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2018 PNG economic survey

Rohan Fox, Stephen Howes, Nelson Atip Nema, Hoai Bao Nguyen and Dek Joe Sum

Abstract

Based on the latest NSO figures, it is now estimated that the non-resource economy contracted in 2015 by 5.9% after inflation. Whether the economy has started to grow again since 2015 is unclear. While imports and tax data show growth in 2017, credit to the private sector contracted in the same year. Formal sector employment has contracted four years in a row since 2013, with a cumulative decline extending through to the end of 2017 of 7.0%. Underestimation of the severity of the economy's contraction has contributed to an absence of an appropriate policy response to what can only be described as an urgent economic crisis. The government's emphasis is on fiscal correction and now tariff protection. A limitation of this strategy is that fails to provide any stimulus to exporters and is inadequate to tackle the primary problem facing the PNG economy, namely the shortage of foreign exchange, which is worsening. Two separate surveys of business show that foreign exchange shortages are the most important problem they face, that they have increased in severity and have displaced other longer-standing concerns around corruption, law and order and visas. There is no way around the need for a substantial devaluation of the currency. While a devaluation would reduce the demand for foreign exchange and provide a boost to the economy, for it to have a lasting impact it will need to be accompanied by a range of structural and governance reforms to reduce the cost of doing business and promote economic recovery in PNG.

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This is a draft version for comments. Please send comments to rohan.fox@anu.edu.au.

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1. Introduction

The ANU-UPNG surveys provide an annual review of the PNG economy. This survey covers the year to June 2018, and is the fifth in this series. As well as providing the usual update on economic growth and fiscal and macroeconomic developments, this survey has a focus on trade policy, where there has been a major shift in direction, and on the changing perspectives of the PNG private sector. As with past surveys, the research for this survey includes a large number of interviews with businesspeople, officials and economic experts. Our thanks to all.

The most recent NSO data imply that, once the resource sector (which is made up of all PNG's petroleum, gas and mining projects) is excluded, the PNG economy contracted by almost 6% in 2015. Given the lack of accurate recent data, it is unclear whether the PNG economy is still in a recession. However, formal sector employment has fallen for four years in a row, from 2013 to 2017. Surveys of business show that the extent and duration of the economic tough times were unexpected.

The government's main response to the economic slowdown has been fiscal consolidation to prevent a debt crisis. Expenditure has been slashed, and continues to fall. Last year, a second bow was added to the government's economic policy: protectionism, with planned tariff reductions being shelved, and instead wide-ranging, albeit moderate tariff increases implemented.

Neither policy directly addresses the single most important reason for the extended duration of the PNG recession: namely, shortages of foreign exchange, which remain acute, and which businesses consistently label their top constraint. Tackling this problem requires a devaluation, which would provide a stimulus to exports as well as import-competing industries.

Section 2 looks at recent economic growth trends and outlook. Section 3 examines fiscal trends and the macro position. Section 4 analyses private sector policies and perspectives. Section 5 concludes.

2. Growth

PNG is a resource dependent economy. Much of the resource sector – which makes up 30% of GDP – is foreign-owned, and a large share of the benefits flow offshore. For such an economy, Gross Domestic Product (GDP) is a misleading indicator of national economic activity. Gross National Income would be a better indicator for PNG, but is unavailable. In such circumstances, the best indicator of the economy's health is non-resource GDP (sometimes called "non-mining GDP"), that is, GDP excluding the output of the mining and petroleum sectors, but including their spillover effects (e.g. through taxation and private domestic spending).

After surveying the evidence, Howes and Nema (2016) concluded that:

> … it is hard to believe that the non-resource economy has *not* been contracting in 2015 and 2016. Certainly GDP grew in 2015 thanks to strong LNG export growth. But it should not surprise us if the end of the LNG construction phase and the fall in commodity prices led to a contraction in the non-resource economy. Employment, imports, tax revenue and qualitative evidence all seem to point in this direction.

This was written at a time when the only estimates available for non-resource GDP in 2015 and 2016 showed positive albeit weak growth. The most recent estimate from Treasury, in the 2018 budget, showed growth of 0.7% in the non-resource sector and overall GDP growth of 10.5% in 2015. But in March the PNG NSO (which receives technical support from the Australian Bureau of Statistics) released its 2015 estimate for GDP. The NSO (on its website) now says that real growth in GDP in 2015 was not 10.5% but 5.3%. The increase in GDP reflects the fact that 2015 was the first full year of LNG production – this resulted in an increase in resource output of almost 50%. NSO has not released its sectoral disaggregation, but it is safe to assume that Treasury's resource output numbers are correct: resource GDP is easy to measure as it approximately equals mineral and petroleum exports. Applying this assumption means, as Table 1 shows, that the latest GDP figures imply that non-resource GDP declined by 5.9% in 2015 after inflation.

Table 1 Estimates of GDP, resource GDP and non-resource GDP real growth for 2015

	GDP growth		Resource GDP growth		Non-resource GDP growth	
	Value	Source	Value	Source	Value	Source
2017 estimate	10.5%	Treasury	48.3%	Treasury	0.7%	Treasury
2018 estimate	5.3%	NSO	48.3%	Treasury	-5.9%	NSO & Treasury combined

Source: NSO (2018) and PNG Treasury (2018)
Notes: NSO only publishes a growth figure for GDP. The Treasury resource GDP figure is accepted and applied to the NSO GDP figures to obtain the NSO non-resource GDP growth figure. All values are in constant prices.

As we suggested back in 2016, it is hardly surprising that non-resource GDP growth was negative in 2015. After all, construction for the mega PNG LNG project finished the year before. That construction, which was carried out over 3-4 years, was valued at $19 billion, which is about equivalent to PNG's GDP. The removal of that stimulus must have placed significant downward pressure on GDP, both direct and indirect. In addition, 2014 was the year in which government revenue peaked, with revenue falling partly due to economic contraction but also due to a drop in commodity prices. The resulting fiscal contraction would have also caused a contraction in non-resource GDP.

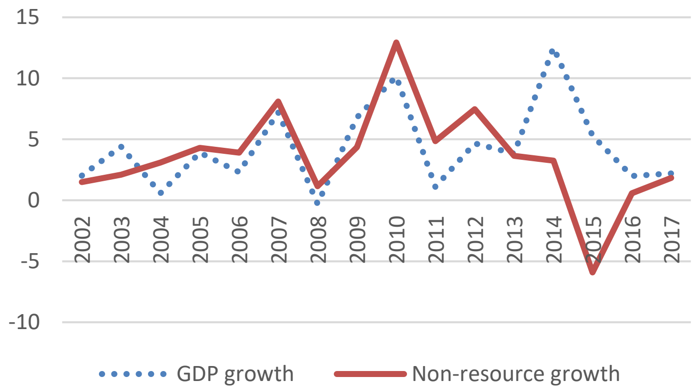
In addition, and again as we noted in 2016, there were several signs of negative growth: not only falling tax revenue, but plummeting import demand, falling employment, and accounts by businesses themselves.

What is more surprising is that this contraction in GDP has taken so long to be recognized in government statistics. It is a very unusual situation to have such a drastic revision to GDP growth numbers. The downgrading of GDP growth from 10% to 5% is not due to a rebasing. In fact, it is not clear what the source for the difference is, other than that one estimate comes from NSO and one from Treasury. However, given that NSO receives support from ABS, the NSO estimates are more credible.

The IMF, the World Bank and the ADB also missed the non-resource recession that is now shown in the official data. The ADB does not report non-resource GDP growth. The IMF and the World Bank do, and their latest figure did deviate slightly from Treasury estimates. Whereas the Treasury had a figure of 0.7% for real non-resource GDP growth in 2015, the World Bank and IMF had growth of about -0.2% (IMF 2017; World Bank 2017). Nevertheless, the fact remains that the IMF and World Bank figures were much closer to the Treasury than the new NSO estimates.

The only data available for GDP growth for more recent years than 2015 is from Treasury. This shows a modest recovery in the non-resource economy post-2015 (Figure 1). However, since Treasury GDP data has been unreliable in the past, we also need to look elsewhere.

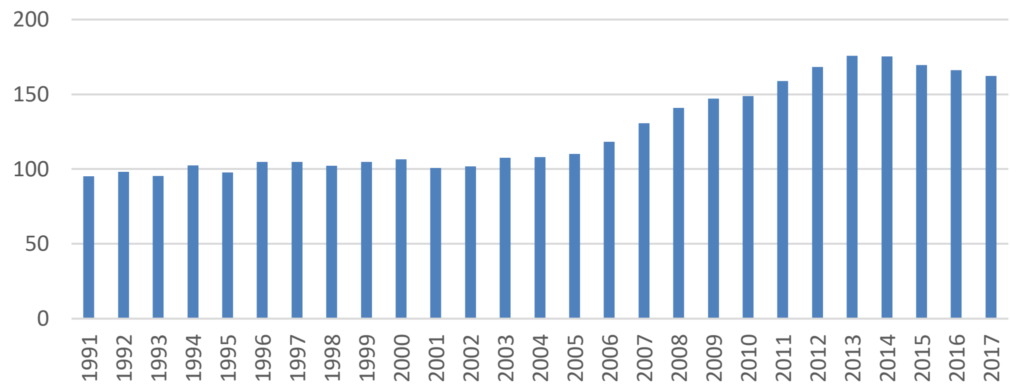
Figure 1: GDP and non-resource GDP growth, 2002-2017, adjusted for inflation



Source: Development Policy Centre (2018) based on PNG Treasury budget documents, except for 2015, for which see Table 1.

Formal sector employment data is released by BPNG every quarter, with a lag of six months or less. The BPNG shows negative growth in formal sector employment for four years, starting in 2013 – see Figure 2.

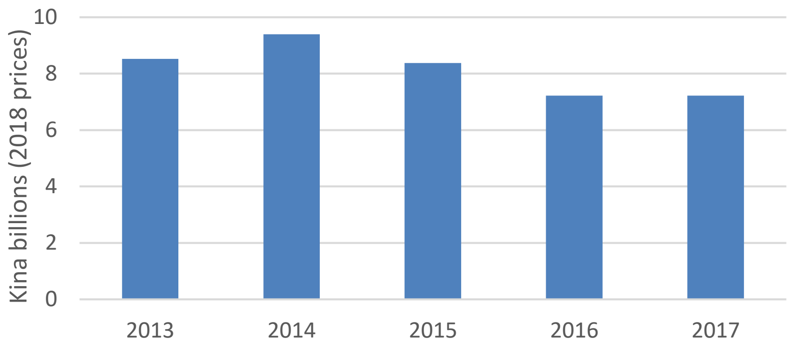
Figure 2: Formal sector employment (March 2002=100)



Source: BPNG, as of March 2018 QEB

Whereas the employment data suggests a continuing recession, some other data suggests further contraction in 2016, but some recovery in 2017. Figure 3 shows that the three large economy-wide taxes (income tax, non-resource corporate taxes and GST) fell sharply in 2015 and 2016, but stabilized in line with inflation in 2017.

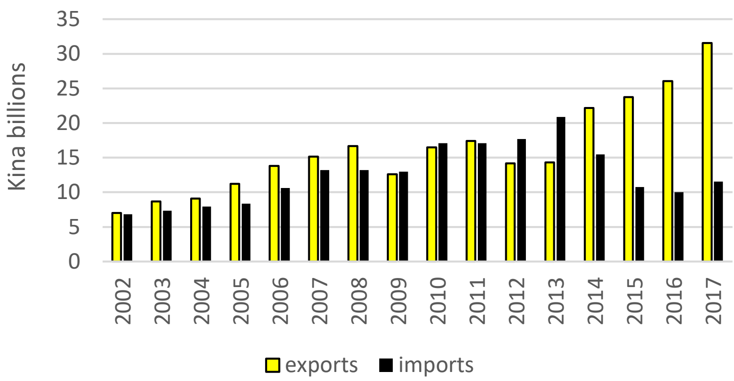
Figure 3. Economy-wide taxes, adjusted for inflation



Source: PNG Budget Database.
Note: Economy-wide taxes are income tax, corporate tax and GST.

Figure 4 shows that imports also recovered in 2017 after three years of decline. Exports continue to grow strongly, driven by the PNG LNG project and recovering commodity prices. This supports GDP growth but not non-resource GDP growth because resource revenues mainly go off shore, resulting in a massive current account surplus and current account deficit (Figure 16).

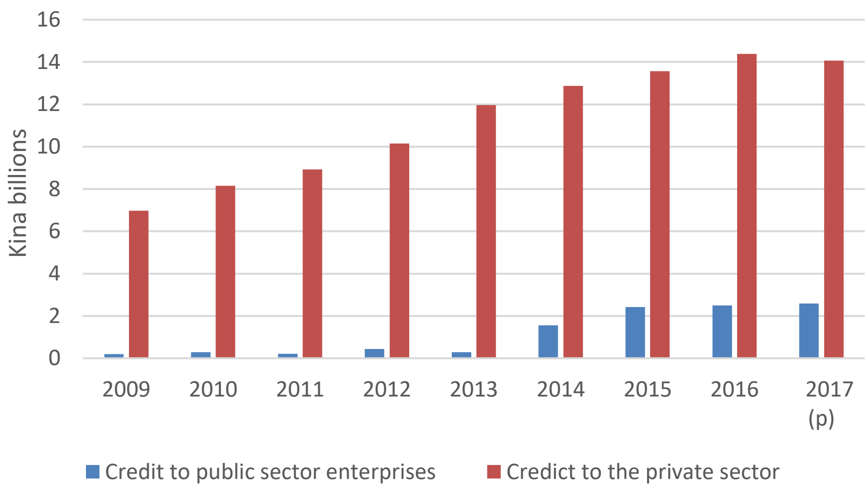
Figure 4: Exports and imports of goods and services



Source: BPNG, as of March 2018 QEB

However, other data for 2017 is less positive. Figure 5 shows that nominal credit to the private sector fell for the first time in 2017. Growth in credit to the public sector, which has been strong in 2014 and 2015, has also petered out.

Figure 5: Credit to the private and public sector



Source: BPNG, as of March 2018 QEB

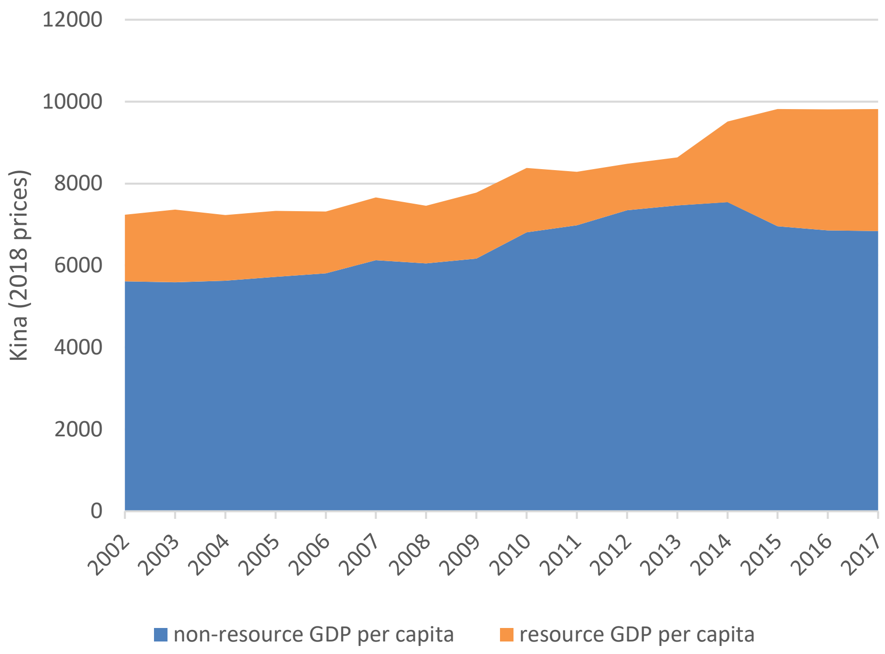
Finally, most businesses we interviewed were still worried about business conditions. The most important constraint on growth, foreign exchange shortages, shows no sign of weakening (see the discussion in Section 4.2). Annual reports of major businesses talk of "the weak economy" (Steamships 2017, p.6). Steamships provides a good monitor of the economy because of its diversified nature, with operations in property, transport and food and beverages. Its turnover has fallen every year since 2014, including in 2017 (Steamships 2017, p.4). Businesses also reflected concerns about the state of infrastructure. Lae businesses were especially concerned about the Highlands Highway.[1]

In summary, we expect that when NSO releases figures for 2016, it will again show negative non-resource GDP growth, but it is unclear whether the recession is over.

Figure 6 shows what the latest GDP numbers mean in per capita terms. Adjusting for inflation, non-resource GDP per capita in 2017 is estimated at K5,168, which is back at 2010 levels, and a 9.4% decline relative to the 2014 peak. Over the commodity cycle, average annual per capita growth is 1.3%.

[1] There is a major ADB project in the pipeline to rehabilitate the Highlands Highway but it is yet to get underway.

Figure 6: Real GDP and non-resource GDP per capita



Source: Development Policy Centre (2018) based on Treasury budget documents, except for 2015, for which see Table 1. Note: NSO figures used for real GDP with base year of 2013, converted in to 2018 prices using CPI.

Views on the growth outlook are mixed. Treasury forecasts GDP growth of 2.4% for 2018, and approximately similar rates for subsequent years, with non-resource growth projected at about 3.5%. (The resource sector is not projected to grow.) Given current trends, and the lack of economic stimulus, such projections may be over-optimistic. The holding of APEC this year in PNG is expected to deliver a modest, temporary stimulus. The government has a strong and welcome focus on economic diversification, but the pursuit of this goal is hampered by the high costs of doing business and the over-valuation of the currency in particular (see Section 4.2). Businesses we spoke to were not optimistic, and those in Lae, PNG's business capital, forecast more job losses.

Some predict much more rapid growth in later years with various resource projects in the wings. However, the understandable desire to renegotiate fiscal terms (as discussed in the fiscal section), as well as various proposed, controversial revisions to the Mining Act, and other environmental and social issues will slow down the progress of pipeline projects to construction. It also needs to be recalled that older projects will reduce production over time, so newer projects are needed just to replace them.

3. Fiscal trends and macroeconomic update

In April, Standard & Poor's downgraded its sovereign (long-term, foreign currency) credit rating for PNG from B+ (negative outlook) to B (stable outlook), citing slower than expected economic growth and revenues, and rising government debt. This moved PNG down from the top to the middle tier of the three S&P "highly speculative" ratings, which is the category above junk bond or "substantial risks" status. The S&P downgrade was also reflected in a downgrade by the same agency to the credit rating of Bank South Pacific (BSP), due to its high level of PNG exposure (BSP, 2018).

Moody's had already downgraded PNG's sovereign credit rating from B1 to B2 (equivalent to S&P's B) in April 2016, and it downgraded the outlook in March of this year from stable to negative.

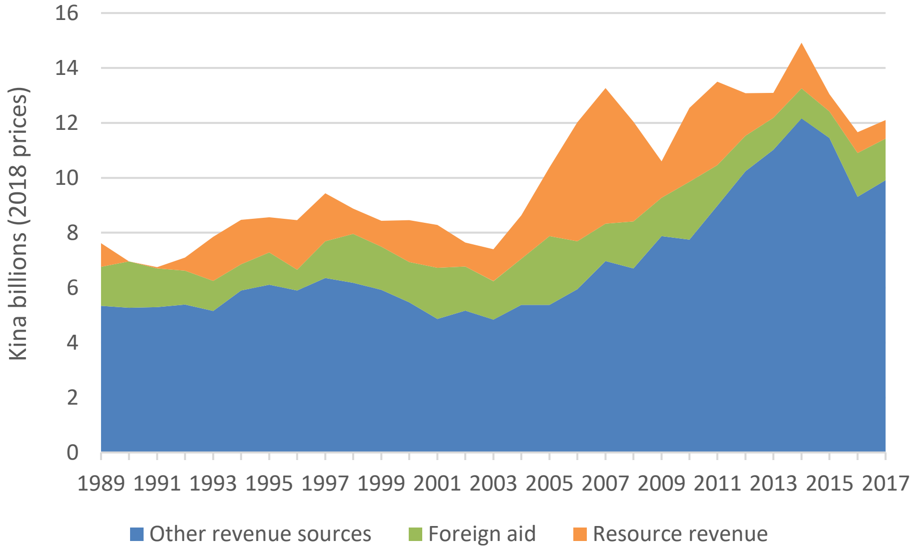
These rating downgrades are the first by the two major rating agencies since they began rating PNG (in 1998 for Moody's and 2007 for S&P), and are indicative of the chronic and severe macroeconomic problems the country is facing. The next sub-section looks at fiscal trends, and the following one at inflation, the balance of payments and the exchange rate. These topics were covered in detail in the previous survey (Fox et al. 2017), much of which remains relevant today.

3.1 Fiscal trends

Revenue in 2017 was higher than in 2016, and the first year in which there was even nominal growth in revenue since 2014. However, revenue was still below 2015 levels, and in historical terms equal to revenue some ten years earlier.

Figure 7 divides revenue into three main types: foreign grants, resource revenue, and everything else. We consider each in turn.

Figure 7: Government revenue: resource revenues, foreign aid and other revenue resources



Source: Development Policy Centre (2018)

The IMF has concluded that PNG's tax treatment of the resources sector is relatively generous by international standards.[2] Since 2015, resources revenues (corporate taxes and dividends from mining and petroleum) have been at their lowest level since 1992. Accelerated depreciation and tax holidays mean that new projects such as PNG LNG (accelerated depreciation) and Ramu NiCo (accelerated depreciation and tax holiday) pay no or virtually no resource revenue. But it is suprising that even older projects are paying very little revenue. The country's two biggest mines are Lihir (which began in 1997) and Ok Tedi (which began in 1984). As Table 2 shows, Lihir is still very profitable, but according to PNG Extractive Industry Transparency Initiative (EITI) reports (PNG EITI 2015, 2016, 2017), has paid virtually no corporate tax since at least 2013. Ok Tedi is still a major tax payer (except for 2015 and 2016 where earnings were hit by the drought which caused it to temporarily cease operations), but is much less profitable than it used to be.

[2] "…[T]he tax arrangements for PNG's mining and petroleum sectors are very generous compared to other resource rich countries and do not reflect the maturity of the PNG resource sector." (IMF 2016, p.9)

Table 2: Income, expenses and earnings for Lihir Gold and Ok Tedi mines (USD)

	2011	2012	2013	2014	2015	2016	2017
LIHIR GOLD							
Revenue	887	964	961	1055	1020	1035	1181
Operating expenses	293	313	421	702	857	638	639
Depreciation & amortisation	106	97	126	221	192	198	259
Earnings before income and tax	488	554	414	132	-29	199	283
OK TEDI							
Revenue	1895	1615	1176	965	400	649	996
Operating expenses	844	864	895	645	502	415	542
Depreciation & amortisation	187	116	245	128	87	64	76
Earnings before income and tax	864	635	36	192	-189	170	378

Source: Newcrest and Ok Tedi Annual Reports 2011-2017.
Note: Earnings before income and tax is revenue minus operating expenses minus depreciation.

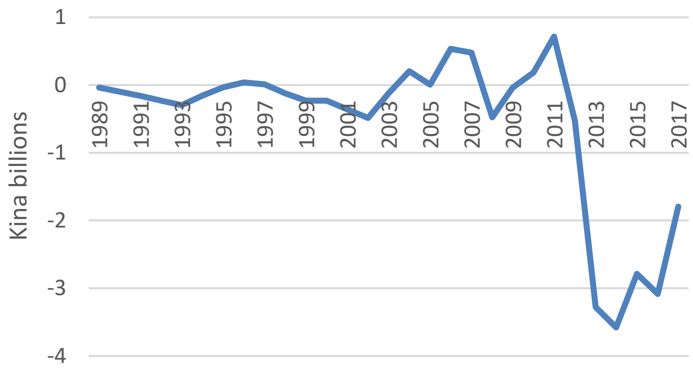
PNG is a developing country, and foreign aid still provides a considerable portion of the government budget. Though there has been a recent recovery, aid is relatively stable in real terms, which means it is declining in per capita terms.

Finally, non-resource own revenue in 2017 was higher after inflation than in 2016, but still lower than 2015. As discussed earlier (Figure 3), the three main taxes – personal income tax, company tax and GST – increased in line with inflation. The additional increase in revenue was due to an increases in dividends from statutory authorities, and increased revenue from imports, gambling and international travel. The government projects a further increase in non-resource own-revenue in 2018, largely on the back of increased payments from statutory authorities: those with independent revenue have now been forced to hand most of it over to the government.

Expenditure is constrained by not only poor revenue performance but also by the need to control government borrowing. Figure 8 shows that, even though the fiscal deficit has fallen since its 2014 high, the four deficits between 2013 and 2017 are still all larger than any other in PNG history. PNG struggles to raise the debt it needs, and is reliant on lending from the Central Bank, and planning to borrow more off-shore.

There is a huge volume of expenditure arrears. For example, in April 2018 the Works Minister indicated that "around K700 million in outstanding invoices are owed by the National Government to contractors involved in road maintenance projects around the country." (Loop PNG, 2018). In such a context, the deficit is an arbitrary figure which can be adjusted upwards or downwards simply by paying or not paying outstanding bills. The government is now targeting a zero non-resource primary balance. The deficit is projected to be roughly constant in nominal terms in 2018 and 2019, and then decline to K1.3 billion by 2022.

Figure 8: Government surpluses (revenue minus expenditure)

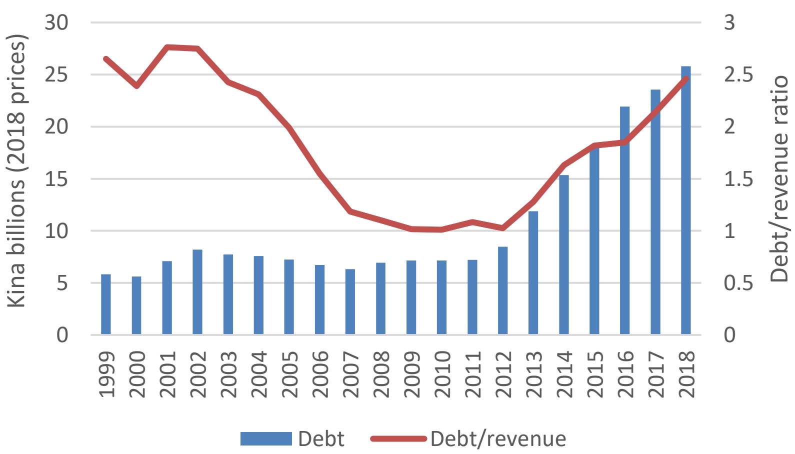


Source: Development Policy Centre (2018).

Debt and interest payments are both at record levels and rising. The ratio of debt to revenue is back at pre-boom levels and increasing rapidly ((Figure 10).

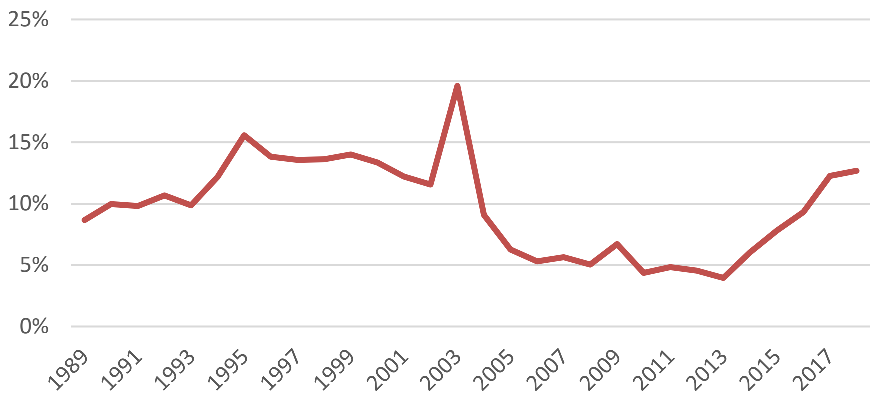
Figure 9). (Note that the debt figures exclude all the arrears that have accumulated, as well as public-sector debt that may become a government liability.) The interest bill as a proportion of total expenditure has increased each year for the past four years, from 4% in 2013 to 12% in 2017 (Figure 10).

Figure 9: Nominal debt and debt-to-revenue



Source: Development Policy Centre (2018).

Figure 10: Interest bill as a proportion of total expenditure

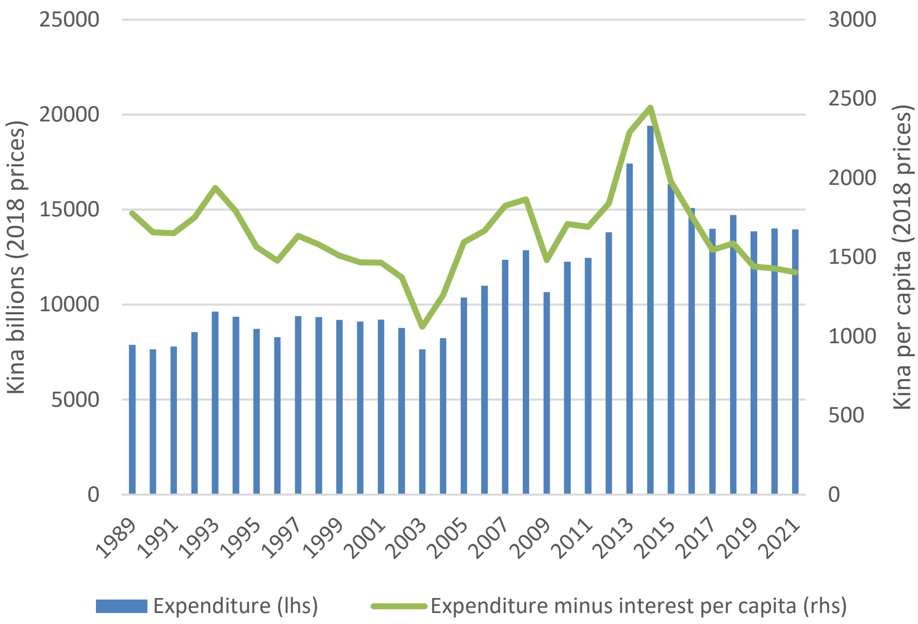


Source: Development Policy Centre (2018).

In summary, the government has done well to meet its debt-service obligations in a time of fiscal stress, but PNG's fiscal crisis has been manifest in other ways, most notably through a struggle to pay payroll, rental for government offices, massive arrears, a virtual disappearance of funds for roads maintenance, and a shortage of drugs and equipment across PNG's health system including in its premier hospital (Mola 2018).

The fiscal outlook is bleak. Although expenditure is projected to increase more than inflation in 2018, after falling for each year from 2014 to 2017, it is projected to increase at most in line with inflation out to 2021. This means even by 2021 total expenditure will be back at its level of 2010. And, even assuming that interest payments stabilize, expenditure-after-interest is projected in 2021 on a per capita basis to be at one of the lowest levels seen over the last three decades (Figure 11). While growth could pick up with higher commodity prices or construction of a large resource project, it would be fatalistic to make such a contingency the basis for fiscal hope.

Figure 11: Government expenditure, adjusted for inflation

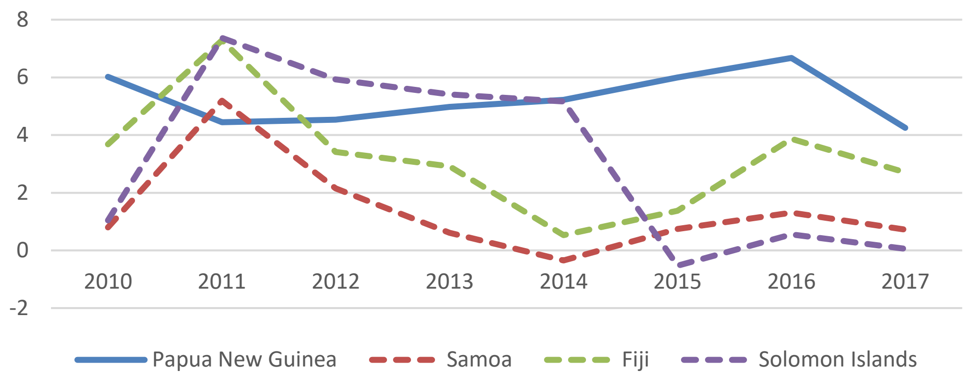


Source: Development Policy Centre (2018).

3.2 Macroeconomic performance

In 2017, inflation was 4.2%, the lowest over the past five years, though still high compared to other Pacific islands (Figure 12). The downward trend in inflation reflects the slowing down of the PNG economy as well as the lower imported inflation and relative stability in the kina exchange rate (BPNG, 2017). Broad money growth is reported by BPNG to be negative in 2017, perhaps reflecting the decline in foreign exchange reserves. However, given the excess liquidity in the PNG economy, there is unlikely to be a clear relationship between inflation and money supply.

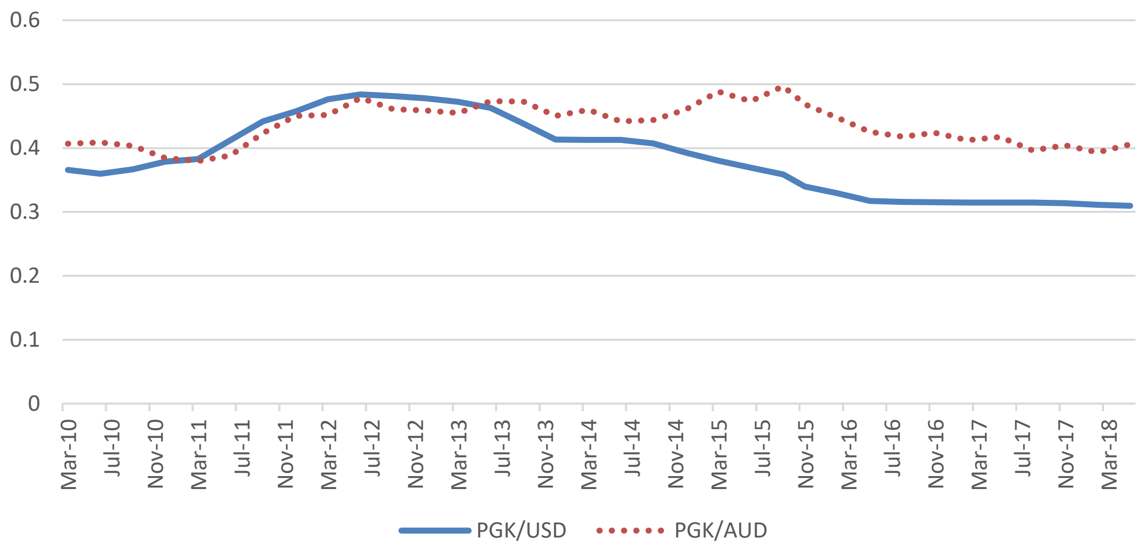
Figure 12: Inflation in selected Pacific Island countries (%)



Source: IMF IFS (2018).

Figure 13 shows the nominal USD-Kina and AUD-Kina exchange rates over the past 18 years. Over this period, the nominal value of the kina has fluctuated in a relatively narrow band, between 0.3 and 0.5. In other world, the BPNG has successfully stabilised the exchange rate. Specifically, since mid-2016, the Kina exchange rate has been fixed by BPNG at approximately 0.3 US dollar per kina. But this stability has come at a cost. Fluctuations in the exchange rate, in any economy, may cause some uncertainty to investors but it facilitates market clearing in the foreign exchange market and allows the economy to respond to external shocks.

Figure 13: PGK/USD and PGK/AUD exchange rate (2010-2018)

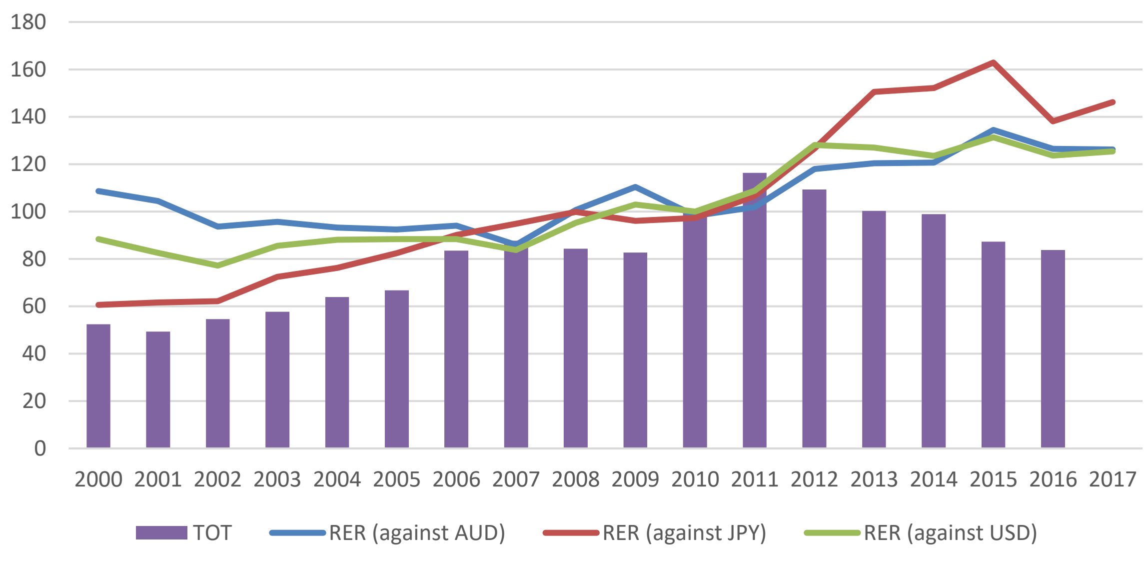


Source: IMF IFS (2018) and RBA (2018).

Figure 14 depicts the evolution of the real exchange rate (RER) of the kina against PNG's main trading partners. This is the nominal exchange rate after adjusting for the difference between PNG's inflation and inflation in the country being compared. These adjustments make sure that the exchange rate captures the changes in relative fundamentals between the PNG economy and its trading partners. Values above/below 100 indicate exchange rate appreciation/depreciation as compared with the level in 2010. Figure 14 shows that the kina has appreciated by about 20 percent to 40 percent, depending on the foreign currency, relative to 2010. But, as the figure also shows, commodity prices have fallen since 2010 by about 20%: see the terms of trade (TOT) line in the figure below.

In a resource dependent economy, the equilibrium RER is dependent on commodity prices (Schroder and Fox 2018). The appreciation of the RER at a time when commodity prices have fallen shows why the exchange rate is so over-appreciated today. How much is hard to say, though recent estimates from the Development Policy Centre and the ANZ put it at about 20% (Schroder and Fox, 2018, Sen, 2018). The IMF (2017, p.15) has also recommended that "that the Kina be allowed to depreciate to eliminate the current over-valuation of the currency, end the FX shortage, and promote external competitiveness."

Figure 14: PNG's real exchange rate index and terms of trade, 2010=100

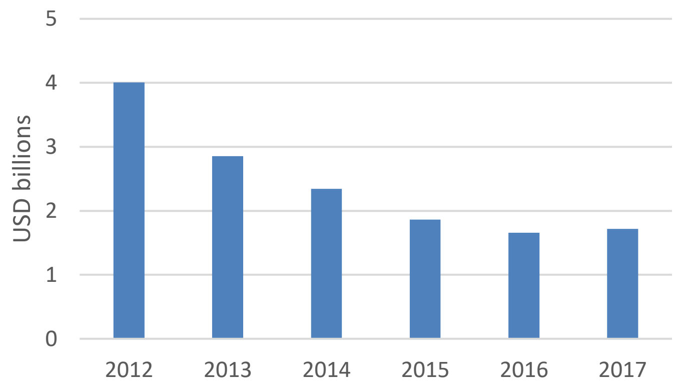


Source: RER against AUD and JPY are calculated by authors and RER against USD is retrieved from IMF IFS (2018), TOT taken from World Bank and adjusted as 2010 = 100.

Because the Kina is over-appreciated (or under-priced), there is excess demand for foreign currency. This has been managed by foreign exchange (FX) rationing. Four years after their introduction in mid-2014, foreign exchange (FX) restrictions continue to be in place. As we reported in the last survey, there are bans on trade financing, on the opening of new foreign currency accounts by PNG residents, and on the remittance of dividends. There is a long queue to obtain funding for imports that some estimate to be as large as $US 1 billion. Foreign exchange reserves have been depleted, but, as

Figure 15 below shows, the government is not willing to allow reserves go below about $1.5 billion. With lower bounds on both foreign exchange reserves and the exchange rate, foreign exchange shortages and rationing are acute. Indeed, as discussed in Section 4.2, businesses now rate foreign exchange shortages as their top concern.

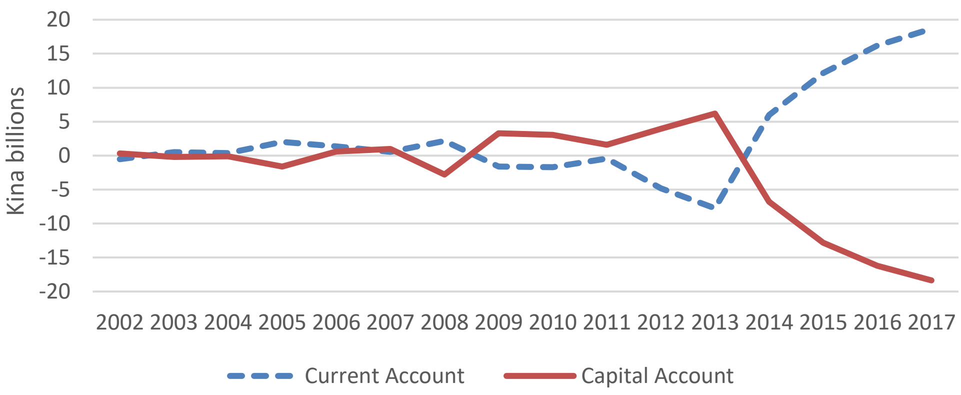
Figure 15: Foreign exchange reserves (USD, at the end of each year)



Source: BPNG.

Figure 16 shows the current account and capital account for PNG. The current account has gone sharply into surplus in recent years with imports compressed due to foreign exchange rationing (Figure 4) and exports booming due to the PNG LNG project. However, the massive current account surplus (now about 30% of GDP) has not led to improved FX availability. Rather, as Figure 16 shows, most of the Kina that PNG has earned through exports have been re-exported in the form of capital outflows.

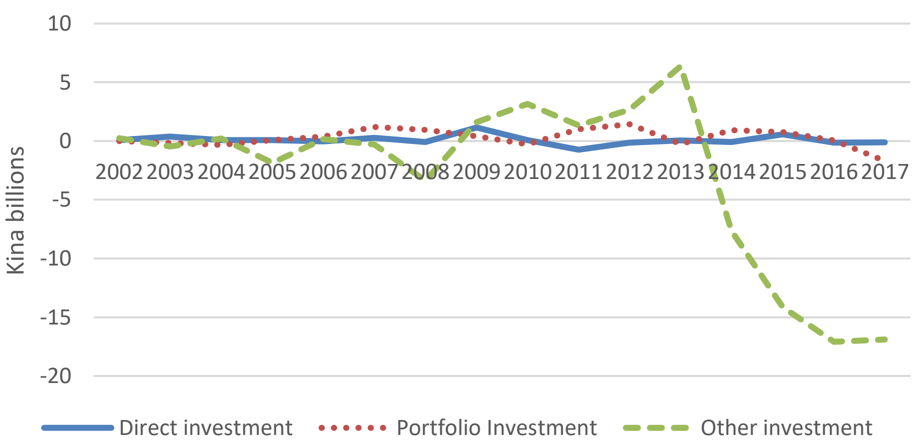
Figure 16: Current account and capital account (2002-2017)



Source: BPNG

Decomposing the PNG's capital account, as shown in Figure 17, reveals that the capital deficit is not caused by foreign direct investment to abroad by PNG investors or offshore portfolio investment. Rather, it seems that profits are being taken offshore in the form of dividends and loan repayments by resource owners. (The ban on profit repatriation imposed by BPNG does not apply to the large resource owners who have project agreements that allow them to keep export proceeds offshore.) The large capital account deficit is consistent with the very low value of resource revenues being captured by the government (as discussed in the previous section) and indicates a worrying lack of re-investment of profits, which are instead being sent offshore where possible. All the restrictions placed by BPNG on conversion of Kina into foreign currency, as well as the risk of devaluation, result in strong incentives to keep funds offshore.

Figure 17: Decomposition of PNG's capital account (2002-2017)



Source: BPNG

4. Private sector policies and perspectives

So far the message of this survey has been as follows. Despite a booming resource sector, the non-resource economy has contracted and formal sector employment continues to fall. The macroeconomic situation is getting increasingly risky as evidenced by the credit downgrades over the last two years. To protect macroeconomic stability, the government is attempting to reduce the deficit, protect foreign exchange reserves, and defend the exchange rate. But this is itself undermining growth performance and prospects. Clearly fiscal and macroeconomic stability are not enough. Economic growth is urgently needed. This section looks at the economy from the perspective of the private sector. Earlier surveys reported on government policies towards the private sector, in particular the controversial small and medium enterprise policy (Cornish et al. 2015), but implementation of this policy seems to have stalled. The most important changes recently have concerned trade policy, and these are the focus of Section 4.1. Section 4.2 examines private sector perspectives on the economy.

4.1 Trade policies

The first sign that PNG would be taking a more protectionist trade policy came in late 2015, with the banning of a number of fresh fruit and vegetable imports from Australia. That ban was short-lived, but this last year has seen a major reversal in trade policy. For the last two decades, PNG has been following a policy of tariff reduction. As part of its negotiations with the World Bank and IMF, PNG introduced a Tariff Reduction Program (TRP) in 1999, which set out tariff reductions to 2006. Despite some opposition, the TRP was upheld by a 2003 review (PNG Treasury, 2003), and the 1999 program was broadly implemented. Another review in 2007 (Scollay, 2007) resulted in a further round of reductions out to 2018. The reductions planned and/or achieved are shown in the table below. It is important to note that most tariff lines (three-quarters) in PNG are in fact zero, with no tariffs being applied on imports of most goods for which there is no domestic production. Table 3 shows the reduction in tariff rates over time for those goods that are subject to tariffs. Since 1999, there have been three tariffs - 'intermediate', 'protective' and 'prohibitive'. All have fallen significantly.

Table 3: Tariff rates under PNG's two Tariff Reduction Programs

	pre-1999	1999-00	2001-2	2003-5	2006	2011	2012	2015	2018
Intermediate	30	30	25	20	15	15	12.5	10	10
Protective	49	40	35	30	25	25	20	15	10
Prohibitive	55-100	55	50	45	40	40	35	30	25

Notes: Figures up to 2006 from the 2007 tariff review; and figures from 2011 from the 2012 budget.

With a few exceptions, the tariff reductions have been implemented as planned. The unweighted average of the three tariff categories fell from 42% in 1999 to 18% in 2015. The Import and Export Customs Tariff Act of 2012 legislated a series of tariff changes that would come into effect immediately, with further reductions to come into effect on January 1 2015, and yet more to be implemented on January 1 2018. However, in August 2017, the TRP was suspended (Post Courier, 2017). In the 2018 budget about 250 tariffs lines were increased, and over 600 decreases were abandoned. On average the tariff increases were moderate (about 7%), but there were some substantial increases. In particular, a 25% tariff on milk—which had been duty-free—was introduced to support the new Ilimo Dairy Farm. Table 4 shows a sample of the increases.

Table 4: Selected tariff increases from the Customs Tariff (2018 Budget) (Amendment) Bill 2017

		Old	New
Clothes	Stockings, socks	15%	20%
	Cotton or woolen clothes	15%	20%
Household and consumer items	Toilet paper	15%	20%
	Tablecloths	10%	20%
	Baths, sinks, washbasins	10%	25%
	Detergents	10%-15%	20%-25%
	Glue	10%	20%
	Soap	15%	20%
	Shampoo	10%	20%
	Nail polish	10%	20%
Food	Ice cream	15%	20%
	Milk	0%	25%
	Cocoa products	10%	15%
	Meat	10%-15%	12.5%-20%

Examples of protectionist measures from the past in PNG are instructive. Ramu Sugar was initially partly government owned, and has received generous protection since its inception in the 1980s. PNG Halla Cement was also partially government owned and received support in the 1990s. Neither business lived up to expectations. Ramu Sugar provided no dividend in its first 10 years of operation. The government stake in Ramu Sugar was eventually sold to New Britain Palm Oil, who converted 2,500 hectares of the land from cane sugar to palm oil. Despite now being over three decades old, hardly part of an infant industry, it is still said that it wouldn't be able to survive without large tariffs, now 30% on the import of sugar. After 7 years of poor performance the PNG government sold its 50% share in PNG Halla Cement to Japanese company Taiheyo. The privatized company is said to be profitable now though still benefits from a 10% tariff, and has a monopoly on the cement market in PNG. It has also had difficulty meeting demand in the past (Oxford Business Group, 2012).

It is odd to increase tariffs in the same year that PNG is hosting APEC, an organisation created to promote free trade. It is also a departure from past economic policies, which emphasized outward orientation (Scollay 2007). Administrative costs are higher for a less uniform system (the new changes have introduced new tariff rates of 12.5%, 20% and 25%, in addition to the older ones of 10%, 15% and 30%). Now that the TRP has been abandoned, businesses will lobby for further tariff increases.

On the positive side, the tariff increases are mainly moderate, and may be justified given exchange rate overvaluation. However, by the same token, a more efficient method to help domestic producers of both imports and exports would be to devalue the exchange rate.

The problems being faced on the export side are illustrated by the difficulties PNG is facing in implementing its tuna processing policies, where there have also been important changes in the last year. In 2017, the PNG Government announced that all fish caught in PNG waters would have to be processed in PNG, and that its existing policy of subsidized fishing in PNG waters in return for some processing, would be replaced by a rebate for fish processed in PNG (Post Courier, 2017). This policy is not favoured by tuna processors, because PNG is an expensive place in which to can tuna. For example, the minimum wage in the Philippines is $2,053, whereas that in PNG is $3,304 (minimum-wage.org).[3] PNG had earlier enjoyed a tariff preference for its exports to the EU, but the same duty-free status that the EU provides to PNG is now provided to the Philippines as well. Philippines' exports to Europe are booming.

PNG has undertaken to provide a rebate on fish processed in PNG, but only for two years, and with PNG's cash flow problems there would be concerns as to whether this rebate would be paid (Loop PNG, 2018).[4] In response, one of PNG's six tuna processors, Frabelle, closed its plant at the end of April 2018, resulting in 800 workers losing their jobs (RadioNZ, 2018). It is unclear how this dispute will play out, and there is clearly a tussle underway between the government and the industry.[5] Increasing tariffs does nothing to help the tuna processing industry. If the PNG government really wants to encourage onshore tuna processing (or timber processing), the best thing it could do would be to depreciate the exchange rate.

4.2 Private sector perspectives

While it is often commented that PNG suffers from a paucity of data, private sector perspectives are one area to which this comment does not apply. Since 2002, the Institute of National Affairs has undertaken 5-yearly business surveys (in 2002, 2007, 2012 and 2017). And since 2012, Business Advantage (BA) has undertaken seven annual surveys of business, the most recent being published in 2018.

The BA survey is referred to as the "PNG 100 Survey" and is said to be a survey of "senior executives from a representative sample of Papua New Guinea's largest companies, across all sectors of the economy." (Business Advantage 2018a, p. 19). The INA surveys are somewhat larger. The 2017 survey covered 187 firms, the 2012 one 136 (Holden et

[3] Philippines is the top exporter of tuna to the EU.

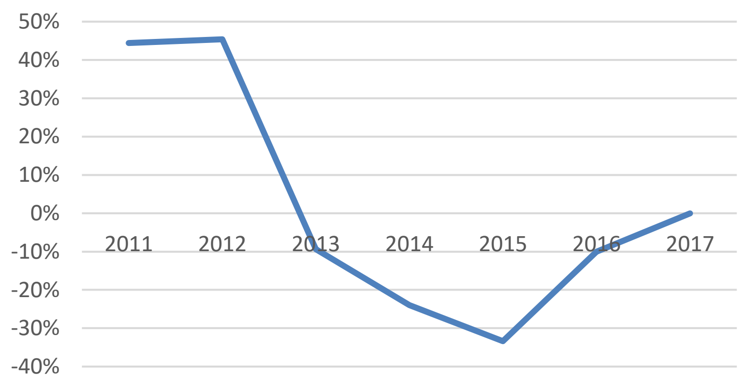
[4] This replaced an earlier arrangement in which ships were given discounts on their fishing licenses if they processed tuna onshore. However, the ships only processed a small share of their tuna catch in PNG (about 20%). In February, it was reported that rebates were paid. However, the recent policy shift requiring the National Fisheries Authority and other statutory agencies to hand over 90% of their funds to the central government will reduce the confidence of processors that rebates will be paid.

[5] Frabelle has emphasized that it has not closed its factory permanently.

al. 2017), and the 2007 one 243 (ADB 2008, p.1). The INA survey covers both large and small businesses.

The Business Advantage (BA) survey is useful in understanding recent economic trends. Each survey BA asks employers how their performance compared to expectations in the previous year. Figure 18 aggregates the data provided to give an overall score between -100% and +100%. The higher the percentage, the better businesses feel they performed relative to expectations. Zero is a neutral score: it indicates that as many businesses say that performance exceeded as those that say performance fell short of expectations. Figure 18 shows that during the boom years of 2011 and 2012 businesses were positively surprised by their performance with scores of above 40%. In 2013, performance was roughly equal to expectations, but 2014 and especially 2015 were disappointing years with many more businesses doing worse than they expected than better. By 2016, expectations and performance were becoming closer aligned, and by 2017 performance was back in line with expectations.

Figure 18: Business performance v expectations index

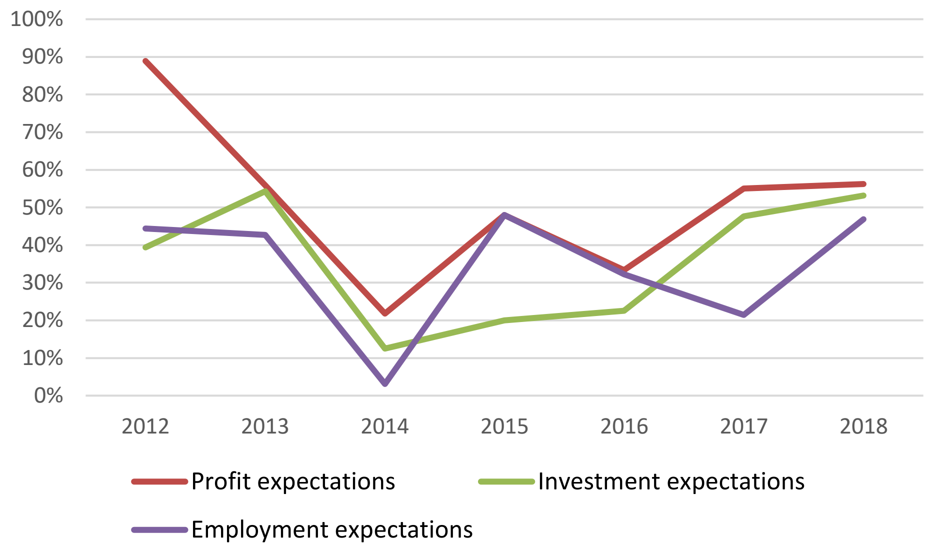


Source: Business Advantage (2012-2017)
Notes: The score is calculated by combining the percentage of those who say that business performance greatly or slightly exceeded expectations in the previous year and subtracting the percentage of those who say that business performance fell slightly or substantially short of expectations. 2017 data is from the 2018 survey, and so on.

Despite finding that performance has not lived up to expectations for four of the last five years, PNG businesses have remained optimistic. BA surveys also ask about profit, investment and employment expectations in the coming years. As

Figure 19 shows, these have always been overall positive, and typically around one-third, staying high throughout the last few difficult years. Expectations are of course not always realized. Despite strongly positive employment expectations for the last three years, actual formal sector employment has fallen in each of these years (Figure 2). Likewise, despite strong support for increased investment, private sector credit growth has been slow, and negative in 2017 (Figure 5).

Figure 19: Business expectations index

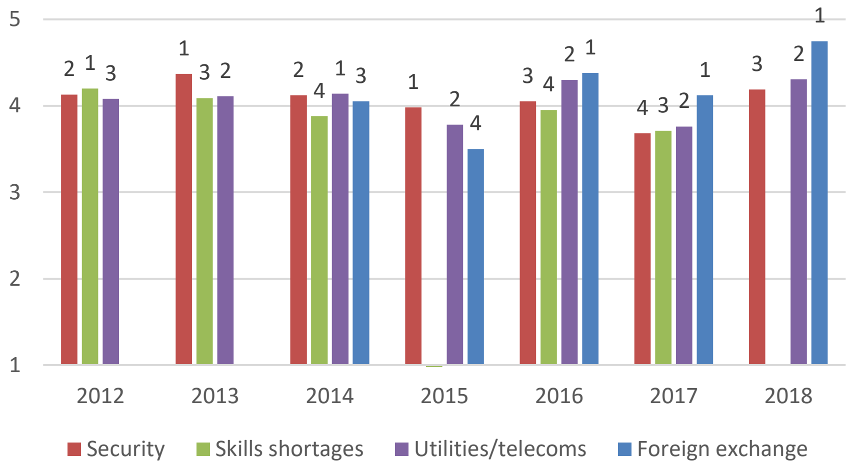


Source: Business Advantage (2012-2017)
Notes: The score is calculated by combining the percentage of those who say that they expect profits, investment or staff to substantially or somewhat exceed levels in the previous year and subtracting the percentage of those who say that they expect profits, investment or staff, respectively, to be slightly or substantially less than in the previous year.

The BA survey also asks businesses about constraints. Respondents answer on a scale from 1 to 5 with a larger number indicating a bigger hindrance. In 2017, the scale was changed from 1 to 4. 2017 answers have been rescaled to make them comparable.

Of the 16 responses reported over the six years (including a residual "other"), there are four that tend to dominate: foreign exchange; security; skills shortages; and utilities/telecoms. The ranking of these four is shown in Figure 20. Foreign exchange was not a constraint at all in 2012 or 2013, but it became one of the top four issues in 2014, when it was the third highest-ranked constraint. It was also third highest in 2015, and since then it has been the top-ranked constraint. The other three constraints (security, skills shortages, and utilities/telecoms) have been top-four constraints every year since 2012, except for skill shortages, which did not rate in 2018.

Figure 20: Top four impediments facing business

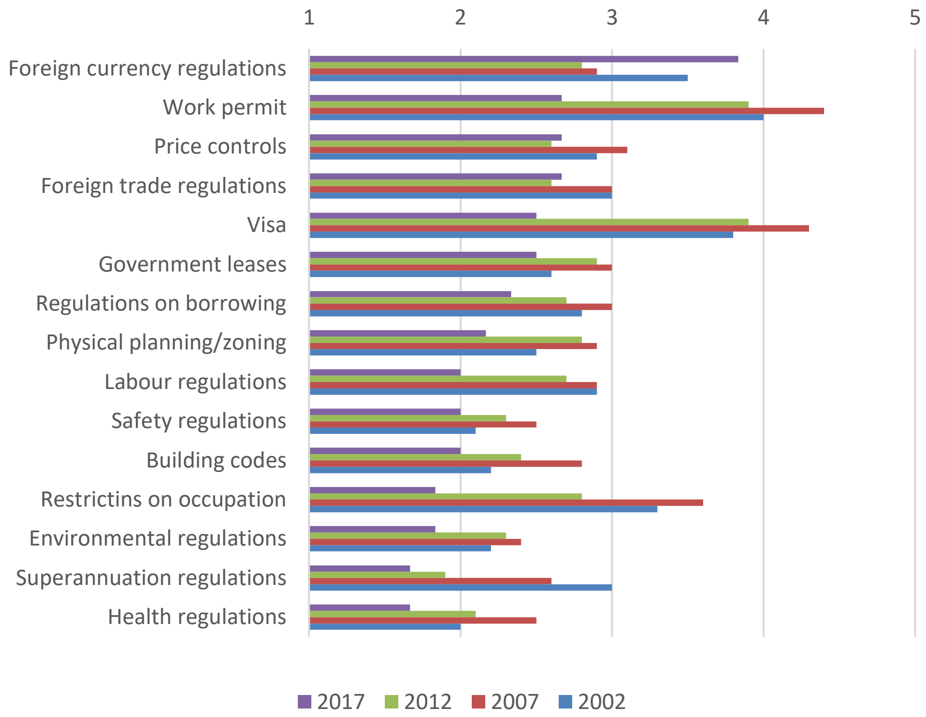


Source: Business Advantage (2012-2017)
Notes: This graph shows the impediments that are most frequently ranked in the top four in the Business Advantage Surveys. The numbers show the ranking in the year concerned, with one the highest ranking. The only indicators which have been rated in the top four which are not shown in this graph are "lack of government capacity"(ranked fourth in 2017 and third in 2015), "logistics" (ranked fourth in 2013), and "access to necessary expertise (ranked fourth in 2012). The answers are based on a ranking of 1 to 5. In 2018, a ranking scale of 1-4 was used, and these have been converted via a linear transformation to a 1-5 scale. In 2017 and 2018 "unreliable telecommunications" were asked about separately from "unreliable utilities", but this summary combines the two into "utilities/telecoms" taking whichever is higher.

The INA survey gives us a longer-term perspective on the thinking of business over the last 15 years. In each of its four surveys, the INA has asked business about 15 "government controls as a hindrance to business". Respondents answer on a scale from 1 to 6 with a larger number indicating a bigger hindrance. In 2017, the scale was changed from 1 to 4. 2017 answers have been rescaled to make them comparable.

Figure 21 shows the ratings on the 15 controls over the four surveys, ordered by their perceived importance in 2017.

Figure 21: The importance of various government controls as hindrances to business



Source: ADB (2008) and Holden et al. (2017)
Notes: This graph shows the 15 government controls businesses are asked to rate as hindrances to business in the various INA surveys. The answers are based on a ranking of 1 to 6. In 2017, a ranking scale of 1 to 5 was used, and this has been converted via a linear transformation to a 1 to 6 scale.

As can be seen from Figure 21, in 2017, for the first time, foreign currency regulations were rated as the biggest hindrance to business. In 2012, it was the 4th most hindering constraint; and in 2007 the 8th, and in 2002 the 3rd. 2002 was the last year prior to the recent economic boom in PNG. There had been significant currency depreciation, and there may have also been shortages. Price controls and foreign trade regulations also moved up in 2017 to equal second place (along with visas). In 2012, price controls and foreign trade regulations were ranked 9th and 10th.

As Figure 22 shows, typically work permits and visas have been ranked as the biggest hindrances: they are one and two (or equal first) in 2002, 2007 and 2012. But in 2017 they were pushed into second place and below by foreign currency regulations. Figure Y also makes it clear that there has never been such a big gap between the top government hindrance and all others as there was in 2017 between foreign currency regulations (the top-rated hindrance) and all others.

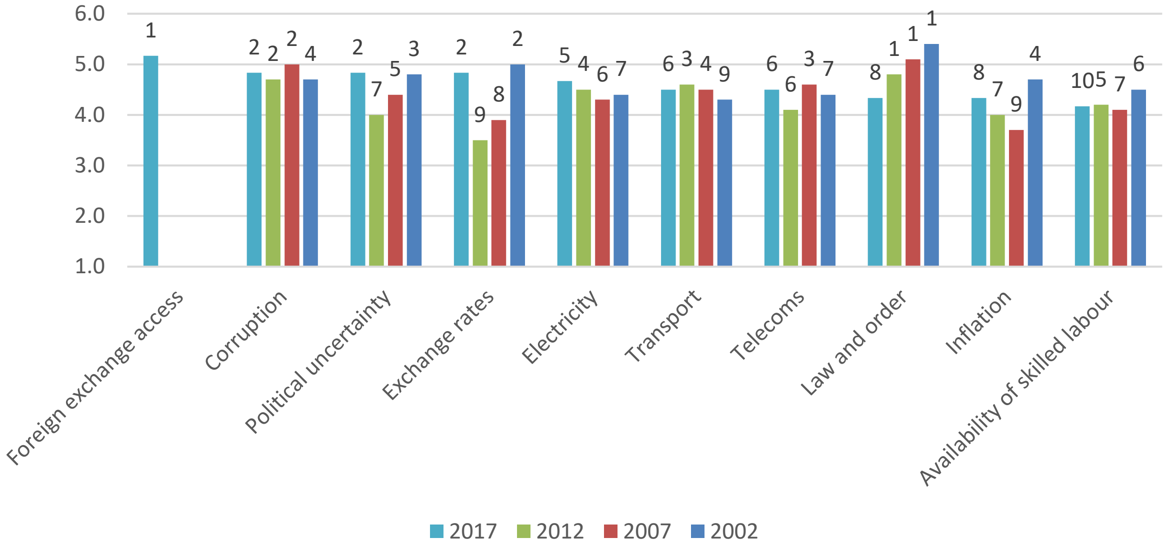
Figure 22: Top three government controls hindering business

Source: ADB (2008) and Holden et al. (2017)
Notes: This graph shows the three controls that are most frequently listed as top three constraints in the various INA surveys. In 2007 "restrictions on occupation" was listed as the third most important hindrance, and in 2007 "government leases". The answers are based on a ranking of 1 to 6. In 2017, a ranking scale of 1 to 5 was used, and this has been converted via a linear transformation to a 1 to 6 scale.

The INA survey also asks more generally about constraints to business. Over the four surveys, questions have been asked about 28 possible constraints. Figure 23 below shows the top 10 constraints for 2017, and how they fared in previous years. In general, there is a high degree of commonality. Nine of the top 10 constraints in 2017 were also top-10 constraints in the other three surveys. Corruption is always one of the top four constraints. Infrastructure constraints (electricity, transport, and telecommunications) are always in the top 10. Law and order is the top constraint for 2002, 2007 and 2012, but only the 8th most important in 2017.

The one constraint in 2017 which does not feature in earlier years is foreign exchange shortages. This was added as a possible constraint to the survey for the first time in 2017, and it went straight to first place. The exchange rate which was nominated as the second most important constraint in 2002, but only the eighth or nine most important in 2007 and 2012 returns to (equal) second place in 2017.

Figure 23: Top ten constraints to business in 2017, and how they were regarded in earlier surveys



Source: ADB (2008) and Holden et al. (2017)
Notes: This graph shows the ranking and rating in all four surveys of the constraints that were nominated in the INA survey by businesses as the most important in 2017. The answers are based on a ranking of 1 to 6. In 2017, a ranking scale of 1 to 5 was used, and this has been converted via a linear transformation to a 1 to 6 scale.

Overall, the message from both surveys is the same: foreign exchange shortages are business's biggest worry. In the words of the IMF (2017, p.13):

> The main obstacle to business activity and investment are difficulties in obtaining foreign exchange. This is adversely affecting both current activity and the willingness of parent companies to continue investing in PNG.

5. Conclusion

PNG faces the twin risks of further economic contraction and macroeconomic stability. So far, too much emphasis has been placed on the latter, perhaps because of the underestimation to date of the non-resource economy's contraction. Yet, a strategy biased in favour of macroeconomic stability will not succeed even on its own narrow terms, as shown by the downgrading of the country's credit rating by both major rating agencies over the last two years. In the meantime, the data suggests that employment continues to fall with declines in formal sector employment in each of 2014, 2015, 2016 and 2017. It is neither desirable nor feasible to solve PNG's fiscal and macroeconomic problems without an acceleration in economic growth, leading to more jobs, expenditure and revenue.

To stimulate the economy, PNG has turned to tariff protection to promote import substitution. PNG's long-standing Tariff Reduction Program has been abandoned, and rather than tariff decreases, a large number of moderate tariff increases have been implemented. These increases will not help exporters (in fact they will harm them) and will not be enough to tackle the primary problem facing the PNG economy, namely the shortage of foreign exchange, which is worsening. Two separate surveys of business show that foreign exchange shortages are the most important problem they face, and that they have increased in severity and displaced other longer-standing concerns around corruption, law and order and visas.

There is no way around the need for a substantial devaluation of the currency. It would not be feasible to move quickly to a floating exchange rate, but the Bank of PNG could easily shift downwards the rate at which it makes foreign exchange available to the banks.

There is simply no other way to reduce the extent of foreign exchange rationing, the primary drag on growth. An exchange rate depreciation is now recommended not only by ourselves, but by the IMF and the ANZ. Such a policy shift would benefit the majority of PNG's poor (who live in rural areas, and can grow coffee, and vegetables to substitute for rice and other food imports). Conversely, maintaining an overvalued exchange rate will work against the government's current plans to diversify the economy and encourage domestic processing (e.g. of tuna).

The two main arguments against depreciation are that it will boost inflation (and thereby hurt the urban poor) and that it will not boost exports (Business Advantage, 2018b). On the former, with inflation down and the macroeconomy stable, there will be no better time to depreciate. While there will be pain involved for urban dwellers, the alternative is continued economic stagnation and job losses, which will also, above all, hurt the poor, urban and rural. On the latter issue of export pessimism, apart from the international evidence (Ghei and Pritchett, 1999), Nakatani (2017, p.28) simulates the impact of a 10% RER depreciation specifically in PNG and finds that it leads to "an increase of about $150 million in exports and a decrease of about $100 million in imports, suggesting that the FX will increase by $250 million [per year]." Earlier research by Allen et al. (2008) show that in PNG “smallholders are responsive to market opportunities” (p. 309) and sensitive to price changes. They show that domestic food production expanded substantially due to the devaluation of the Kina in the 1990s (p. 297).

If it was possible to engineer an economic recovery without a depreciation, it would have happened by now. Yet, while a devaluation is essential to reduce the demand for foreign exchange and provide a boost to the economy, it would not be a panacea. PNG faces a daunting agenda to improve business confidence and reduce the costs of doing business. We have addressed the broader reform agenda in our earlier surveys, and do not repeat it here in order to focus on the primary concern of businesses, namely exchange rate shortages. As the IMF puts it, currently “[t]he main impediment to private sector development is macroeconomic policies.” (IMF, 2017, p.13)

Despite the range of advice reaching the government in favour of depreciation, for more than two years there has been no nominal depreciation to speak of, and the real exchange rate has continued to rise, and businesses have continued to suffer. The government can take credit for avoiding both a balance of payment crisis and a government debt default, but the price the economy and service delivery have paid is high. Without a change in the government’s policy stance, our projection is for very subdued economic growth in the coming years, continued job losses and deteriorating service delivery.

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