rice production because this will not harm consumers – subsidies must be implemented in such a way as not to distort competition and must be directly linked to domestic rice production
- does not make use of quota or tariffs, because these will be detrimental to consumers and will also introduce market rents

[33] Submission by Trukai Industries Limited, 28 September 2015, page 3.

- ensures that effective competition continues to operate among domestic rice growers – it is essential that no domestic rice monopoly is created by the issuing of pioneer status to a single rice grower.

The Commission notes that it is required under the ICCC Act to protect consumers and to promote competition. It is therefore required by law to take the position outlined in this report.

If a domestic monopoly is created for rice production, the Commission would need to introduce price controls for this monopoly. Under these circumstances, the Commission would most likely use an international benchmark to set prices for such a monopoly. This would require the monopoly to be internationally competitive in order to survive.

The Commission is of the view that there are alternatives available to Government to promote increased food security. In particular, the Commission recommends that the Government considers the use of subsidies rather than quotas. In the Commission's view, the Rice Policy as currently proposed is unnecessary, risky and expensive for consumers.

10 SEA AND ROAD FREIGHT

The Commission notes that local transport costs (road freight and coastal shipping) are a material cost component within retail rice prices, but the Commission does not think that operators in the rice market have any market power within the road freight and coastal shipping industries in PNG. Therefore, the Commission has not reviewed these costs as part of this price review. However, the cost of road freight and coastal shipping remains an ongoing general concern for the Commission.

11 REQUIREMENTS FOR REGULATION

The Commission must decide what form of regulation is required in the rice market or whether any regulation is required. The Commission has the following choices:

- Continue to operate price monitoring arrangements in their present form.
- Vary the existing regulatory arrangements, which may mean:
    - changing the current monitoring arrangements or
    - introducing some form of price control.
- Terminate the existing price monitoring arrangements.

In the 2010 price review, the Commission concluded that, while the market had all the characteristics of a competitive market, the Commission would still continue to monitor particular prices. At the time, the Commission was concerned that reduced international prices had not yet been passed on to consumers. It also had concerns regarding the impact of economy-wide factors, such as increased landing and in-country costs and uncertainty due to investments such as the LNG project. It therefore saw value in continuing with a form of price monitoring.[34]

The Commission has concluded in this report that the rice market is competitive at all levels of the value chain, that is, competition appears to be effective among growers, importers, wholesalers and retailers. However, the Commission does have some concerns about retail competition in particular. The Commission has therefore determined that continued monitoring in some form is appropriate.

The Commission is also concerned about protection for consumers if the Government implements its proposed Rice Policy. The Commission therefore has decided to use monitoring to continue to test that effective competition continues to be present in the market.

Currently, the Commission monitors prices at both the factory gate (using Trukai's prices) and at retail. The Commission does this for a range of package sizes. The Commission has determined to reduce this to only monitoring 1 kilogram packages. The logic for this is that, if one product is available to consumers in the market at a particular price, this puts a ceiling on what can be charged for other substitute products. Therefore, it is only necessary to monitor one package size.

Because the Commission is concerned about competition in the retail market, the Commission wants to be able to estimate retail margins. Therefore, the Commission will gather data from which it can estimate these margins. To do this, the Commission has determined to continue to monitor Trukai's ex-factory gate prices and retail prices. The

[34] ICCC 2010 Rice Industry Review – Final Report, 22 December 2010, page 45.

Commission has chosen Trukai for this purpose because Trukai has the largest market share and their product is distributed more widely across PNG than any other party.

The Commission has noted in this review that the ex-factory gate pricing currently collected by the Commission does not appear to include discounts. The Commission has therefore determined that Trukai will provide the Commission with the monthly weighted average price per kilogram for 1 kilogram packages of Roots Rice. The Commission does not think that this is an onerous task, as any well run business would want to understand the actual average price they receive for their products. Therefore, the Commission expects that Trukai will already have this information.

The Commission has also determined to continue to monitor the retail price of 1 kilogram packages of Roots Rice in stores around PNG. The Commission uses its owns staff for this purpose but can also require retailers to provide this information directly to the Commission.

The Commission also notes that the data collected by PNG Customs about the quantity of rice imported appears to be unreliable. The Commission therefore proposes to meet with PNG Customs to understand what improvements can be made. It is important for the protection of consumers that the Commission and other Government agencies have access to reliable data about the quantity of rice that is imported.

In summary, the Commission is proposing to:

- monitor the ex-factory gate weighted average price (inclusive of all discounts) of Trukai 1 kilogram packaged rice with the Roots Rice brand
- monitor prices in retail stores across PNG of Trukai Roots Rice brand in 1 kilogram packages.

12 APPENDIX A - ICCC OBJECTIVES

Section 5 of the ICCC Act states the Commission's objectives as follows;

OBJECTIVES OF THE COMMISSION

(1) In performing its functions and exercising its powers, the primary objectives of the Commission are –

(a) to enhance the welfare of the people of Papua New Guinea through the promotion of competition, fair trading and the protection of consumers' interests; and

(b) to promote economic efficiency in industry structure, investment and conduct; and

(c) to protect the long term interests of the people of Papua New Guinea with regard to the price, quality and reliability of significant goods and services.

(2) In seeking to achieve its primary objectives, the Commission shall have regard to the following facilitating objectives :–

(a) to promote and protect the **bona fide** interests of consumers with regard to the price, quality and reliability of goods and services;

(b) to ensure that users and consumers (including low-income or vulnerable consumers) benefit from competition and efficiency;

(c) to facilitate effective competition and promote competitive market conduct;

(d) to prevent the misuse of market power;

(e) to promote and encourage the efficient operation of industries and efficient investment in industries;

(f) to ensure that regulatory decision making has regard to any applicable health, safety, environmental and social legislation;

(g) to promote and encourage fair trading practices and a fair market.

Section 21(2A) of the PR Act specifies the following:

When making an order under subsection (1) of the PR Act, the Commission shall have regard to:

A. the need to protect consumers and users of the declared goods or services from misuse of market power in terms of prices, pricing policies (including policies relating the level or structure of prices) and the standard of the declared goods or services;

B. the cost of making, producing or supplying the declared goods or services;

C. the desirability of encouraging greater efficiency in relation to making, producing or supplying the declared goods or services;

D. the need to ensure an appropriate rate of return on any investment in relation to the declared goods or services;

E. the borrowing, capital and cash flow requirements of persons making, producing or supplying the declared goods or services;

F. considerations of demand management and least- cost planning;

G. existing standards of quality, reliability and safety of the declared goods or services, and the desirability of encouraging improvements in those standards;

H. the effect any proposed order on general price inflation over the medium term; the economic and social impact of anti-proposed order; and

I. any other matters the Commission considers relevant.

13 FIGURES AND TABLES

13.1 Table of figures

13.2 Table of tables