

PNG's Economy 2016– past, present and future prospects

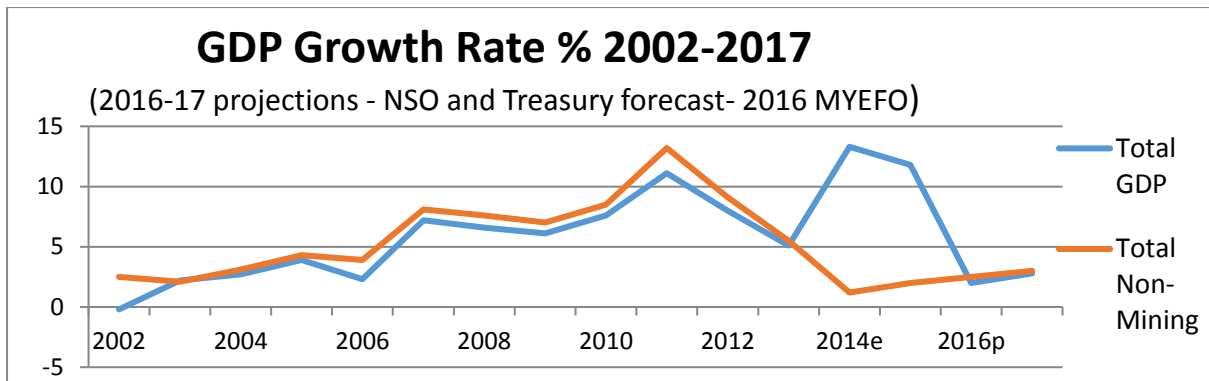
By Paul Barker, Executive Director, Institute of National Affairs



Economic Performance and Issues: Papua New Guinea's is now in its 15th successive year of positive economic growth, with rates rising progressively until 2011, but declining since then, apart from the leap in 2014/15 associated with the commencement of production from PNG LNG.

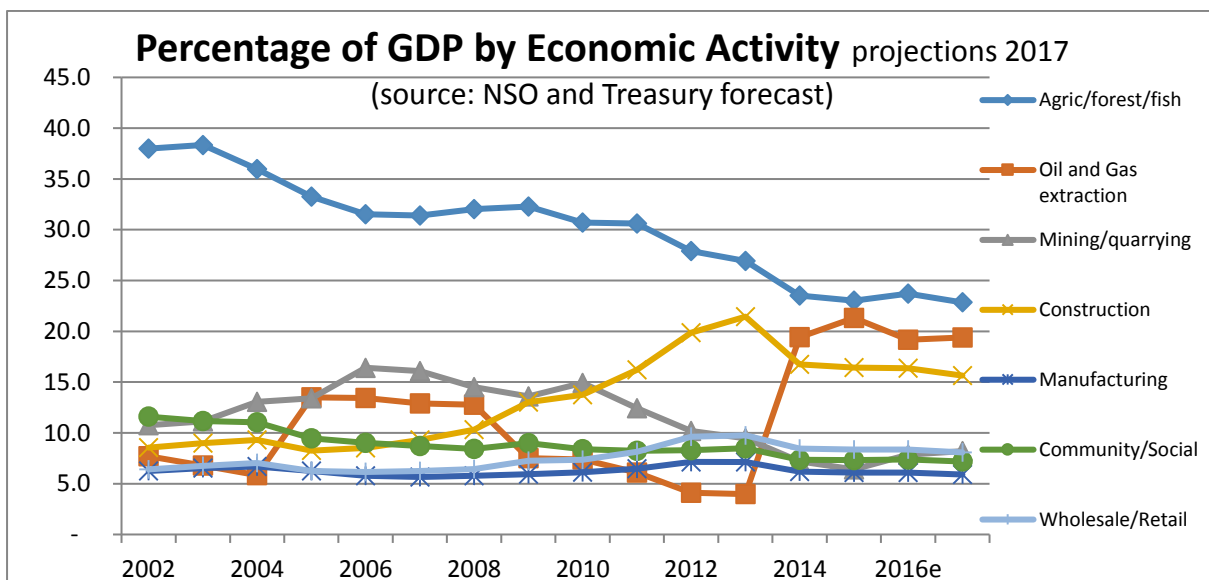
The 1980s saw relatively sluggish growth, ending with the disruption associated with Bougainville crisis. The 1990s, experienced severe economic turbulence, associated with a combination of poor fiscal management, commodity price instability and unrealistic expectations associated with new resource projects. However, since 2007, until 2016, GDP growth remained above 5% per annum, on the back of strengthening commodity prices and the subsequent PNG LNG investment, but also the effects of prior structural reforms, greater fiscal prudence and reduced public debt levels. Improved ICT and a private construction boom reflected the latent demand, high liquidity and improved business confidence and in turn contributed to wider economic activity. However, the completion of the LNG construction phase, combined with a severe fall in commodity prices from mid-2014, including hydrocarbons, and the El Nino induced drought and frosts in 2015/early 2016, which subdued agricultural and some mineral production, substantially restrained the high growth rates predicted with the commencement of LNG production, and brought real economic growth down to 2% in 2016 (below the population growth rate).

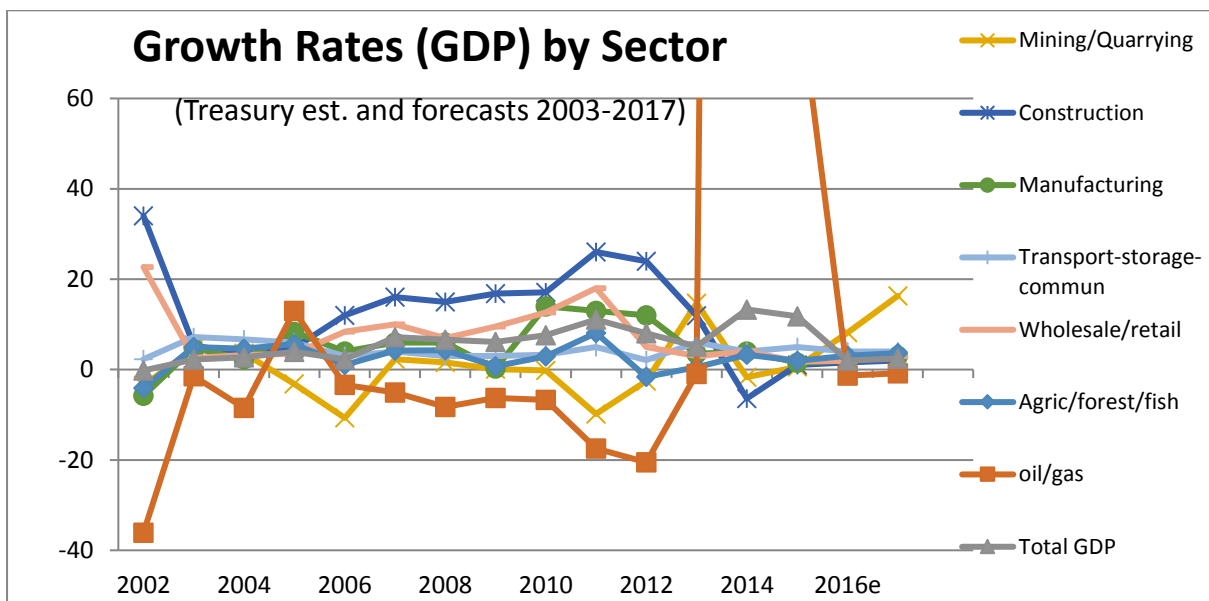
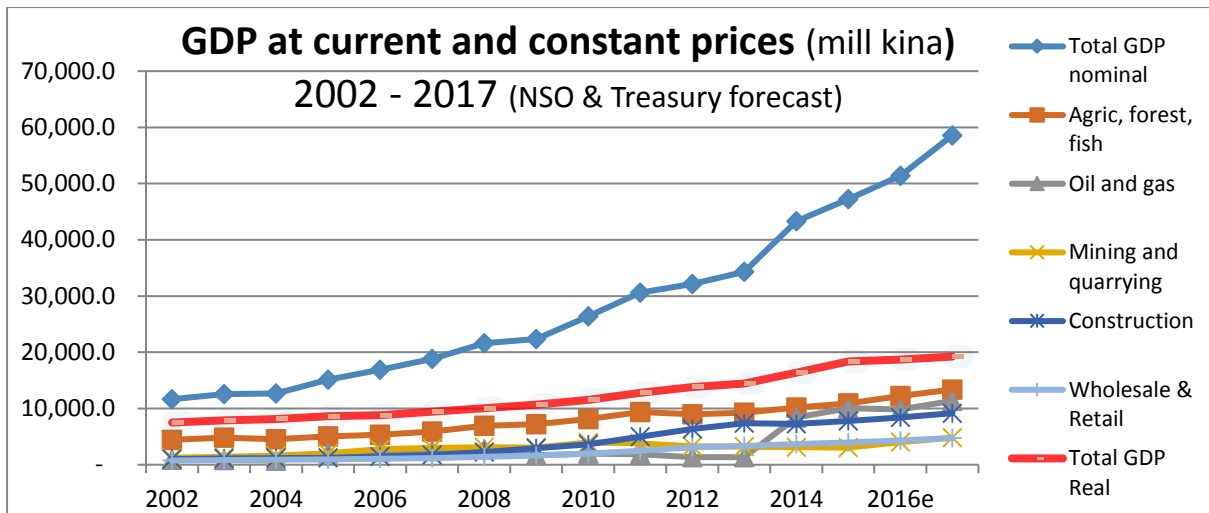
The growth rate for 2015, the first full year of LNG production, was estimated by Treasury at 11.8%, well below forecast, largely owing to the lower commodity prices and the El Nino, and as the LNG's impact was substantially incorporated into 2014 figures (13.3%), but it also highlights a wider downturn in business activity. The non-mining growth rate was estimated at 2.4% in 2015 and a mere 1.2% in 2014, showing the limited real impact upon the economy beyond the construction phase, and whilst project debts are serviced.



The fiscal stimulus from major government construction projects, notably in NCD, helped cushion the downturn, but, with falling revenue over three years of substantial fiscal deficit and associated rising debt servicing costs, the government could no longer maintain such levels of expenditure. Major expenditure cuts were made in the second half of 2015 and into 2016, in turn further restraining household incomes and spending and business activity, as well as diverting funding from some development priorities. The balance of payments deficits, caused by the low export values and lack of further major foreign investment, put pressure on the kina, but, when combined with foreign exchange market interventions, resulted in a shortfall in available foreign exchange from mid-2015, impeding trade, and in turn wider economic activity, not just of exporters, but manufacturers and others needing imported goods and services.

Construction made the greatest gain during the years from 2008 to 2013, reaching an estimated 21% of GDP, from a modest 8% in 2002, before slipping back to 16% since 2015. Mining's proportion has fallen from 16% in 2006 to barely 6% in 2015, with low prices and production, and subdued exploration, recovering slightly in 2016. Agriculture has slipped from 38% in 2001 to about 23% in 2015, although it must be recognised these figures are relative, with other sectors all declining relatively to the major increase in petroleum/gas since 2013, reaching an estimated nearly 21% of GDP in 2015, before settling back since.





2016 has seen prices for some of PNG's major export commodities improve, from oil and LNG, gold more substantially, but also certain agricultural crops. Production from Ok Tedi recommenced, albeit modestly in March, cocoa prices remain sound, and coffee had a relatively good season, helping relieve pressure on the foreign exchange market. Forecasts for commodities into 2017 and beyond tend to suggest continuity, based upon subdued growth in major emerging markets, notably China, and low growth levels in the mature markets of North America, Europe and Japan, combined with political uncertainty. Further gains in hydrocarbon prices are forecast by some commentators, but despite apparent collusion between OPEC members and certain other major hydrocarbon producers over restraining supply, there is clearly market scepticism, and the greater availability of hydrocarbons, including from non-conventional sources, imposes market restraint, particularly with renewable energy also available more competitively, placing a further ceiling on prices.

Forecasts for 2017 and 2018 envisage continued low GDP growth in the 2-2.5% range, with largely subdued commodity prices, barring any major unforeseen events impacting global supply or demand. Continued low resource and general corporate profitability are likely to continue restraining government revenue and hence expenditure. Despite the pressures (to spend and reduce taxes) in an Election year in 2017, the relatively high prevailing public debt level will impose some restraint on

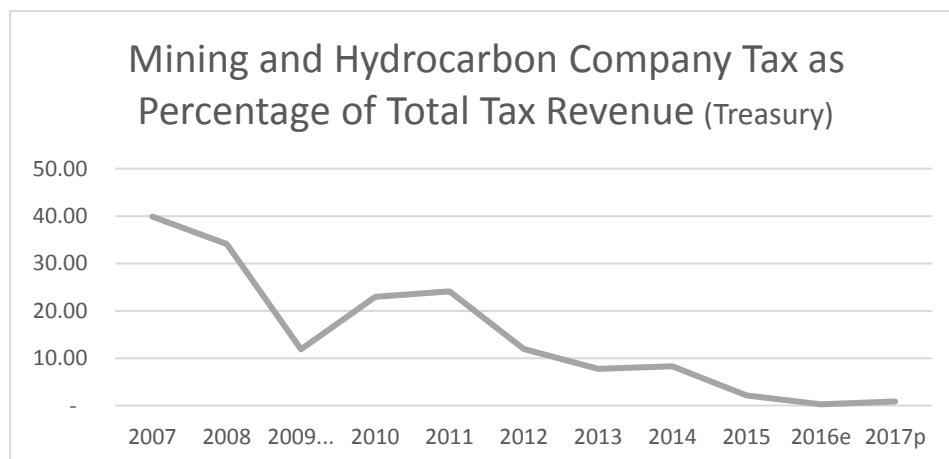
government capacity to borrow for substantial further fiscal stimulus, beyond concessional financing for reconstruction of core infrastructure, such as the Highlands Highway.

Beyond 2018, the prospects of developing further LNG facilities (Papua LNG and P'nyang) and possible further mining developments, provide potential economic stimulus, combined with proceeds from PNG LNG enhancing revenue substantially; however, it will be critical to focus upon encouraging broader-based investment and economic activity and opportunity and spread across PNG.

The extractive industries overtook agriculture in 1984 in terms of export value, and have become increasingly dominant in export earnings; however, non-mining/gas still dominates the economy, in terms of overall GDP (estimated at 67% for 2017, with agriculture still comprising over 20%). In terms of more meaningful measures of economic benefit, including GNI (which measures economic flows retained within PNG), and household income and employment, the renewable resources sector remains markedly more critical to the economy than other sectors.

Although there are clearly social and environmental costs incurred from the extractive industries, their major benefit to the PNG economy, apart from export earnings and employment creation and their multiplier effect, notably during project construction phases, e.g. of LNG facilities, is through the revenue derived to the State, and how the State utilises it, at national and local levels, in delivering needed public goods and services, to enable broader-based and sustainable economic activities to proceed, including through reliable access and human resource development, including health and education service provision.

Particularly in recent years (see chart below), however, revenue from the extractive sector has declined heavily, as a result of low market prices and more concessional investment conditions applied to more recent projects. The revenue accrued from extractive projects, plus other local benefits, including to local resource owners, clearly provides the project and its investors their social mandate to operate. Ensuring fair, transparent and equitable investment benefits are incorporated in mandated investment conditions, and in project agreements and their application, must be in the best interests of the government, PNG society, but also for the industry as a whole in the longer term, and forms the basis for the Extractive Industries Transparency Initiative (EITI), to which PNG is currently an applicant, having already submitted its first national report (for 2013) and about to submit its critical second report (for 2014) in December 2016.



PNG's development paradox remains as a land of relatively abundant natural resources, with various world class resource-based operating or prospective projects, and yet overall economic performance has been disappointing and failed to deliver broad-based economic and social opportunities for most of the population, even during the 2000s when overall growth rates have largely been positive. High population growth has undermined gains in GDP per capita. Lack of maintenance and development of basic infrastructure over two decades, and inadequate investment in core skills and services, including education and training, health, law and justice, have undermined broad-based economic opportunities, despite some valuable recent efforts.

This leaves PNG with amongst the worst social indicators in the Asia-Pacific region and having to play catch up with its fast growing population. Recent government policy and planning frameworks (aligned to the STARS strategy, MTDP2 and National Planning Framework) should steer public expenditure in a more consistent direction, if applied, rather than by-passed by ad-hoc or factional funding.

The increased budget allocations since 2012 and donor support for core functions, notably upgrading infrastructure, education and health services (including free services), police and rural areas, have been curtailed since 2015 by heavy budget cuts, and implementation remains restrained by weak governance, implementation and oversight, particularly in some districts. By 2014 access and health services for much of the population in rural populations, was worse than two to three decades earlier, and whilst education attendance has improved markedly over the past decade, particularly for girls, standards are widely reported to have declined and class numbers increased to unmanageable levels, with poorly resourced teachers overstretched. Some positive progress has been achieved, often in partnership with the private sector, churches and CSOs, in restoring and upgrading facilities, from hospitals to nursing and teaching colleges, reducing malaria and some other disease rates, and with overdue policies, such as on population, but it requires consistent funding, coordination and implementation.

The major fall in energy and other commodity prices from mid-2014 has forced government and the public to review their perception of the resource sector, and recognise the need to avoid the trap of over-expectations and dependence on any industry or industries, however promising their prospects. Papua New Guinea was aware of the risks associated with so-called Dutch Disease, and was establishing the Sovereign Wealth Fund, in order to stabilise income and expenditure for priorities and help sanitise the currency and economy from the negative impacts of large increases in export revenue into the local currency and economy. It would have been preferable to have had the fund established prior to the commodity price booms of 2006-8 and 2012/13. As it stands now issues related to resource boom and bust are still apparent, but PNG has missed the recent peak in the cycle. LNG production costs in PNG are said, however, to be competitive, with costs from PNG LNG and other major fields said to lie in US\$ 15-30 per barrel (equivalent) level, enabling viability and international competitiveness. The principles with respect to the SWF and stability and accountability of resource revenue management remain fully pertinent, although this is the time to avoid undue indebtedness, and focus on critical core and productive public expenditure, and improved revenue collection and debt management, rather than saving any revenue and currency offshore for a later rainy day, as had been envisaged following the commencement of the LNG project.

The 2014/15 Tax Review also provided extensive recommendations for more consistent and broader-based revenue collection and greater equitability but less dependency on the resource sector, including fairer collection of resource rental, without needing to pursue the State equity option with all its upfront costs, and potential conflicts of interest. But, as with past experience with poor resources governance over recent decades, particularly in the 1990s, as with the misuse of the Mineral Resources Development Fund (MRSF), it is critical that sound fiscal and sectoral policies, laws and regulations are approved, following appropriate consultations, but then applied consistently. The *Fiscal Responsibility Act 2006*, which is a recent cornerstone for prudent fiscal management, is already being partially ignored or side-lined, which doesn't provide encouragement for sound future resource governance.

Papua New Guinea is a relatively high cost country for business and households to operate and live, which undermines the prospects for a range of economic activities and diversification. These costs are partly natural, with a relatively widely dispersed population and difficult terrain to build or maintain infrastructure. However, it also relates to human factors, such as weak governance, slow and inconsistent application of the law, corruption prevalent with resource allocation and administration and a poorly educated population, with high illiteracy and innumeracy rates, and unreliable standards. Over the past two years, although some progress has been made improving particularly some infrastructure and services, but uncertainty has been raised with respect to the new Small-Medium Enterprise Policy and the associated 'Reserved List', proposed amendment to the Lands Act, Mining and other resource legislation, administration of foreign exchange transactions and foreign currency accounts and slow and ambivalent addressing of the largely illegal SABL land-grabbing. Whilst some of the proposed or applied policies and legislative changes, have sound justification and components, some have been progressed with limited or no consultation and are just adding to the perceived risks and costs of doing business in PNG. It is also noted that at times the laws, including tax and labour requirements, are adhered to by reputable established companies, but that other, often newer or privileged overseas and some local enterprises, are able to bypass some processes, saving costs, and thereby gaining an uncompetitive advantage.

Undercapitalised and often under-performing state-owned enterprises, many still enjoying major monopolies, but also administering quasi-public funds and tasks, also undermine prospects for business and investment, as well as pushing up living costs. Maladministration of State land and public tenders, were highlighted in the last INA Business Survey as the two most frequently experienced impediments to prospective investment and business; it is not envisaged that the situation will have changed unduly. Law and order problems and corruption, together with poor transport and power infrastructure were considered the worst business impediments, followed by ICT infrastructure and cost, although clearly markedly improved since 2007, when mobile phone competition commenced. This was followed by the need for access to a larger skilled workforce. In this regard, it is clearly not possible to have all required skills available when a major once-off resource project, such as LNG construction, occurs, but the aim should be for a skilled and flexible workforce, able to retrain relatively quickly for evolving opportunities that might arise, so that the Papua New Guineans can fully participate in the fruits of development and the State also gain a regular taxpaying workforce.

Employment: Papua New Guinea's formal sector workforce is less than 500,000 (estimated at 465,000 in 2014¹) out of a population of 8 million+, with an economically active workforce of 3 million. That leaves approximately 2.5 million in the informal sector, and nearly 100,000 also 'inactive' but seeking employment. Education was the largest single formal sector employer (15%), followed by agriculture/forestry and urban real estate/business services (each 13%) and then construction. However for men construction took the lead space (14%), followed closely by services and then agriculture (13%), whereas for women education dominated (23%), followed by agriculture and retail/wholesale (each 13%).

In 2014, 17,345 work permits were issued (down from 23,409 in 2013, late in PNG LNG construction). The largest number of overseas work permits in 2014 were issued to persons from the Philippines (36%), followed by Australia (16%) and China (13%), followed in turn by Indonesia and Malaysia; in 2013 China was second with 17% and Australia (10%). The main single job description in 2014 was for 'Technicians and Trade Coordinators and Supervisors', followed by 'Specialist Heavy Machinery Mechanic or Technician' and 'Operations Manager'.

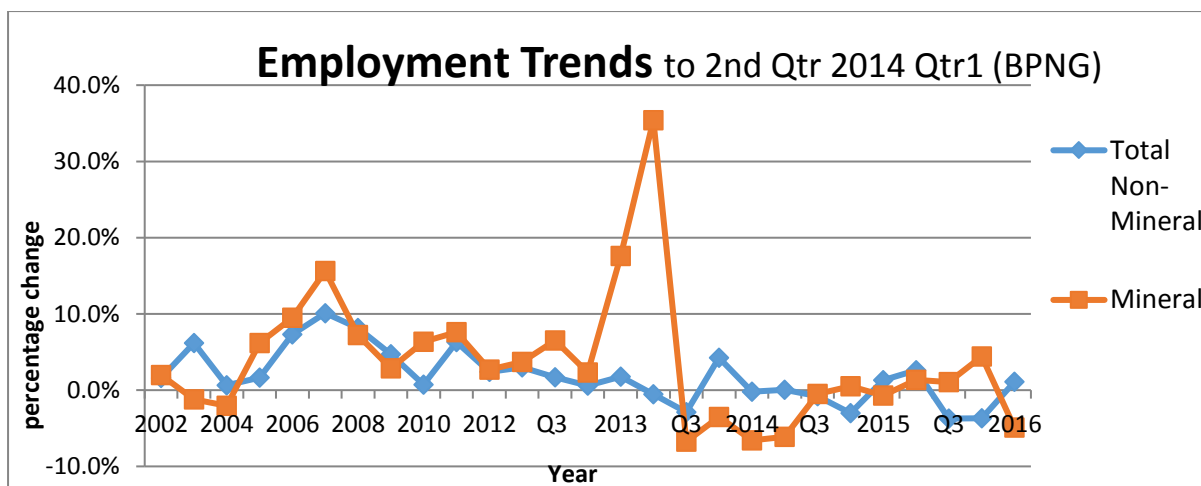
There has been a large increase in formal sector employment since 2000, largely driven by enterprises responding to the growth in agricultural and mineral prices during that period and, from early 2012 by the PNG LNG construction and associated activity.

According to the Central Bank's survey of employment trends, after positive (non-mining) formal sector employment growth since the early 2000s, rising to an estimated 10.5%² in 2007, and 8.3% in 2012, the rate of growth dropped to 2.4% in 2013, and declined by 3.9% in 2014 and 3.6% in 2015, with lower non-mineral commodity prices and the downturn in wider business activity. Mining/oil related employment was sluggish until 2015, but rose with the strong mineral prices to 15.6% in 2007, dropping back to 2.9% in 2009 with the Global Financial Crisis, before recovering and leaping to 16.1% in 2012 and 43.3% in 2013, with the LNG construction, before declining in 2014 by 12.3%, and rising again by 6.1% in 2015. Construction has been the employer bucking the general flat and declining employment since 2013, with strong if fluctuating growth during and since 2013. Employment growth had been concentrated in certain main centres and provinces during the LNG construction, and the impact of the government's fiscal stimulus expenditure on roads and sports facilities has also been focused on NCD.

Further major LNG construction projects may proceed in 2019, providing extensive, but relatively brief employment for 2-3 years. As with PNG LNG, they may also stimulate extensive small and micro-enterprises, albeit with a high subsequent failure rate. Sustained employment generation in the formal and informal sectors depends upon developing and sustaining suitable investment and business conditions, particularly for viable agriculture and other economic activities, including through infrastructure development and public and private support for education and appropriate skills development.

¹ L Jones and P McGavin - Grappling afresh with labour resource challenges in Papua New Guinea: a framework for moving forward. Institute of National Affairs, 2015

² Bank of PNG Survey of Employment trends (in QEB March 2016)



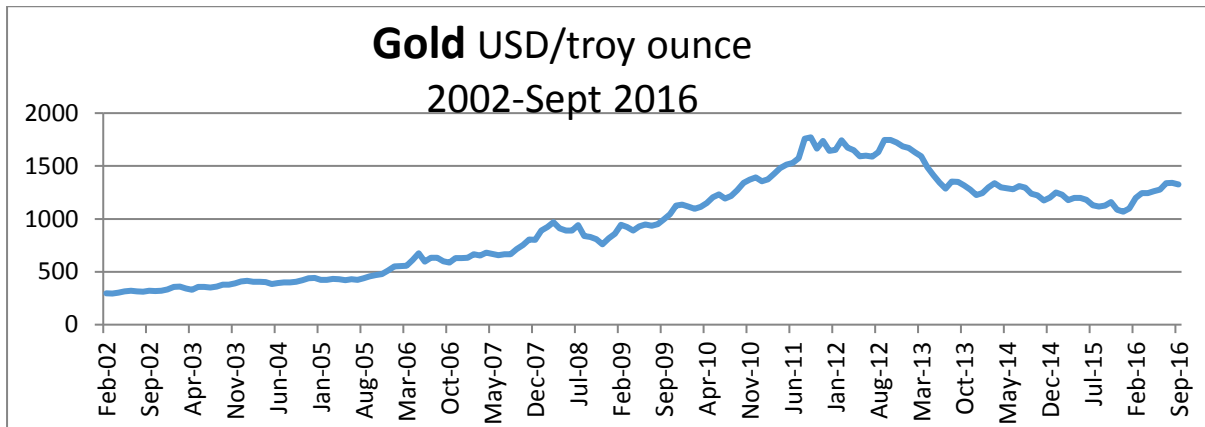
Commodities and Markets: Following almost universally strong prices in 2011 and 2012, international commodity prices for most of PNG's exports fell in 2014, and remained low throughout 2015, although generally not as low as in the early 2000s. Some commodities have made significant gains in 2016, but not all, and some have continued a downward trajectory. The picture for exporters and import replacers has been affected also by the declining value of the kina against most currencies during this period, other than the Australian dollar, enhancing kina values of exports, although pushing up the cost of imports.

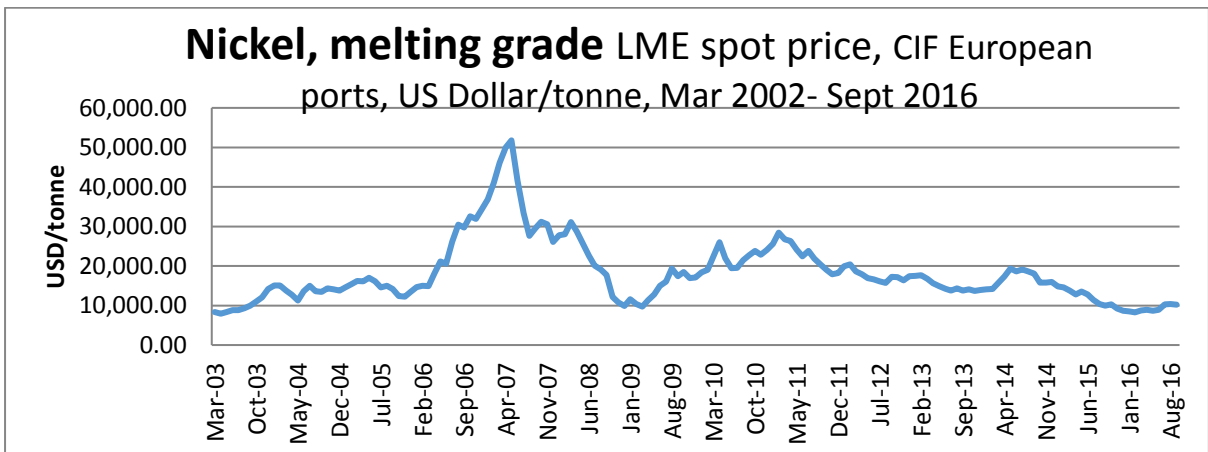
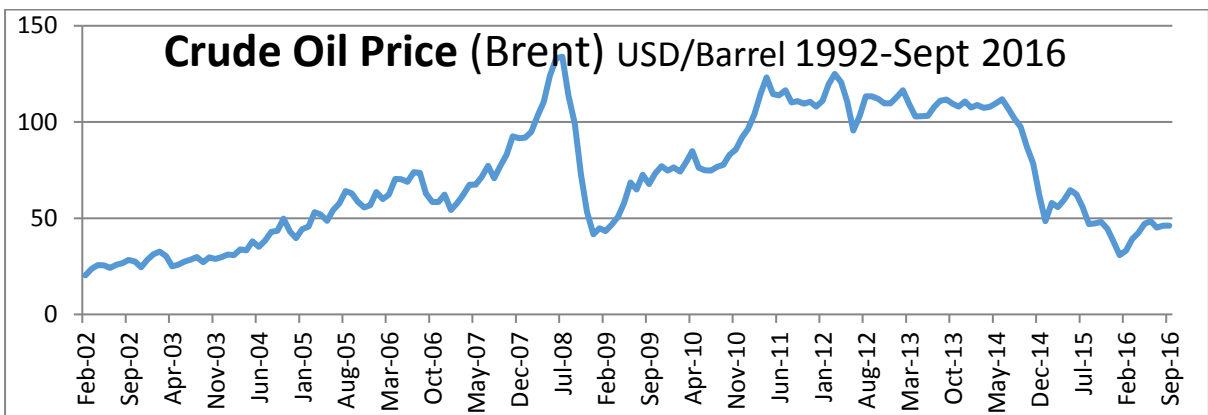
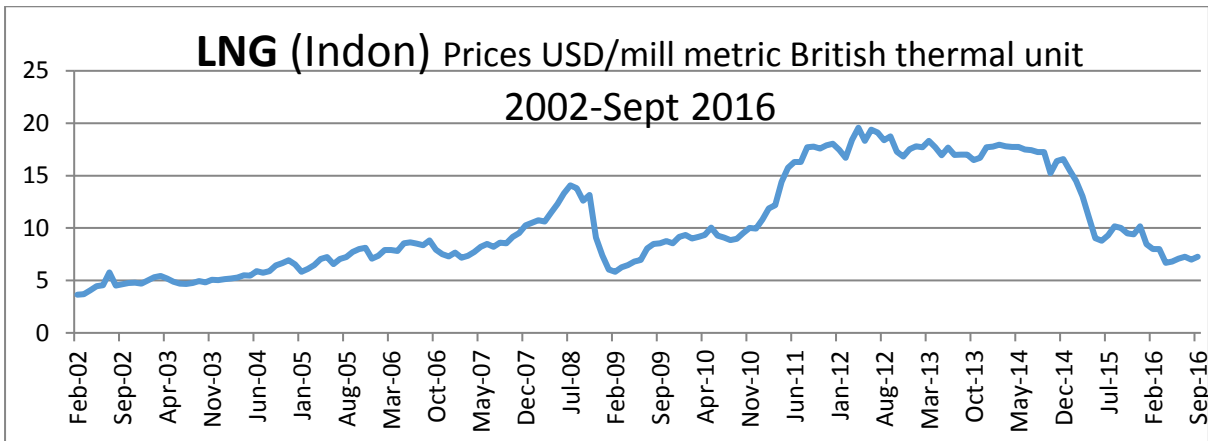
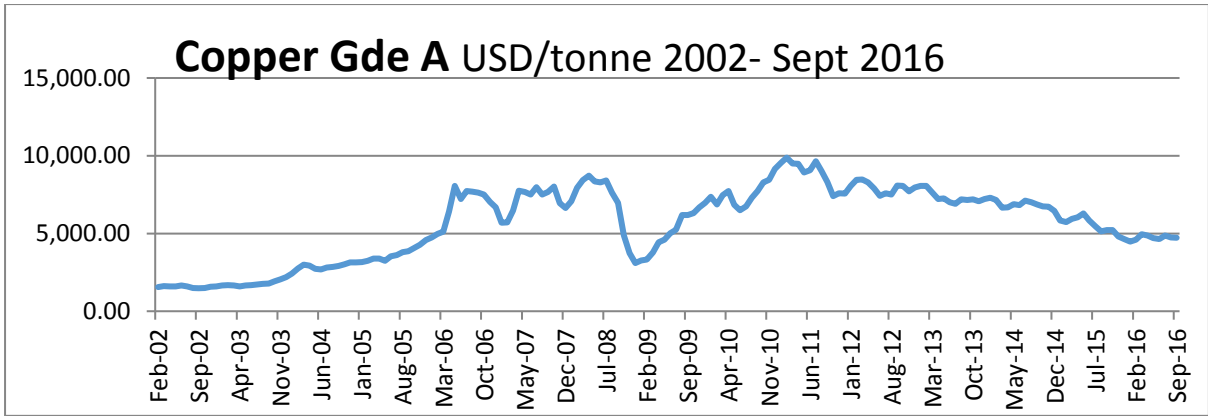
The continued weaker demand from China for raw materials, with a turbulent housing and stalled stock market, and continued sluggish growth in the developed countries, combined with a surplus of energy supplies, has kept most commodity prices suppressed. Gold prices rose, rather typically, on the back of international financial uncertainty, and oil prices rose in 2016 to around USD 50 per barrel, but found resistance to progressing above that level, despite recent OPEC consensus on reducing supply, in the face of readily available new oil and gas supplies, including from the North America, and increasingly affordable alternative energy. This is combined with the successful conclusion and ratification of the Paris Accord, requiring limited greenhouse gas emissions, as well as new innovations and rules, e.g. in Germany to phase out current petroleum/diesel powered motor vehicles by 2030. Copper prices have continued their downward trajectory on the back of subdued Chinese and global demand, and nickel prices remain weak.

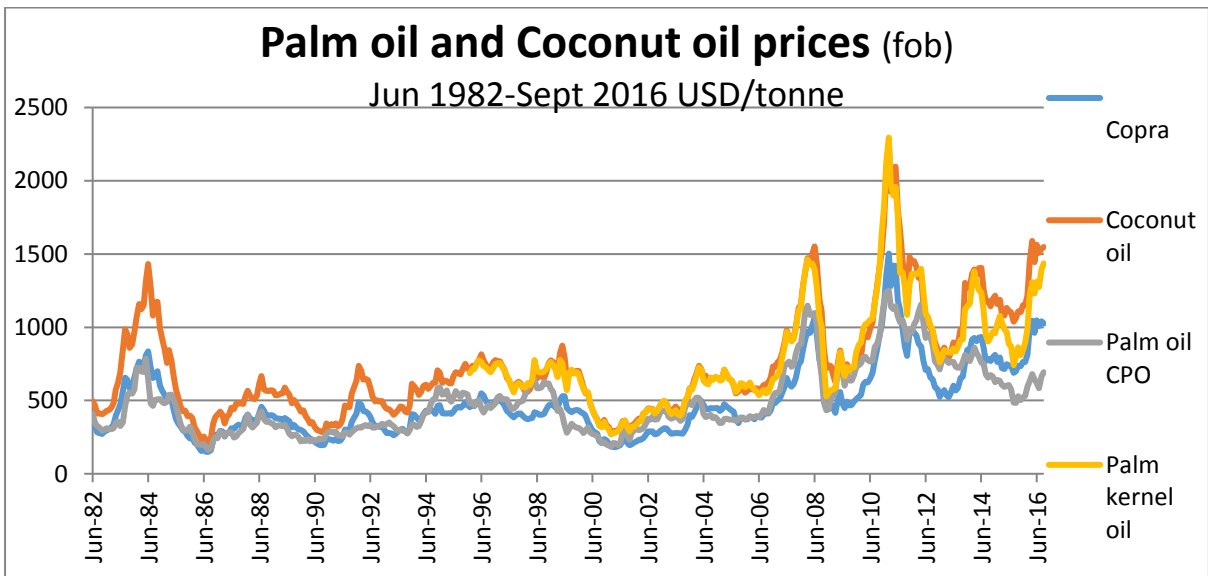
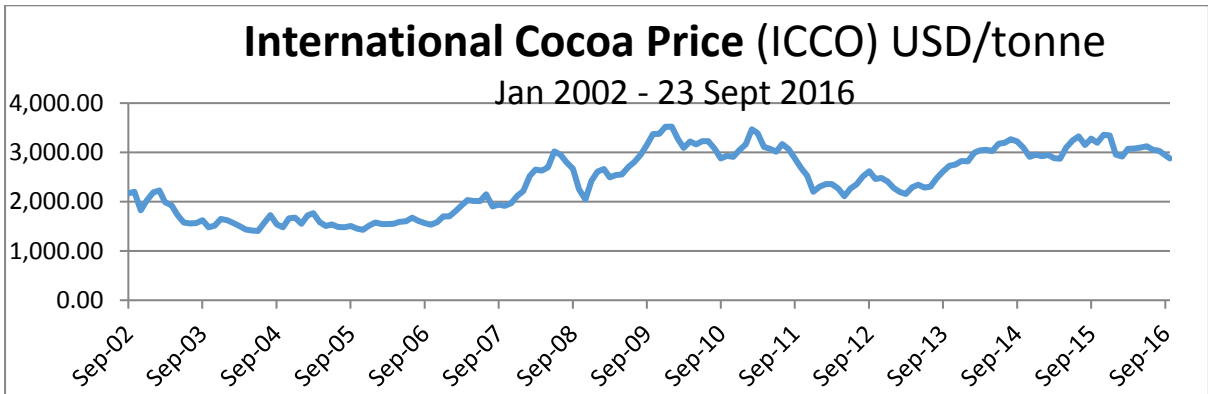
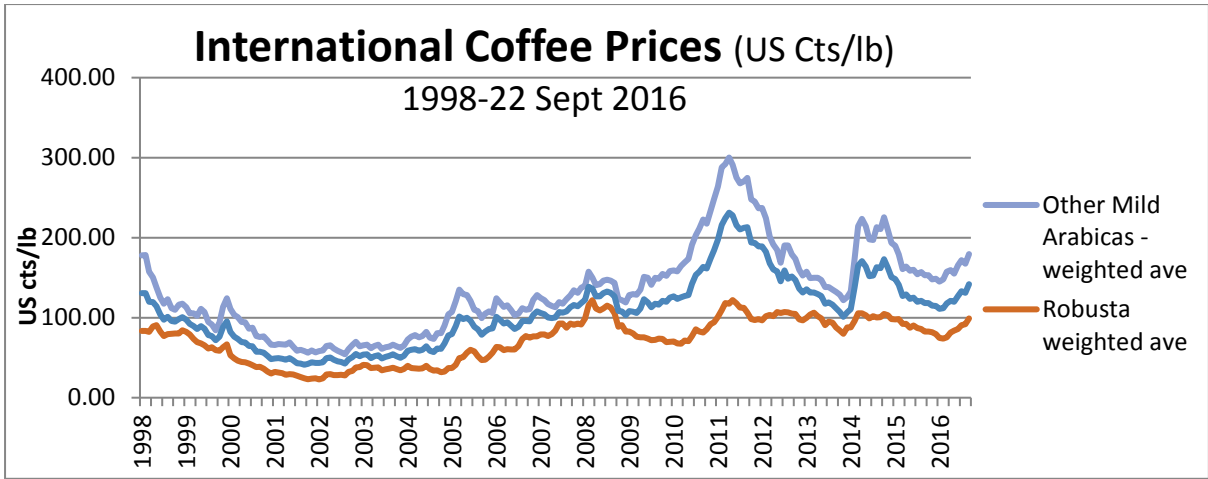
In agriculture, cocoa prices have remained firm, coffee prices have made a modest improvement, and vegetable oil prices (palm oil and coconut oil) have also enjoyed increases, partly tracking mineral oil, for which it is now deemed a substitute. Rubber and tea prices remain low, but have shown a slight upturn in the third quarter of 2016. Sugar, which is largely grown for domestic demand in PNG but sometimes exported to the US, has seen a more substantial price appreciation during 2016.

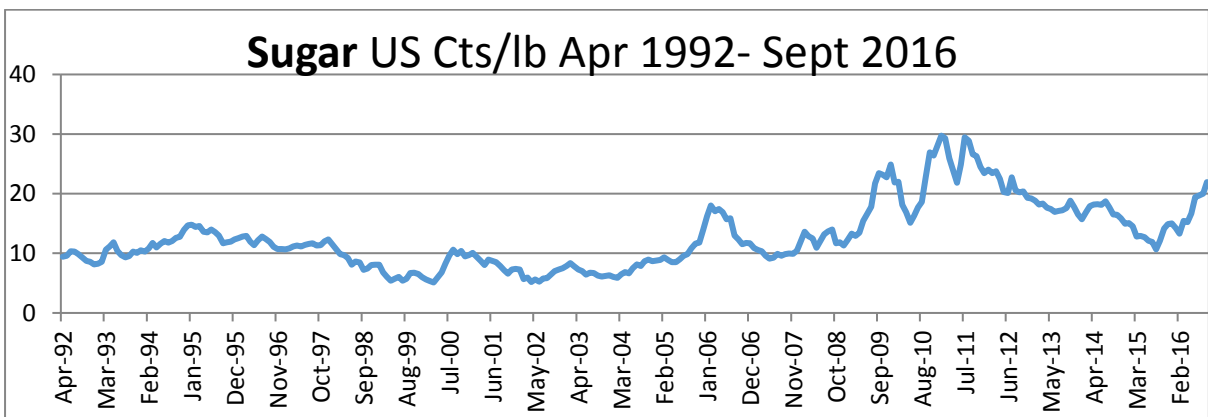
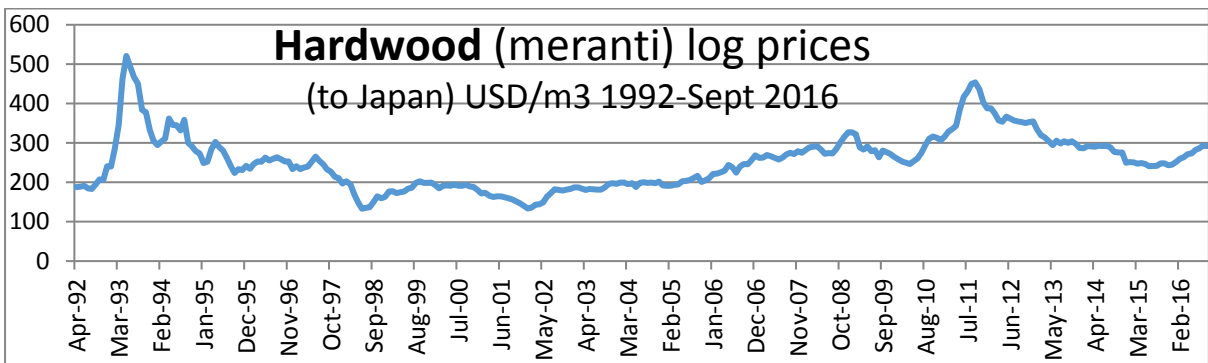
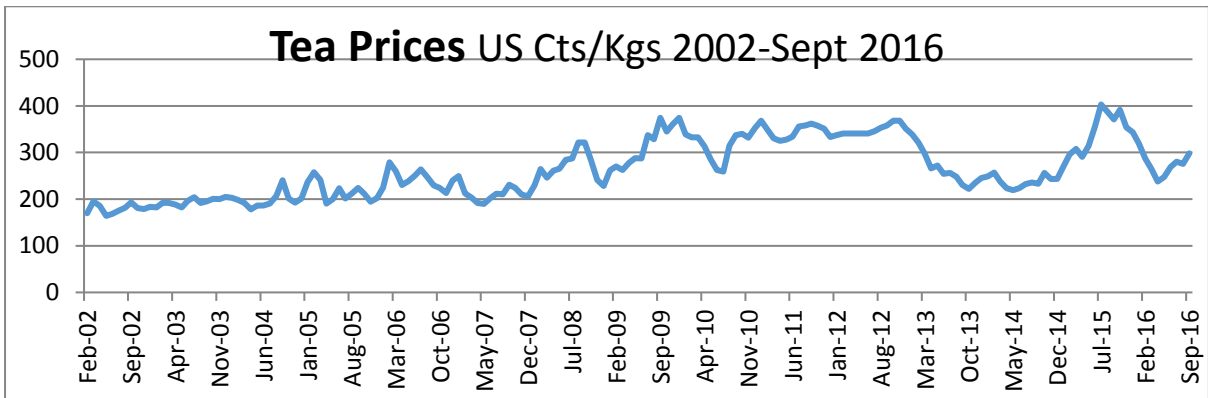
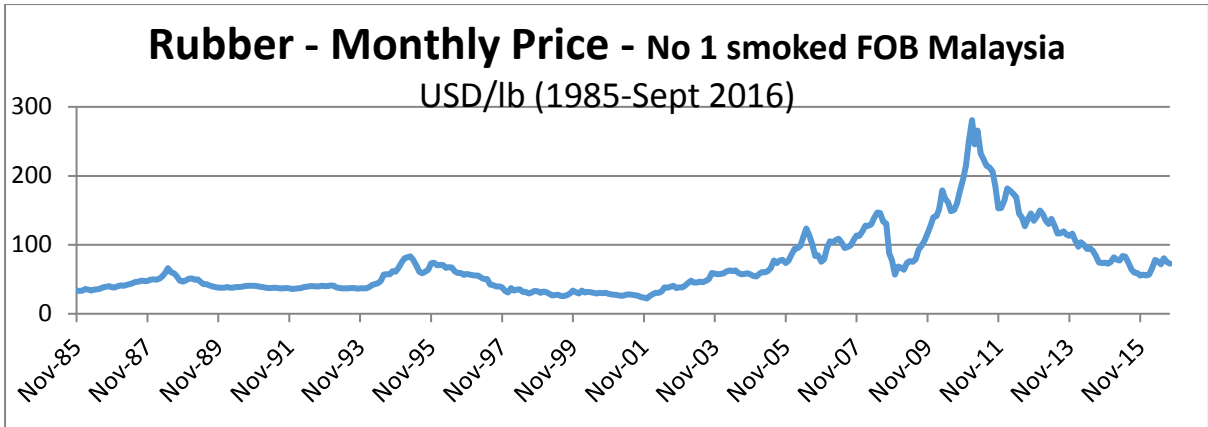


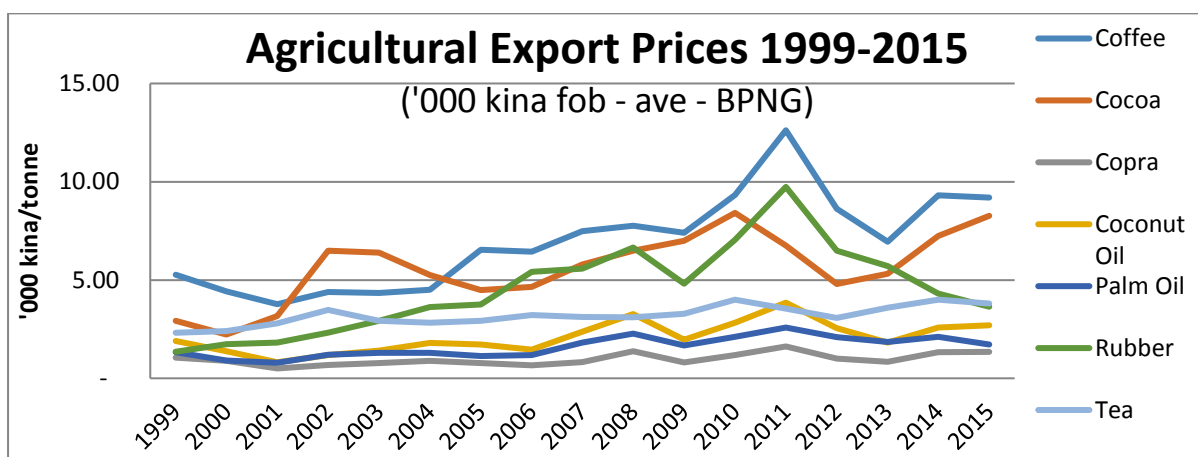
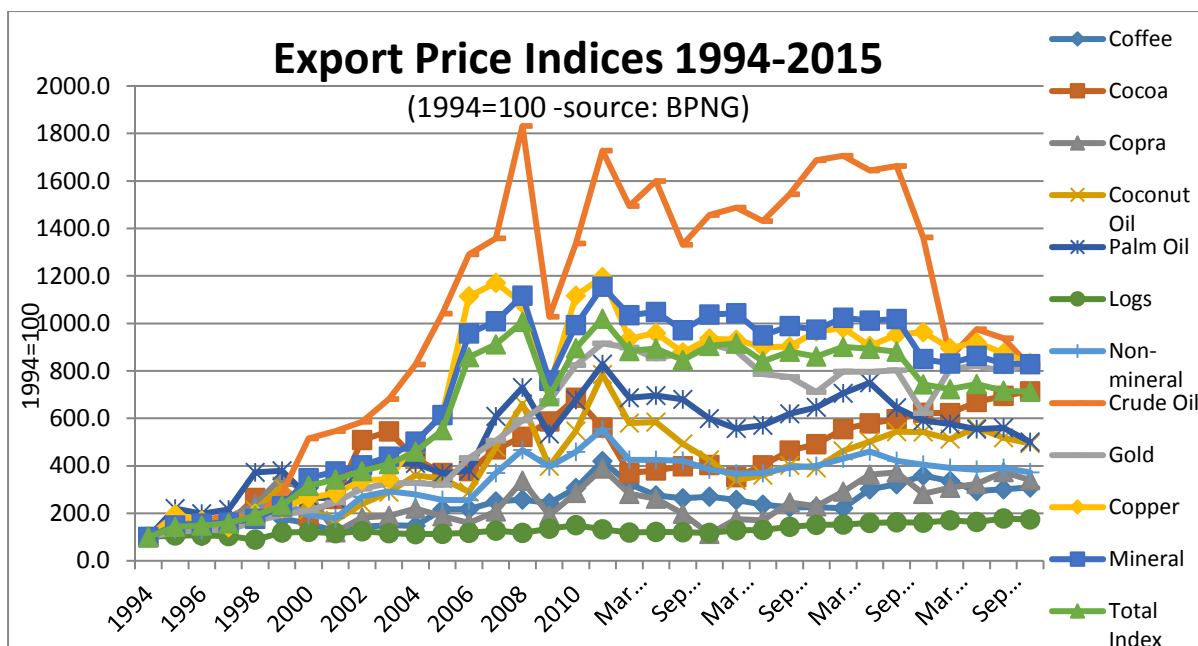
Longer term price trends are invariably hard to gauge, but while there are clearly shifts towards 'greener' energy, the medium-term prospects for gas remain sound, in substituting for higher emission coal, notably in China, especially for accessible suppliers in this region, while demand for other raw materials in East and South Asia will only be subdued temporarily as some of their markets take stock. The demand and prices, for higher value agricultural products, including cocoa and coffee, are also likely to maintain steady growth, and especially with supply constraints in various countries, including in West Africa.











Evolving Commodity Markets and Development Models: Although the major developed economies, such as EU, remain the major markets, their economic performance in recent years has been flat and financial and fiscal conditions often turbulent, but their role in global economies and markets remains strong, but no longer dominant. Some of the BRIC countries, such as Brazil, have taken an economic (and political) hammering in recent months, but nevertheless, despite market disruption, China's growth rate remains robust, it's already overtaken Japan as the second largest economy in the world, and under some yardsticks is hovering towards becoming the largest. India has been the star performer over the past year, although it has started from a much smaller economic base than China. During the recent commodity boom (2011/12) China's share of global industrial production was estimated by the World Bank to be 19.1%, India's 2.6%; China's consumption of primary energy 21.9%, India's 4.4%; for metals China was 42.9%, India 3.5%; for grains China was 22.8%, India 9.6%; for edible oils China was 20.2%, India 11.4%; (at the time China's portion of global population was 19.2% and India's 17.5%).

Far more than India, China's development remains heavily driven by trade, as the world's largest exporter and second largest importer, largely of raw materials, at around 9% of imports, providing a valuable balance of accumulated foreign exchange reserves. It has also suffered many difficulties faced

by developed economies, including high debt levels. India's level and diversity of trade in goods and services is fast increasing. PNG needs to monitor market opportunities for both existing markets and new markets for current and greater value-adding in goods and services, especially as markets in the emerging economies mature. PNG needs to welcome these opportunities, but also negotiate firmly to safeguard its own interests and standards, including protecting beneficial investment conditions, retaining and developing employment and value-added onshore, not overseas, competitive tendering on contracts etc.

The Government introduced the Responsible Sustainable Development Strategy (STARS) in 2014 to reduce dependency upon resource extraction, and emphasise greater value-adding and economic diversification and sustainability, community participation, reduced population growth, whilst wisely utilising and safeguarding the country's relatively pristine natural environment for the future generations. Although market pressure on resources has perhaps eased slightly in recent years, it will invariably recur, as with the notorious SABL land grabbing³, so it is critical for PNG to apply rigorous and universally relevant social, environmental and labour standards and transparent but competitive and equitable investment conditions, so that the country fully benefits from resource utilisation, if and where it is approved, and that back door deals, which undermine the country's future, are exposed and prevented. Resource utilisation should occur at the country's own pace and aligned with its own absorptive capacity, ensuring maximum local engagement and benefits, including local employment and institutional strengthening, and not at the expense of the natural environment, which provides the livelihood for the majority of the population into the future.

Production and Trade: Even before the general fall in prices from 2013, but also since, production has been declining or at least stable for most of PNG's export (and import replacement) commodities, apart from the new hydrocarbon and mineral products, notably LNG and condensate, nickel and cobalt, together with palm oil, timber and marine products and certain newer crops, such as balsa, from the so-called renewable resources sector; these products have shown increased production over time. Food production for the domestic market has also increased widely, generally in line with local population growth, both for sale and for subsistence needs, but old cash crop plantings have widely been semi-abandoned or converted to food production, in the light of inadequate crop prices and returns, poor market access and extension support and disease (notably cocoa pod borer). Nevertheless, with sound prices and major support, (notably under the PPAP partnership program), cocoa has seen some restoration of production, notably in some main growing areas of the New Guinea islands, using higher yielding and more disease resistant planting material. Coffee has also enjoyed a markedly improved harvest in 2016, after recovery from the El Nino of 2015/16. Copper production and exports were again restored at a low level with the recommencement of Ok Tedi operations.

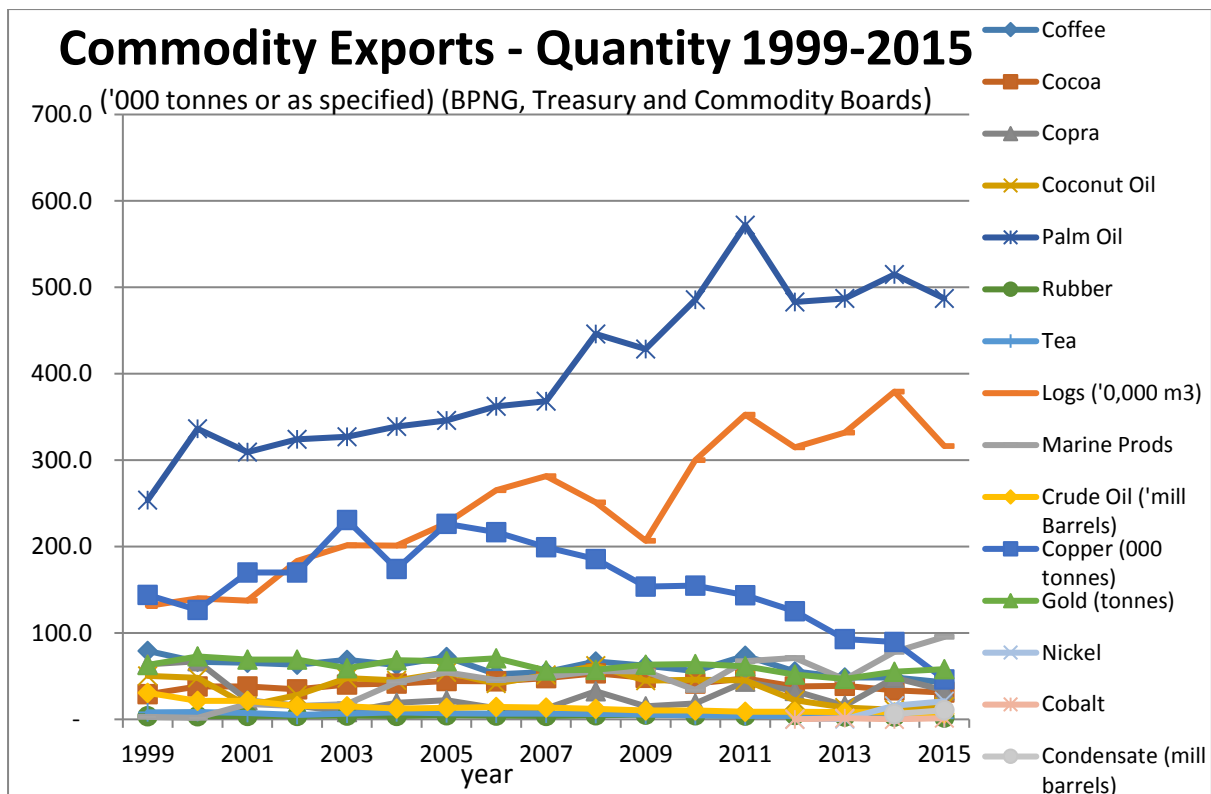
Gold exports were at 58.1 tonnes for 2015, an increase over recent years, despite the disruption for the El Nino affecting 2 mines, but down from the peak years of the early 2000s when it had reached 72 tonnes, or 2010-11 around 64 tonnes. Copper exports for 2015 were down severely to 46,400

³ Commission of Inquiry in the Special Agricultural and Business Leases (commenced 2011), the findings of which were endorsed by the Government in 2014, with a commitment to the revocation of these illegal acquisitions of customary land

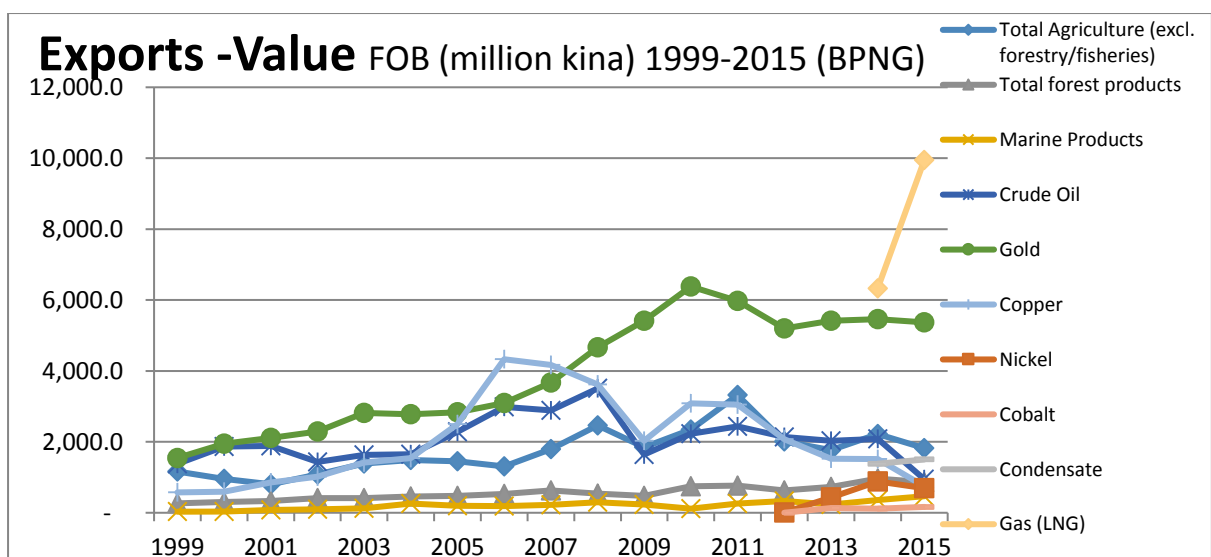
tonnes , from the levels at or above 200,000 between 2003-2007, partly thanks to the 2015/6 El Nino-induced closure, but production and exports had been tailing off steadily from 2009. Crude oil exports in 2015 were down to 6.6 mill barrels, steadily declining from over 30 mill barrels in the late 1990s, above 10 mill barrels before 2010, and above 8 mill to 2014, as the Kutubu and associated fields were progressively exhausted. However, condensate exports, associated with the development of the Hides and related gas fields, commenced in 2014 at 6.2 mill barrels rising to 10.6 mill in 2015. Nickel exports, which commenced in 2012, were reported as reaching 10,900 tonnes in 2014 and 20,900 in 2015 (2016 is, incidentally, the first year of the Ramu mine's 10 year tax holiday). Cobalt exports reached 1,400 in 2015.

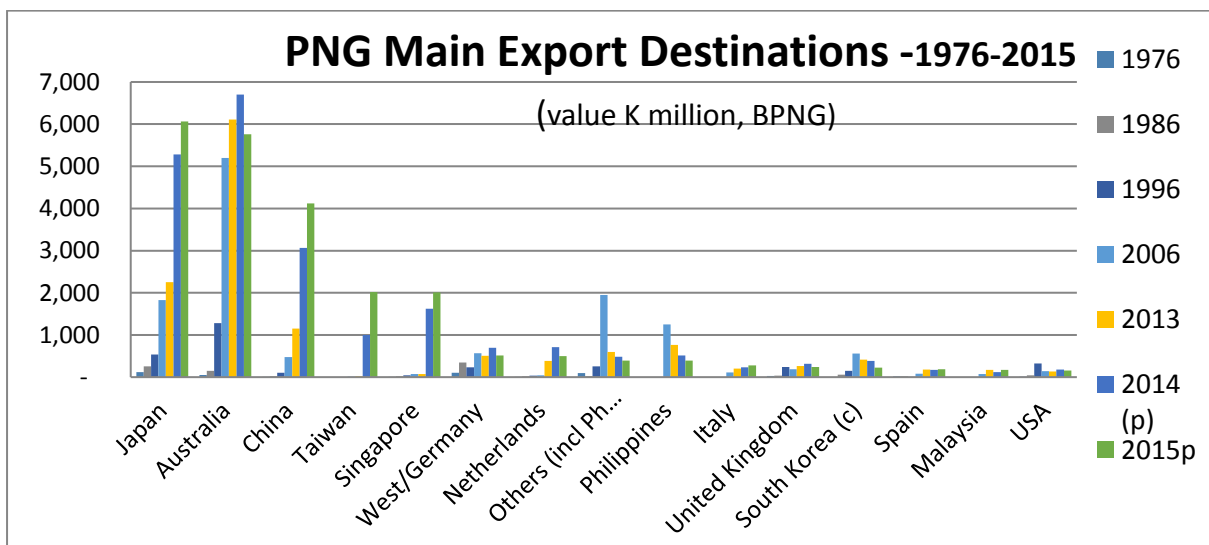
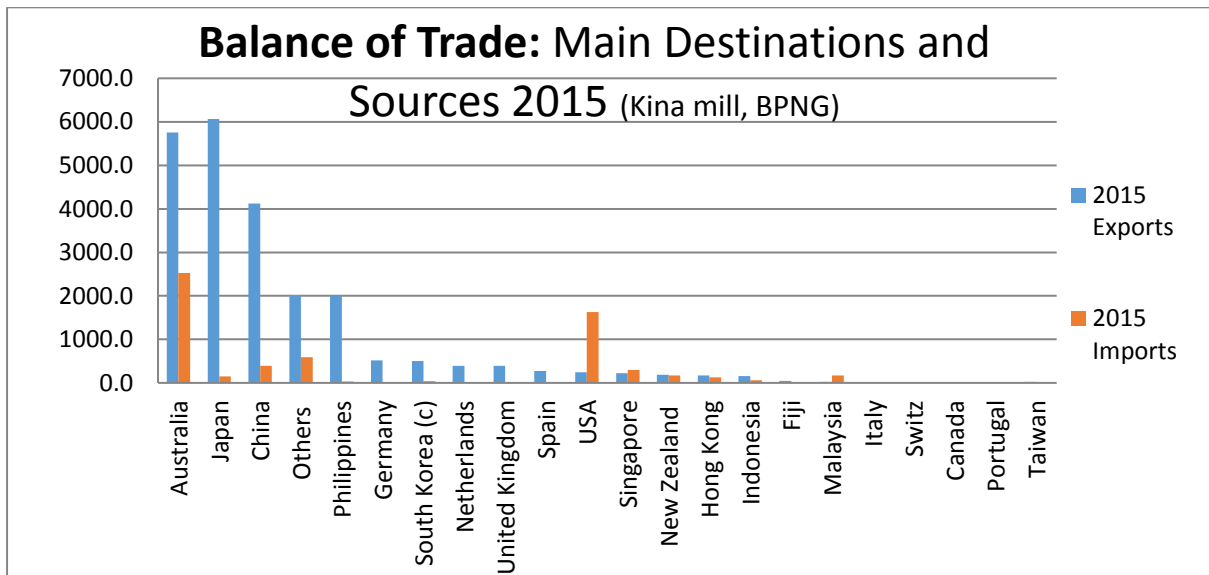
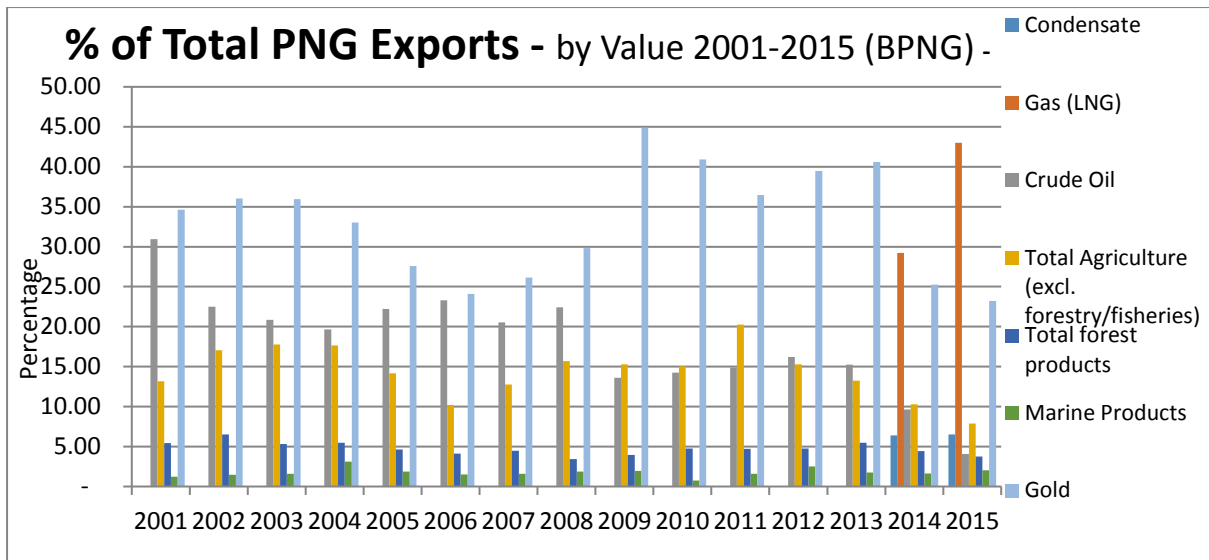
For the main agricultural crops, palm oil exports were at 486,900 tonnes in 2015, slightly down from 514,800 tonnes in 2014, partly owing to the effects of the El Nino. Although lower than the peak of 571,900 in 2011, production levels have been steadily rising from below 300,000 tonnes in the 1990s and 3-400,000 over the next decade. Coffee exports were at a low 42,800 in 2015, declining from 73,500 in 2011 and nearly 80,000 tonnes in 1999, although 2016 has provided a better crop, probably stimulated by the El Nino. The general decline, however, reflects aging trees (and growers), conversion of planted area to other crops and abandonment of coffee during years of lower prices, poor transport access and lack of extension. The PPAP partnership project is helping stimulate replanting and rehabilitation of existing coffee gardens and improved quality and links through the value chain (including certification), both in coffee and cocoa.

Cocoa exports down at 30,900 tonnes for 2015 reflects the steady decline in production from a peak of 53,300 in 2008, resulting from cocoa pod borer and perhaps the 2015 El Nino, despite continued sound cocoa prices, but 2015/16 is also highlighting recovery involving many farmer in parts of the main growing areas of ENBP and ABG, as a result of new clonal material and rehabilitation under PPAP and other support projects, even while other areas are still being infested with CPB (e.g. in East Sepik). For the traditional mainstay cash crop, copra/coconut oil, exports were down to 33,600 and 14,600 tonnes, respectively, in 2015 (from 32,600 and 62,000 tonnes in 2008), as a result of continued weak prices, lack of buyers and transport, aging trees and non-restoration of the coconut oil mill in Rabaul following a fire.



By value, LNG promptly took lead position since commencement of production in 2014 (nearly K8-10 billion of exports recorded for 2015 and estimated for 2016), followed by gold (long PNG's major export earner, K5.4 bill for 2015, and K7.4 billion for 2016), and then agriculture/forestry and fisheries combined (@ K1.8 bill for 2015). Oil continued its decline in both production and value (@ K940 mill 2015, K900 estimated for 2016), trailing behind condensate (@K1.4 bill 2015, K1.5 bill est. 2016). Log exports and palm oil were roughly on a par (at K960m and K940 mill apiece in 2015, K925 mill and K1.1 bill est. 2016), ahead of copper (K750 mill), which had long been one of the three main export earners (leading 2006 and 2007), along with gold (for 11 out of 13 years) and oil. Copper was followed by nickel (@ K760 mill in 2015, rising to est. K1 bill in 2016) and coffee (K390 mill, well below its recent peak of K930 mill in 2011, rising to est. K640 mill in 2016 with a good crop and higher price).





Major focus and expectations have reduced over LNG development, which despite successful and timely commencement of production has clearly been somewhat of a disappointment in terms of early

contribution to government revenue and the wider economy, beyond the construction phase, largely owing to the fall in prices since mid-2014. Its contribution should start seeping through more substantially from 2019, building up in the 2020s, as project financing is progressively repaid. With potential development of further fields from 2019, the industry's central role in the economy will be further reinforced, so long as suitable investment conditions for all parties, particularly the State, on behalf of the PNG's population, but also landowning communities, are applied transparently and in a timely manner. The recent experience, leaving a large hole in revenue, however, certainly emphasises the need for economic diversity, and avoiding overdependence upon any industry.

In agriculture, the most successful export crop over recent years has been oil palm, thanks to being relatively central controlled by the private sector, with major investment in new plantings, processing and marketing facilities, research and innovation, including plant breeding, skilled personnel and standards and suitable partnerships, including with outgrowers and government. The industry, however, is sensitive to price and factors which raise domestic costs and reduce kina returns, which jeopardise competitiveness. A major feature of the PNG industry has been achieving a market premium from provision of RSPO certified 'sustainable' palm oil, which also enables market access. The proposed introduction of a range of regulatory controls, which impose further costs on the industry, or other agricultural industries, would jeopardise capacity to deliver growth, jobs and opportunities, either through the estate or smallholder sector. Nevertheless, oil palm and other crops very much entail partnerships between larger and smaller producers, milling companies and a valuable supporting role for government; these require mutual respect, including in oil palm, with the fair application of the outgrowers' oil pricing formula. Newer entrants into the industry should also be required to comply with the standards set under RSPO, including non-clearance of primary or high grade secondary forest, not planting on steep slopes, adjoining water-courses, etc, whilst developments should only occur with the free, prior and informed consent of customary landowners.



Cocoa grafting in Bougainville, supported by Productive Partnership in Agriculture Program (PPAP)

Increased log exports, (rising from 1-2 mill cu metres in the 1990s, 2-3 mill m2 in the 2000s and 3-4 mill m2 in the 2010s) reflect both stronger prices, weak allocation and oversight and failure to promote value-adding, but also use of special agricultural and business leases (SABLS), operating under Forest Conversion Areas (FCAs), obtained without due consent from customary landowners, purportedly for agricultural development. These FCAs make up some 1/3 of the log exports over recent years. Government has committed to foreclosing these operations, following the findings of the SABL Inquiry, but with little tangible action. Landowners have also gained favourable Court Rulings.

Although domestic production of food and stimulants, including sugar for the domestic market and betel nut, form a major part of the economy (substantially un-reflected in GDP data), and have largely grown apace with population, nevertheless major imports of some (now) staple grains (rice and wheat), plus certain other fruit and vegetables have continued, thanks to the high costs of domestic transportation and other marketing issues, and limited local production of grains in PNG. While domestic rice production has certainly increased, it hasn't attracted more extensive or major private investment owing to comparatively low returns, and higher costs than in some other producing

countries. This has tempted a business to seek an exclusive trading monopoly under the pretext of major domestic rice production. Even if it does succeed in raising domestic rice production, the risk is that domestic prices for a staple food, especially for urban households, would be raised, pushing up inflation, especially impacting lower income earners, whilst providing good returns for the investor in the absence of real competition.

PNG's Exclusive Economic Zone (EEZ) is one of the larger ones in the Western Pacific, and embraces some of the richest fishing grounds for tuna, during most seasons. However, the resource is harvested largely by offshore-based international licensed vessels, although since the mid-1990s an increasing number of operators have based part of their fleet in PNG, and established local processing facilities, exporting a portion of their catch from PNG, particularly to the EU market using PNG's preferential access recently extended interim Economic Partnership Agreement (EPA). Exports were recorded for 2012 at 71,000 tonnes, valued at K329.5 million, but reached K466 mill in 2015. This greatly understates the value of produce harvested in PNG waters, with revenue substantially provided from license fees, but without the catch being landed onshore. Domestic fish canning and other processing facilities have been concentrated in Lae, near Madang (including for the planned, if contentious Marine Industrial Zone) and a small loining plant in Wewak, but concern prevails that some plants are used as fronts to enable greater harvesting and transshipment of catch for processing in Thailand or elsewhere in SE Asia.

The sustainability of PNG and the Western Pacific's valuable tuna resource is dependent upon sound research, monitoring, management and enforcement, including with respect to major new fleets eager to harvest these waters. The Partner to the Nauru Agreement (PNA's) vessel day scheme seems more effective than more complex mechanisms based upon allowable catch and reporting, however, rigorous monitoring and verification is required to safeguard revenue and health of the oceans and PNG's archipelagic waters, including the retention of extensive non-fishing, or marine protected areas, to safeguard marine stocks and habitats.

The high investment in mining and LNG exploration and development since the early 2000s was a reflection of both improved prices, combined with more competitive and consistent investment conditions, and relative economic and policy stability. PNG LNG has added practical knowledge for further investment in that industry, but lower market prices and greater policy uncertainty in recent years over various investment-related issues, and increased red tape, including over foreign exchange administration, plus continued high costs of some operations in PNG have put a dampener on mineral investment, especially with capital tighter, including to large western companies. Although, previous optimism amongst mineral investors is more subdued than a few years back, it has regained some traction, on the back of higher gold prices and other positive markets signals, with major projects, including Wafi-Golpu (copper and gold) progressing to potential development, and the long discovered Frieda prospect now gaining greater traction, whilst recognising tangible concerns over the mine's social and environmental impact on the whole Sepik basin.

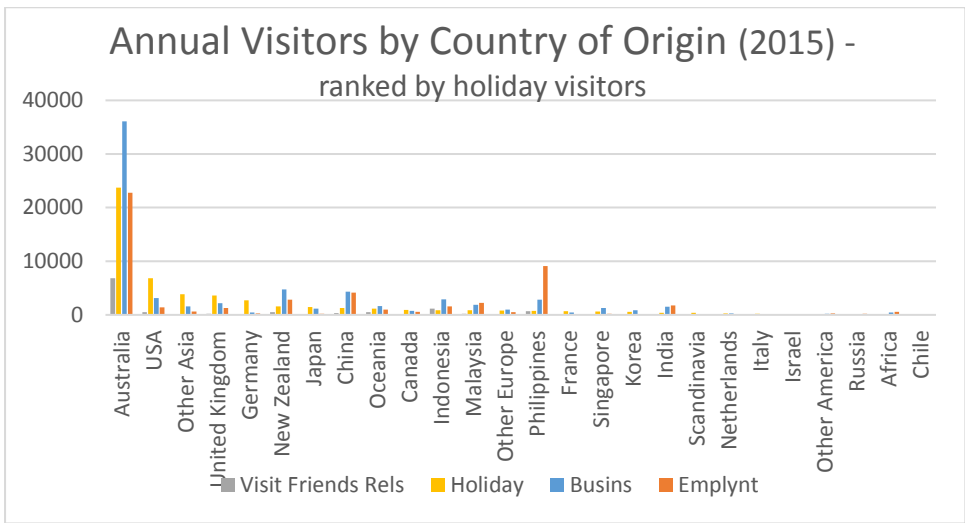
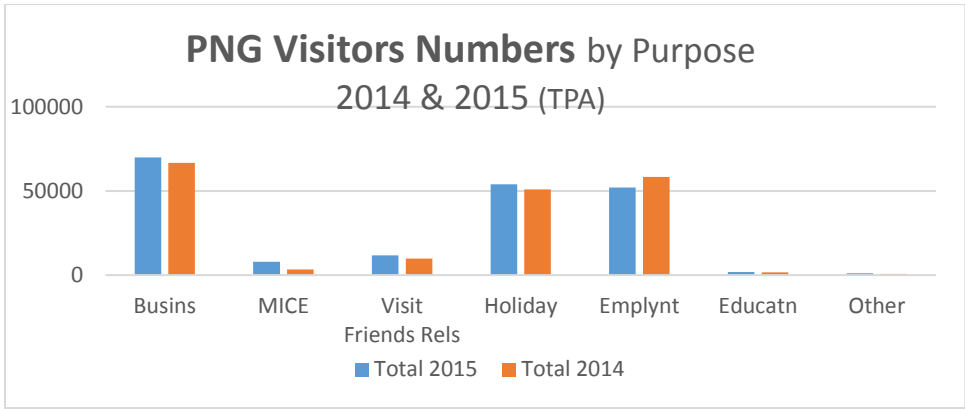
Nevertheless, it is not in the country's or industry's interest to fast-track developments, by passing due process, particularly with respect to landowner identification and consultation, nor to marginalise the central requirement to safeguard PNG's invaluable and sensitive natural environment, upon which the population largely depends, with very vivid lessons apparent from past mistakes.

The main export destinations for PNG's trade have changed and diversified substantially over the years. Back in the 1970s, the main export destination was Japan, for some of the minerals and certain agricultural and forest products, followed by West Germany, particularly for coffee and cocoa and then Australia, UK and Philippines for copra. By the 1990s Australia had become the major export destination, largely for minerals for further processing and on-selling, followed by Japan (oil/mineral, some agricultural and timber), USA, W. Germany, UK and S Korea (timber etc). By the early 2000s this was little changed, although Singapore was also a major destination for Kutubu crude oil, but China was barely an export destination yet. By the mid-2000s, China started becoming a major export destination for minerals and other raw materials, such as logs, as did Philippines partly for on-shipment. By the mid-2010s, Japan is back as PNG's major export destination, notably for LNG, and a range of other raw materials, followed by Australia and then Taiwan and Singapore (for LNG), Germany and Netherlands, notably for agricultural products (palm oil, beverage crops etc.) and then a wider range of other countries.

When it comes to the balance of exports and imports, the main import sources for PNG in 2015 have been Australia (diverse goods), followed by the USA (notably with plant and services associated with the PNG LNG), China, then Singapore. So, although the exports to other destinations outside the Asia/Pacific region remain important, especially for agricultural and fisheries products, with the increased dominance of LNG, the growing preponderance of trade with the E Asia/Pacific region is apparent.

According to the records of the Tourist Promotion Authority (TPA) total overseas visitor numbers for 2014 and 2015 were 191,442 and 198,685, respectively, of which, 79,000 in 2015 were business visitors, and 54,000 recorded as coming for holiday, 11,740 visiting friends and relatives, and 52,000 for employment. Tourism is a mainstay of the economies of some of PNG's regional neighbours. It should be also for PNG, considering the natural and cultural attractions; as a writer for the Lonely Planet Guide described PNG as 'the most interesting country she'd visited'. Australia, followed by US, other Asia, UK and Germany provided the largest numbers of so-called holiday makers.

However, high costs and difficulties of travel and accommodation, certain risks and uncertainty have conspired over many years to restrain the industry. It will never be a mass market destination, nor should be; however, it does have successful niches, for adventure travel (including Kokoda Track and other trails), dive, surfing, cultural shows, bird-watching, historical, and does have some luxury as well as rustic eco-resorts, and latterly has restored the cruise business (which started back in the 1880s) to certain focus areas (e.g. Milne Bay, Rabaul, Madang). Sports events are also a growing niche. More sensitive to law and order problems and costs than many industries, the industry's future across the country, and especially certain provinces and activities, depends upon sound planning, coordination and support, including for needed business and human resource development, security and transport and telecommunications infrastructure and services.



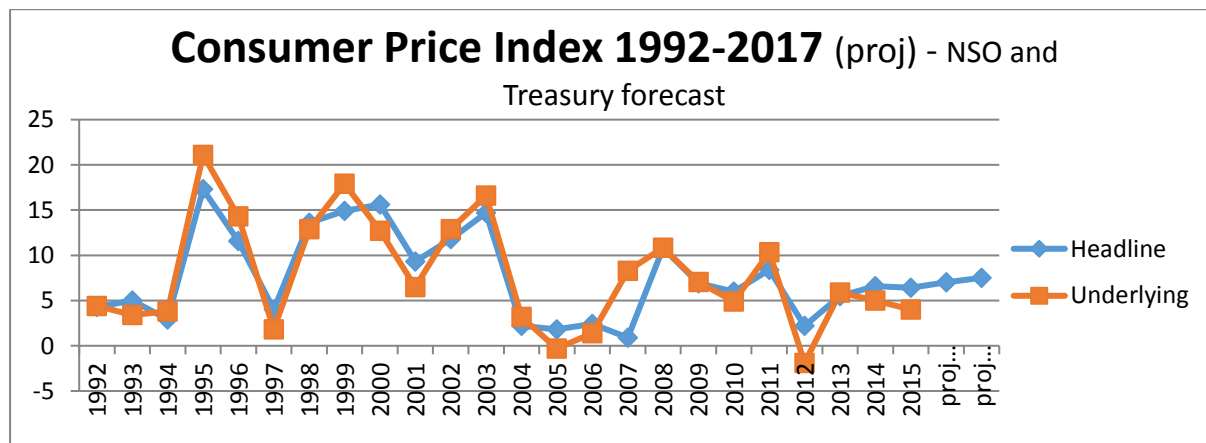
Nulisapi eco-tourist resort in Milne Bay

Economic Indicators and conditions for more sustainable development

Inflation: After the high and volatile rates in the 1990s, inflation was relatively low during the 2000s, but jumped to over 10% in 2008, with the commodity boom and weak fiscal restraint. Inflation fell back in 2009 to below 6%, but resurged with higher commodity prices of 2010/12 and deficient financial control over trust funds.

The CPI rate fell in late 2011 and 2012, with the appreciation of the kina, notably lower global food and oil prices and the removal of school fees under the 'free education' policy. The inflation rate was recorded as 2.2% for 2012, with an underlying rate of 1.9%, but it rose again firmly in 2013 and remained in the 6.4-6.6% range until 2016 (7% estimated by BPNG as of 30 Sept, and a 4-5.5% underlying inflation), driven partly by the weakening kina since 2014, but also factors like the El Nino reducing availability of locally grown food. The Treasury forecast is for CPI to rise to 7% for 2017 (BPNG 7.5%), as a result of the continuing depreciation of the kina, restraint on imported goods and rise in energy prices during recent months.

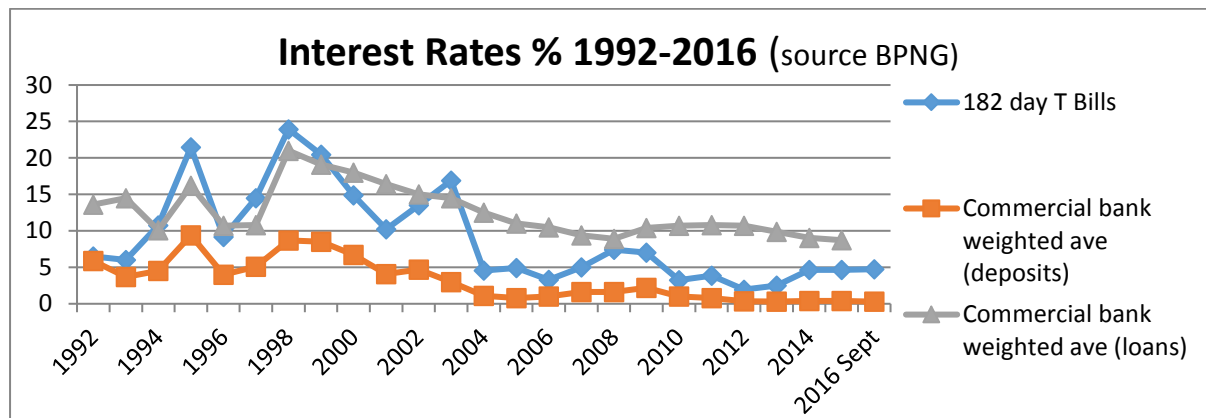
High demand and limited availability of land and accommodation in most centres has long driven up urban accommodation costs. This occurred particularly during the urban boom period when commodity prices swelled and with the LNG construction phase, but also in the face of rural neglect and limited rural opportunities, combined with periodic clearance by urban authorities of squatter settlements, where much of the cities' workforce inhabits. Additional land has been secured, sometimes grabbed, in recent years around some urban centres, including NCD, but this is largely for luxury and higher cost accommodation, with little development of affordable lower-mid cost premises, even sometimes displacing it. Property and rental prices remain high, even by the standards of developed country cities, although high end accommodation and office costs have receded in recent years.



Interest rates: Interest rates on commercial bank deposits remained low from early 2004, and although the average commercial bank lending rate has declined slightly since 2011, the spread between lending and deposit rates remains substantial by international standards, albeit partly reflecting risks, weak collateral and other factors, as well as limited lending competition and readily bankable proposals. The high level of public borrowing to fund the sustained budget deficits since 2012, has resulted in increased interest rates payable for government securities, reflective of levels of perceived risk and exposure by financial institutions and limited take-up of some offers. However, the increased issuance of Treasury Bills for public financing has helped absorb excess liquidity in the

banking sector, albeit balanced by the need for more bankable commercial projects able to stimulate sustainable economic development, particularly outside the extractive sector.

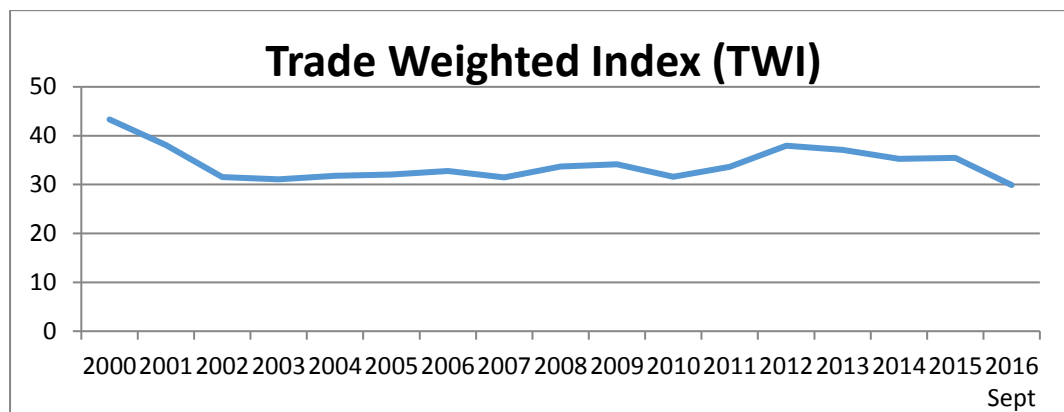
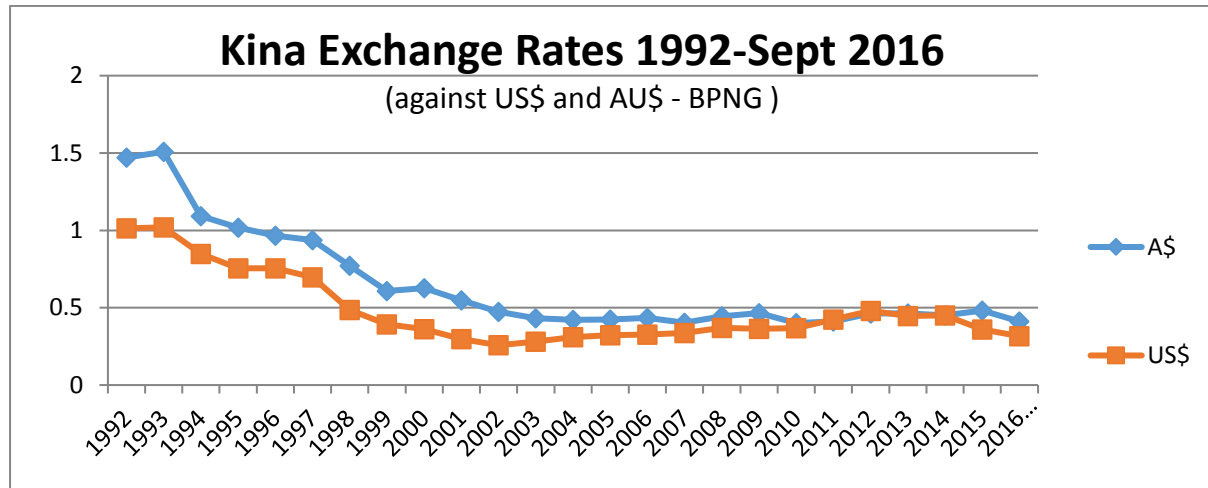
The Bank of PNG has maintained monetary neutrality by retaining the Kina Facility Rate at 6.25 (down from 8% in 2012), reflective of some, but not undue concern over current levels of inflation and financial market liquidity. The 5% increase in the Broad Money Supply in the first half of 2016 (from 2015) resulted largely from continued high government borrowing, while private sector credit was reported to grow over the same period by 3.1%.



The kina exchange rate: the kina depreciated heavily against all currencies in the 1990s, contributing to heavy inflationary pressures during that decade, but assisting beleaguered agricultural industries, experiencing low commodity prices. During the 2000s the kina remained relatively stable, steady against the Australian dollar, but gently appreciating against the US dollar from 2002 to 2012 on the back of stronger commodity prices and then LNG development. With the subsequent fall in export commodity prices and the lack of further major foreign investment into PNG, the kina has fallen against the strengthening US dollar, more steeply and steadily since early 2014. It has remained closer aligned with the Aust dollar, another commodity influenced currency, although also declining against the AUD since mid-2015. The trade weighted exchange rate fell 10.8% from October 2015-Oct 2016, with the kina slipping 11.4% against the US dollar over that period (USD 0.3485 end Sept 2015, USD 0.3155 28 Sept 2016) and 10% against the Australian dollar, and with greater or lesser falls against PNG’s other main regional trading partners’ currencies, including the Chinese Renminbi. These falls have added to imported inflationary pressures, both to household living costs and general business costs.

The scarcity of foreign exchange, including the Bank of Papua Guinea’s restrictions on currency trading since early 2014, restrained levels of transactions, as well as other market interventions, have reduced the pace and extent kina’s fall, although not addressing the underlying cause. Although the government was unable to secure the sought after sovereign bond during 2016, the foreign exchange component of the borrowing from Credit Suisse (USD 200 mill. in August), combined with certain improved commodity prices and exports during 2016, also eased the pressure. Some economists have argued for the market to be left to allow the kina to realign quickly, and that this would restore confidence, discourage speculation and hoarding, and provide a stimulus to export and import replacement businesses to invest and benefit from a more competitive environment.

Others, including the Central Bank and seemingly Government, argue that there would be limited shorter term supply response (e.g. from farmers) from a faster fall in the kina, and that remains more critical to restrain inflationary pressures and sustain stability, including the kina's strength for repaying international debt. They favour letting the kina retain strength until the commodity markets, potentially, strengthen again and the PNG LNG project's overseas debts are progressively paid off, (and/or other major resource project investments bring in further capital).



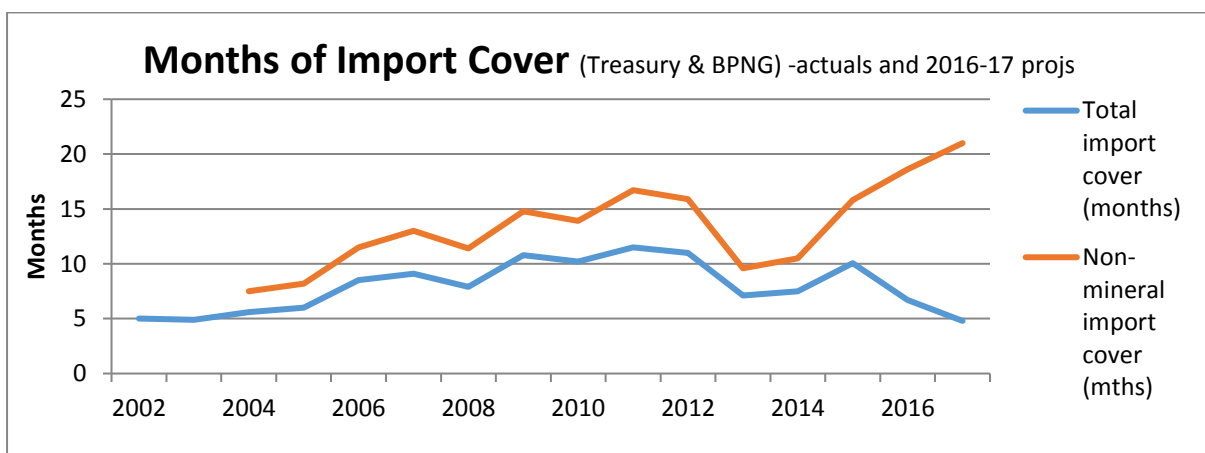
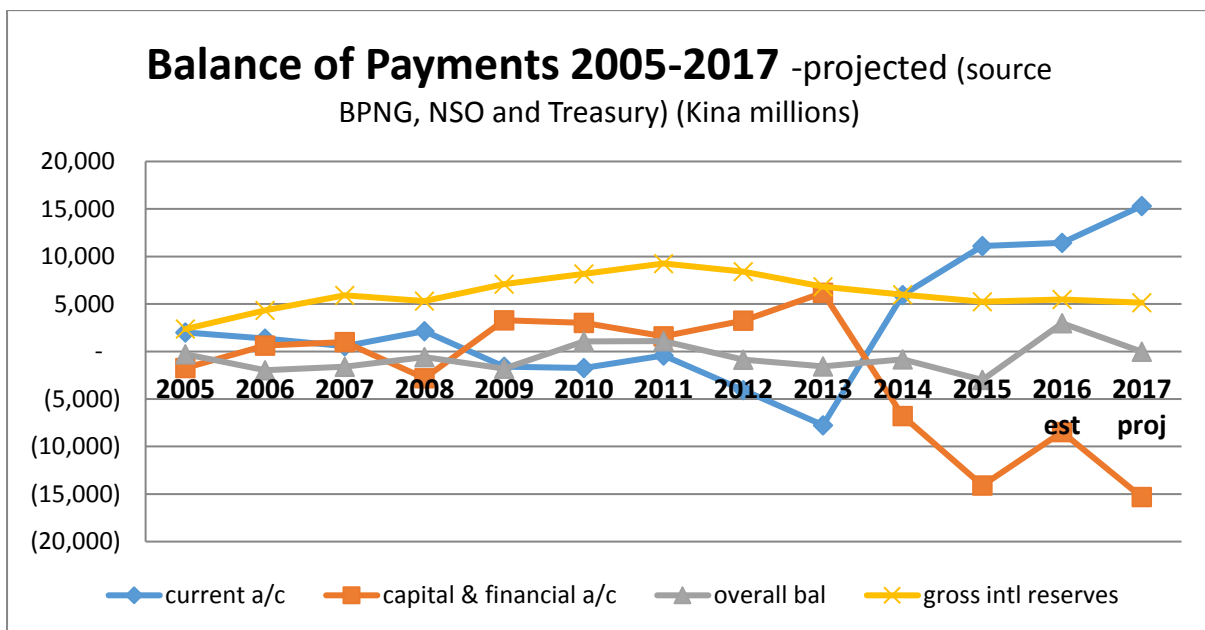
Balance of Payments: PNG had a positive current account balance until 2009, when the major importation of plant and skills for the PNG LNG plant commenced. The current account returned to surplus in 2014, as major project imports wound up and LNG exports commenced (ahead of schedule). Relatively high continued imports in 2014 and 2015 were associated with major public expenditure, partly sustained through ongoing deficit financing. This and the fall in commodity prices, reduced the level of expected trade surplus, however the weakening kina and associated restrictions on foreign exchange transactions subdued the level of imports heavily from mid-2015 and into 2016 (with an estimated 36% decline in imports in the first half of 2016 alone).

The current account deficit was offset by a large positive balance in the capital and financial account during these years, leaving an overall positive balance for 2010 and 2011, and deficit for 2011 and 2012 (of K0.85 billion and K1.5 bill, respectively), together with reduced foreign exchange reserves.

Despite the commencement of LNG exports in 2014, this has been more than offset by the outflow on the capital and financial accounts, leaving a negative balance of K830 mill in 2014 and K3 billion in 2015, but potentially only slightly negative or perhaps a positive balance for 2016. Once the provision

for accelerated write-off on allowable capital expenditure under the PNG LNG Project Development Agreement concludes in 2019, PNG LNG should commence paying tax and the deficits recorded in the financial account to allow for project debt servicing, drop.

Foreign exchange reserves, which were exhausted on successive occasions in the 1990s, were restored progressively during the 2000s, reaching K9.3 billion by the end of 2011, or 11.5 months of total import cover (or 16.7 months of non-mineral cover). By the end of 2013 they were reduced to K6.7 billion, or 7.1 months of total import cover, and down to K5.5 bill at the end of 2015. This, however, is calculated to provide 10.1 months of total import cover (15.8 months of non-mineral cover), in view of the severe reduction in import levels since mid-2015, following the restraint on access to foreign exchange and weaker kina. This may be deemed a successful outcome in some regards, but the foreign exchange restrictions have also cut wider business activity and hence also employment, profitability and revenue collection. It's forecast by the Bank of PNG that reserves will be similar by the end of 2016, but providing only 7.4 months of cover, with imports starting to resume, but that reserves will slip further to K5.1 bill in 2017 and 2018.

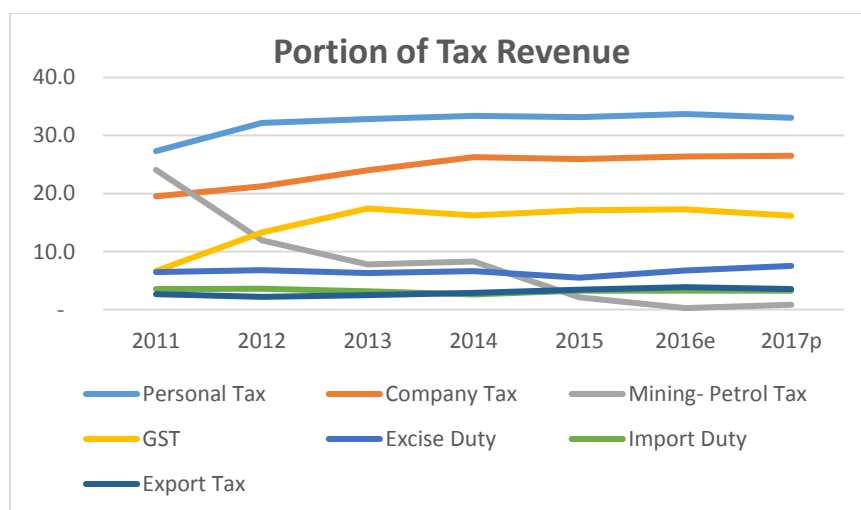


Fiscal Management: Total tax revenue reached K9.6 billion for 2014, dropping back steadily to an estimated K8.4 bill in 2016, notably resulting from lower commodity prices, and temporary cessation

of production from some major resource projects, translating into severely lower mining/oil profitability and tax receipts. In 2016 corporate profits were also impacted in other industries facing the wider economy downturn, and limited available foreign exchange. Personal tax made up 32-34% of total tax revenue from 2012 (K2.8 bill 2016), rising from a lower level hitherto (27% in 2011), when resource tax earnings were higher. General corporate taxes rose from 19.5% in 2011 to 26.4% in 2016, even whilst actual revenue fell slightly from 2014-16, to K2.2 billion. GST rose from 6.6% of tax revenue in 2011 to 17.4% in 2014, and remained relatively steady, proportionately, although also declining in actual collections to 2016 (K1.5 bill) with the lower overall level of trading in the economy. Mining and Petroleum tax, which had provided 40% of tax revenue during the commodity boom year of 2007, dropped back to 12% during the Global Financial Crisis, recovering to 25% during the resumed strong commodity prices early this decade (K1.9 bill: 2012), before steadily falling back, with the lower prices, production disruption and aging resource projects, to less than 0.3% or K22 mill, estimated, in 2016.

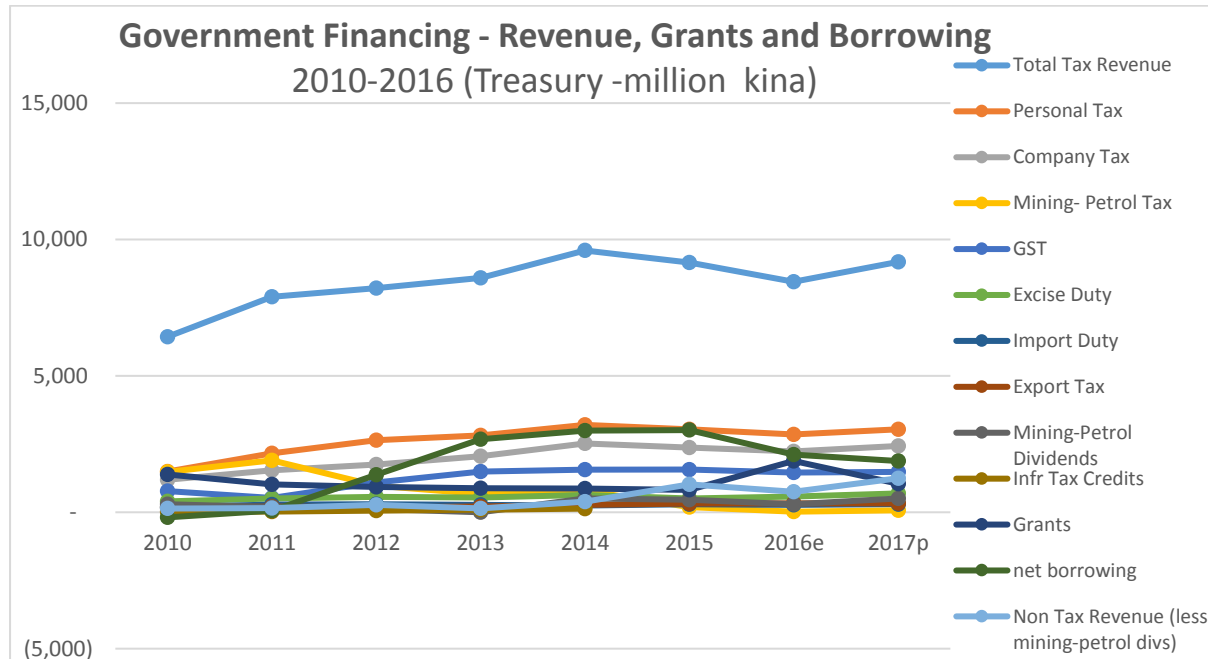
These figures show the extreme volatility of resource revenue in PNG, although also reflect the cycle of aging and new projects, and the shifting revenue arrangements over recent decades, partly to attract new investment. Several major new projects, including PNG LNG and Ramu Nickel, are still largely in pre-taxation stages, with the latter, for example, in its extended tax holiday (2016-2026).

Excise duty (6.8% of tax in 2016, or K571 mill est.) and then export tax (notably on logs – 3.9%), import duty and gaming machine taxes provided most of the balance of tax revenue, also largely declining in total value from 2014-16, except with log exports, which rose in association with increased unsustainable logging, notably with clearance on major SABLs.



Non-tax revenue, which includes dividends from state-owned enterprises, including equity in mining and petroleum projects/entities and some other property income, has risen from 3.9% of total revenue (excluding grants) in 2011, to 13.9% (approx. K1 bill) in 2015, and an estimated 11% in 2016. Mining and petroleum dividends, made up about half of state dividends in the early 2000s, rising to over half in 2014 (4.8% of total non-grant revenue, or K507 mill), before tailing off with the lower commodity prices to K300 mill (3.2%) in 2016. The SOEs are a source of expected increased revenue in 2017, based upon firmer rules on dividend transmission to the State. How realistic that will prove, must be seen, considering the weak capital base and performance of some State entities, including utilities, but also concern over their misusing their dominant market control.

Grants from development partners have provided a declining amount and portion of total revenue and grants early this decade (dropping from K1.4 bill in 2010 to K1 bill , or 10.9%, in 2011), to K0.8 bill (7.4%) in 2015. The figure increased in 2016 again to over K1 bill with certain major grant programs (including from Australia, the major single donor) and budgeted for K1.4 billion for 2016 (10.6% of total expenditure).



The Budget went into deficit from 2012 and each year subsequently, albeit not planned at the levels which occurred. The Treasury currently forecasts that the Budget will continued to entail deficits until 2022, albeit on a declining basis, but thereafter revenue from LNG and wider economic growth will be sufficient to bring the Budget into balance or surplus, assuming adequate fiscal restraint.

The annual deficit burgeoned steadily from K1.4 billion in 2012 to just over K3 billion in 2015, thanks both to the fall in commodity prices from mid-2014, and related factors, but also to some major expenditure programs, both related to the Government’s stated priorities in education, health, infrastructure, districts and law and order, but also major events, notably hosting the 2015 Pacific Games in NCD, which turned out disproportionately costly. Unduly optimistic revenue forecasts and slow adjustments to market conditions allowed the deficits to swell, before adjustments were applied with Supplementary Budgets late in 2015 and (more timely) in 2016. The belated adjustments meant the axe fell heavily on some important expenditure priorities, that hadn’t gained earlier release of warrants, including critical church health and education services.

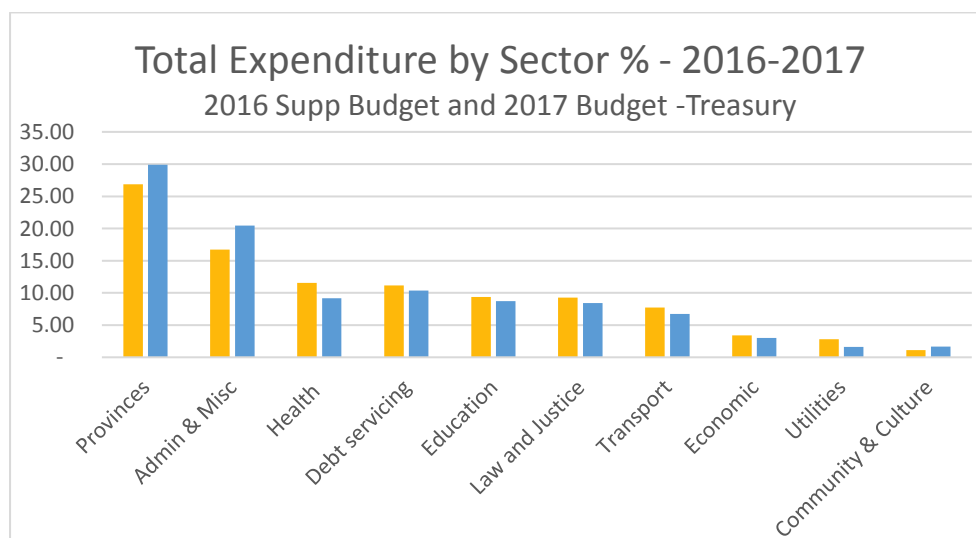
Nevertheless, the principal of deficit financing to stimulate growth, including job creation, is widely applied around the world during economic downturns. PNG entered a downturn of broad-based economic activity mid-decade, with the end of LNG construction and the commodity downturn, despite a high prevailing GDP growth rate. It remains in that relative downturn. The problem was that substantial deficit financing had already been occurring since 2012, even during commodity boom, and the accumulated debt level becoming harder to finance and the debt servicing costs more burdensome.

As shown under debt (below) initiatives have been taken to diversify and reduce the deficit financing cost, whilst simultaneously securing additional foreign exchange. This remains 'in progress', with sustained financing from the domestic market, sovereign bond deferred, some overseas commercial credit secured, the use of concessional finance for some major infrastructural projects, but costlier Exim-bank loans financing other project expenditure, with associated tied contracts undermining prospective local participation and benefits.

Expenditure is meant to be tied to a hierarchy of national visions, strategies and plans, including Vision 2050, the Responsible Sustainable Development Strategy (STARS), Medium Term Development Strategy and sector strategies, coordinated at the national and subnational levels under a new National Planning Framework and legislation. This coordinated process, linked to clear needs and priorities, including international and national development indicators, invariably runs up against immediate political expediency and other factors. With an Election year in 2017, expenditure prioritisation and revenue measures face these challenges and dilemmas.

The principle increases in the 2017 Budget were for 'administration', 23% (but including Election management, APEC 2018, justified apparently under investment promotion, and administrative measures, such as the NID rollout), 'Provinces' 12%, including sustained DSIP/DDA and ward level funding and largely donor-funded initiatives under 'Community and Culture' (50%). Every other sector faces a cut, ranging from 42% for utilities, 21% health, 13% transport, 12% 'economic', 9% law and justice, and 6.5% each for debt servicing and education. The figures are somewhat confused by inclusion of donor-funded projects, but provide an indication of expenditure adjustments from tighter budgetary conditions, despite being an election year.

Government says they are safeguarding key priorities, such as free education and health, but concerns are expressed that these components have added costs, including students, to demand, whilst the core operations and capacity of the health and education infrastructure are struggling. Likewise, there are concerns over the realism of reduced debt servicing costs, when the debt level has risen by an extra K2 billion. The relative priorities of APEC and some poorly planned, administered and overseen DSIP expenditure, as against other public goods, from infrastructure maintenance to basic services, will no doubt be debated, whilst the capacity to secure the additional revenue from taxation and SOEs will be challenging, without major further investment in collection services.



Ensuring more effective utilisation of public funds, to provide quality public goods as a basis for empowerment, economic activity and improved social indicators, requires strengthening the budget process and accountability, including problematic district grants. This in turn requires both supply of improved quality and timeliness of budget material provided, greater public literacy, numeracy and budget awareness, down to the local level, driving demand, together with effective reporting mechanisms, official oversight and penalties for abuse.

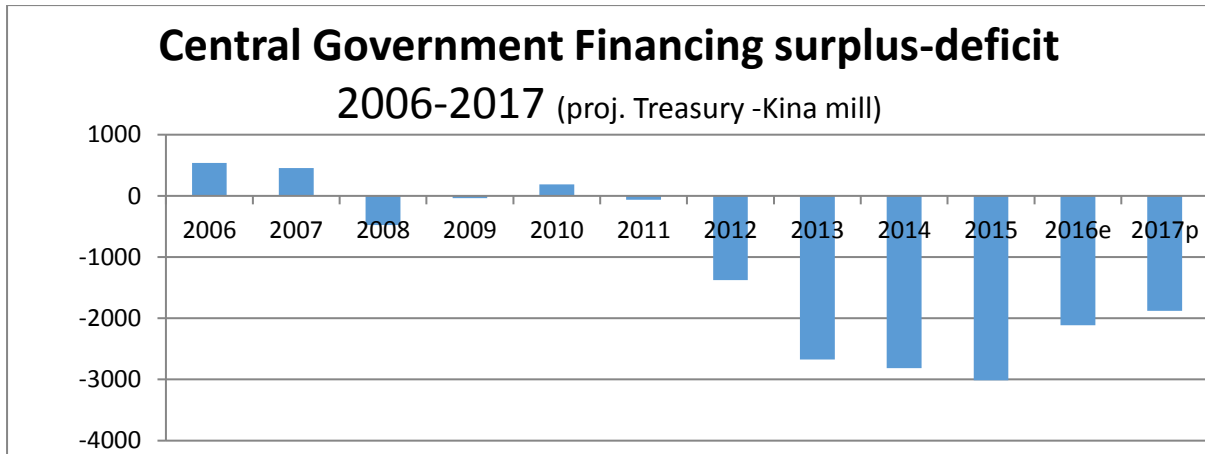
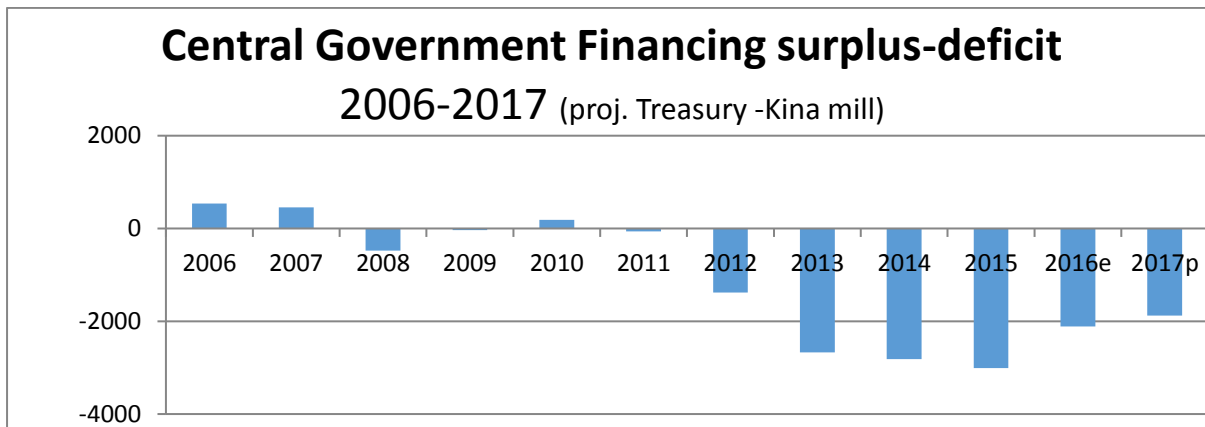
The Government has committed itself during recent years to various initiatives for improved governance, including freedom of information, whistle-blower provisions, fiscal transparency, and administration of the proceeds, licensing and other aspects of extractive industries, to ensure better national and local outcomes; this includes gaining membership of the Open Governance Partnership in 2015, and as an applicant for the Extractive Industries Transparency Initiative (EITI) in 2014.

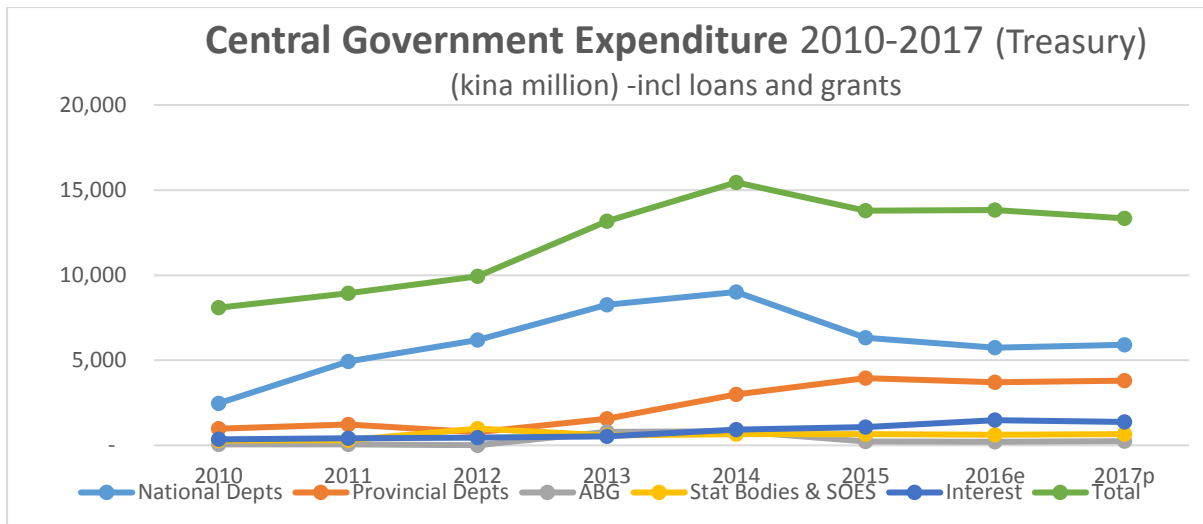


The Sovereign Wealth Fund was legislated in early 2012 to take receipt of revenue from extractive industry projects following extensive industry and public consultations, including in the regions. The structure for the Fund was modified in 2015, and preparation now underway for appointing its board and management. The functions of the fund, namely to stabilise revenue and expenditure and sanitise major earnings into kina, have been somewhat undermined by missing the last resources boom. However, even if current forecasts don't foresee immediate potential buoyancy in the commodity markets, conditions can change unexpectedly in a short period.

Expectations of future earnings from the resource sector in PNG, including from PNG LNG, have tended to be unrealistically high, undermining recognition of the need for consistent investment in human capital and improving wider investment and business conditions. This is highlighted by the limited current revenue from the resource sector, with the economy and revenue falling back upon the non-

mineral sectors. However, when revenue does flow through from current and potential resource projects, and if commodity prices swing up again, it is critical to have the SWF fully operational, and transparently managed, at arm's length from day to day political pressures. The experience of MRSF in the 1990s, and more recently dispute for control over PNGSDP (a nascent SWF), provide a poor harbinger for the SWF. Such funds can be an immensely valuable tool, both to invest for the future and safeguard core routine expenditure from the vagaries of short term revenue fluctuations, as well as sanitising the currency from destabilising appreciation, which undermine other industries (Dutch disease); however, funds that fail to meet the higher standards under the Santiago Principles are ineffective, and can be more destabilising and damaging than if non-existent. Going for the gold standard from the start and sticking with it is essential for a publicly-owned and accountable PNG Sovereign Wealth Fund.



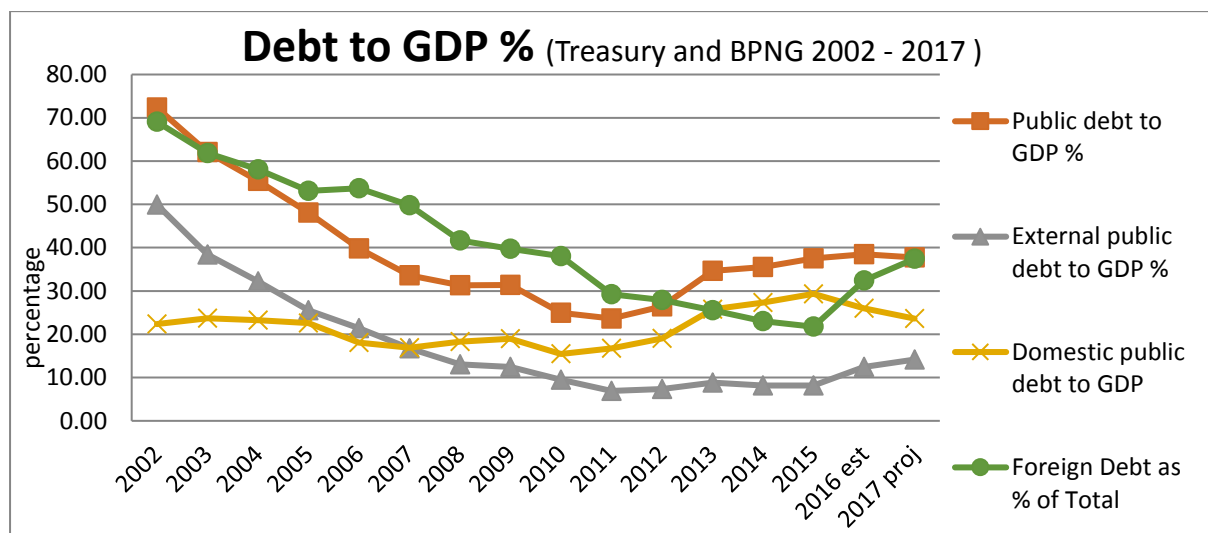
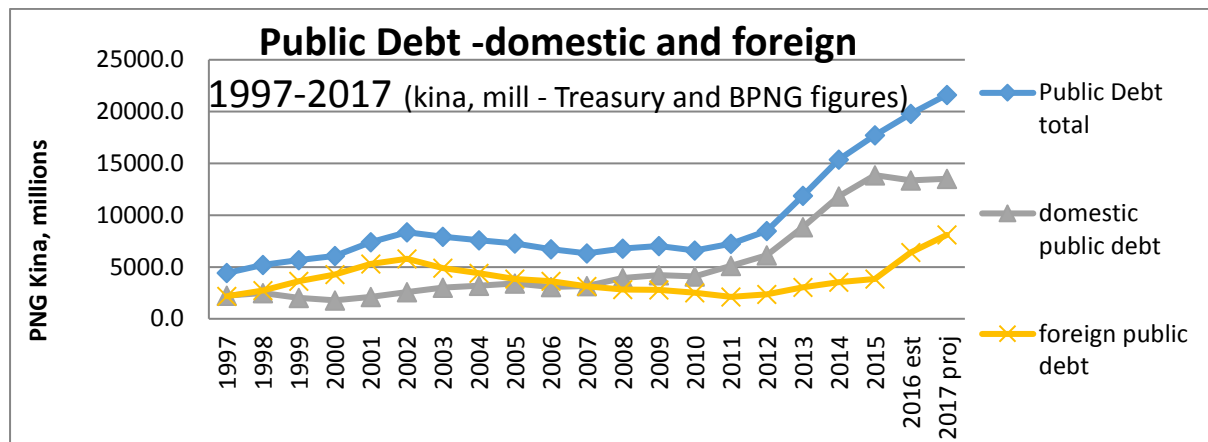


Debt: Public debt to GDP was reduced successfully from 72% of GDP in 2003 to K7,238 mill, or 23.2% of GDP, by the end of 2011, largely through economic growth, but also expenditure restraint and progressive debt repayments. However, by late 2014 it had returned to 35.5% of GDP (K17.7 billion), according to Treasury's own figures, in excess of the prudential ceiling set under the *Fiscal Responsibility Act*. The allowed ceiling was raised from 30% to 35% for the years 2013-2015, with the aim of reigning it back to 30% thereafter. Since then, with continued deficit financing, the level of debt has accumulated to an estimated K19,785 mill in 2016 (officially recorded as 29.4% of GDP, in relation to the growing level of GDP, although still recorded above 35% under other calculations).

Debt to GDP figures in PNG are invariably problematic. In 2015 the IMF argued that debt to GDP was underestimated, and should be nearer 56%, including from their assessment that GDP was about 10% overestimated. On the other hand, under an extensive review of GDP estimates by NSO, with ABARE, it was determined that GDP is about one third higher than recorded over recent years. Treasury has been extrapolating GDP figures for the past decade without actual NSO calculations, so it's fully recognised that the figures may poorly represented the scale of the economy. A larger recorded GDP figure, however, certainly, and conveniently, reduces the official debt to GDP figures, and makes debt appear more manageable.

There is clearly nothing sacrosanct about 30% debt:GDP, and this is clearly below debt levels of many countries, but debt servicing imposes a substantial burden and diverts funds from other immediate needs, and, apart from being a legal mandate, 30% provides a useful ceiling for responsible debt management, although the appropriate level must be determined against debt sustainability and the capacity to service that debt during market uncertainty. Assuming no major disruptions to LNG operations, or further slump in energy or other commodity prices, and assuming expenditure levels are restrained and kept at manageable levels, then this figure should be sustainable and affordable, so long as it embraces the State's full debt exposure and that current/future resource projects pay their fair share of resource rental, so that GDP reflects revenue-raising capacity. There are concerns over the level of additional contingent and other potential liabilities, outside these debt figures, notably by SOEs and owed to superannuation funds, or from Court Rulings against the State, for example. It is critical for the State, when seeking a competitive cost of capital from a sovereign bond or other source, to provide the market (and public) full and transparent disclosure of State liabilities, as uncertainty or risk imposes additional premiums.

Capacity for servicing major debt will be heavily restrained, at least initially, so it will be crucial to adhere to firm borrowing limits, and only to fund priority expenditure generating broader-based economic development (including maintaining and upgrading essential infrastructure) and core public goods/services, avoid overpriced or white elephant national and district projects, commercial investments better left to the market, and additional expenditure with self-perpetuating incremental costs or burgeoning maintenance obligations.



Investment Conditions and Mechanisms for Addressing Industry Issues: Key impediments to business and investment in PNG are highlighted in the INA's Private Sector Assessment conducted every five yearsⁱ, which ranked law and order problems, corruption, the poor state of transport infrastructure, deficient electricity infrastructure and provision, availability of skilled labour, political and policy/rule instability, followed by inadequate ICT infrastructure/high costs, as the most serious impediments. The next survey is to be conducted in 2017.

Since the 2012 survey, and with several initial years of strong economic growth and strong revenue, there have been extensive improvements to infrastructure in certain main urban centres, including NCD and Lae, and to several main highways linking provincial capitals such as Kerema, and districts around the country, such as Kandep to Mendi, Kundiawa to Gembogl, and sections of the New Britain and Buluminksi highways. There have also been major upgrades to certain port infrastructure, notably Lae and to some main airports, such as Mt Hagen and Hoskins. In some districts there have been rural

roads and jetties and, with the support of the new Rural Airstrips Agency, upgrades to some rural strips. Work is ongoing on linking the fibre optic network from Madang through the Highlands and Hides to the Capital. PNG LNG has provided additional power capacity to NCD and will be further upgrading it. The mobile phone networks have been extended and widely upgraded to 4 and 3G, although service competition remains restricted to main centres. Radio and tv networks have expanded, using different technologies.

However, the underlying challenges to large and small businesses and households across PNG, remain largely the same. Basic infrastructure is fragmented and widely impassable or unmaintained. Rural services are severely inadequately resourced, placing a major burden on the functioning facilities in main centres. Little tangible has yet been implemented to address governance and corruption issues, with plans needing to progress to fruition. Measures to improve needed reliability and transparency of land administration have consumed substantial funds, but produced limited apparent outcomes to date. Needed skills development, as with TVET, remains constrained both by weakness in the standards of basic education, lack of resources for the backlog of prospective students and weak coordination between three main agencies, each with some responsibility.

With, and prior to, the current downturn in economic activity, many firms with long involvement as investors in PNG, have hesitated over needed reinvestment, or upgrading, because the challenges, with securing land title, or various required permits or transaction approvals, have seemed increasingly hard or cumbersome, and some policies and prospective laws, related to land or other resources, or reserved lists, as well as exclusive licenses (such as for rice trading) have added risks, uncertainty and delays.

PNG is a high cost place to conduct most business. It has extensive resources for a diverse range of extractive, but also sustainable activities in production and service industries for local and some international markets, but costs need to be brought down and become more competitive, including by improving the quality and reliability of public goods, including law and order and regulatory functions, but also encouraging investment and competition, whether in shipping, banking, even ports, ICT or other service provision and skills and productivity. The role of government needs to be more facilitative, routine, automated and transparent, such as with Customs with Asycuda, and IPA with online registration and searches. Exclusive discretion of individual politicians or officials in decision-making encourages malpractice and investor uncertainty, and needs to be phased out, where possible, and where reserved activities are retained for locally owned businesses exclusively, this should be made clear and the rules applied firmly, but for other industries, where overseas full or partial investment is permitted, it should be openly facilitated, but subject to a level playing field, with tax, superannuation, minimum wages and other requirements applied without formal or collusive exemptions, otherwise the legitimate businesses will in due course be squeezed out by fast operators, and PNG's businesses sector will deteriorate, with revenue and obligations to employees and community service obligations displaced by more ruthless or locally uncommitted operators.

Constant dialogue is critical for government with the country's private sector, as with wider civil society, if all parties are to complement each other effectively, with private sector driving the economic growth and diversity, generating employment and providing goods and services and trading competitively. Various new partnership initiatives between government, private sector and communities, including church and civil society partners, have been launched in recent years, but

government needs to be a committed and listening, not autocratic or bullying partner, if the arrangement is to progress and sound outcomes achieved.

Papua New Guinea is a young country, with an able population eager to learn and work, but often with few opportunities for education, skills development and formal sector employment. Much of the workforce will remain in 'informality' long into the future, so prospects both for these micro-enterprises, as well as for those able to shift to the formal sector, as going concerns or employees, need to be encouraged. PNG's economy will invariably see many changes, with both longer or short term opportunities availing. Its workforce and local businesses need the skills and capacity to adapt and take prevailing opportunities, including activities with sound, proven and long term prospects, some in traditional industries, such as tree crop agriculture and fresh produce, for which there remains a growing global demand, particularly for quality and exotic produce. But gaining better returns both by lowering risks and marketing costs and capturing premium prices for producers from value-adding is a must.

