

2014 PNG UPDATE

University of
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New
Guinea



Australian
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University

‘PNG Economic Boom: Opportunities and Challenges’

(Jointly organised by School of Business Administration, The University of Papua New Guinea (UPNG) and Development Policy Centre, The Australian National University (ANU))

12th and 13th June, 2014

Main Lecture Theatre (MLT), University of Papua New Guinea

Program and Abstracts

Sponsored by:



School of Business Administration
University of Papua New Guinea
Waigani, NCD, Papua New Guinea

This book contains collection of abstracts of papers presented during 2014 PNG Update conference on “PNG Economic Boom: Opportunities and Challenges”, held on Thursday and Friday, 12th and 13th June, 2014 at Main Lecture Theatre, University of Papua New Guinea.

The 2014 PNG Update discussed and debated the contemporary economic and social developments and related issues in Papua New Guinea (PNG). The 2014 PNG Update is multi-disciplinary in nature. The following contemporary issues of Papua New Guinea are highlights of the event:

- PNG’s economic outlook
- Strategies to convert the resource boom into development
- Social issues in a booming economy
- Facilitating broad economic development – agriculture, fisheries, tourism etc
- SMEs and economic competitiveness.

In order to facilitate more debate on issues which have impacts on national interest all sessions were open to general public, policy makers, bureaucrats, professionals from public sectors, private sectors and non-governmental sectors, students and others.

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Technical Program

DAY ONE - (Thursday) 12 June 2014	
Main Lecture Theatre (MLT), UPNG, Waigani, NCD	
Welcome, Inauguration and Key Note Address	
09:00 – 10:30	Welcome Address Prof Albert Mellam, Vice-Chancellor, University of Papua New Guinea
	Inaugural Address Her Excellency Ms. Deborah Stokes, Australian High Commissioner of Papua New Guinea. (TBC)
	Key Note Address Hon Mr. Patrick Pruatich, Treasurer of Government of Papua New Guinea (TBC).
10:30 – 11:00	Refreshment Break
PNG Economic Perspectives: Part I – Chair-Lawrence Sause	
11:00 – 12:30	PNG Economic Perspectives: Loi M. Bakani, Governor of Bank of Papua New Guinea (TBC).
	PNG Economic Perspectives: John Gibson, Waikato University
	PNG Economic Perspectives: Stephen Howes, Development Policy Centre, ANU
12:30 – 01:30	LUNCH BREAK
PNG Economic Perspectives: Part II – Chair – Stephen Howes	
01:30 – 03:00	PNG Economic Perspectives: Ivan Pomalu, Managing Director, Investment Promotion Authority, PNG (TBC)
	PNG Economic Perspectives: Aaron Batten, Country Economist, PNG Resident Mission, Asian Development Bank
	PNG Economic Perspectives: Part II Peter Graham, Managing Director, Exxon Mobil (TBC).
	PNG: Fiscal Policy at a Crossroads Yongzheng Yang, Resident Representative, Office in the Pacific Islands, IMF

03:00 – 03:30	Refreshment Break
From Resource Boom to Development: Role of Public sector: Chair – Elly Kinkin	
03:30 – 05:00	Changes in service delivery over the last decade Andrew Anton Mako, National Research Institute & Anthony Swan, Development Policy Centre, ANU
	Trends and changes of gross domestic product and budget expenditure of PNG: Has economic development also has been taking place? Gomi J. Gibe, Applied Economics, Department of Business Studies, PNG UNITECH
	Public sector pay scales: Are PNG academics underpaid? Thomas Wangi, UPNG & Stephen Howes, ANU
	Capacity building through development cooperation strategy: An analysis of electoral partnership between the PNG Electoral Commission and the Electoral Support Program Phase 2 (2006-2010). John Watmelik, Senior Research Officer, University of Papua New Guinea.
DINNER (On invitation only) At Holiday Inn, Port Moresby, NCD	
DAY TWO – (Friday) 13 June 2014 Main Lecture Theatre (MLT), UPNG, Waigani, NCD	
Overcoming Dutch Disease: Agriculture & Tourism: Chair – A. Swan	
09:00 – 10:30	A systematic bottom-up model is needed to revive the cocoa industry Robert Atsir, RAFM Consultants
	Understanding coconut developments and its socio-economic impact on the people of Tong Island in the Manus Province, Papua New Guinea Allan Wahwah, Aldam Bande & Eric Leng
	Tourism in Papua New Guinea: Its economic contribution for sustainable development Joyce Rayel, Evelyn Kua, Lekshmi N. Pillai, Ponnusamy Manohar, University of Papua New Guinea
	Facilitating broad economic development – tourism Angi Alphonse Hayabe, University of Papua New Guinea

	<p align="center">Facilitating broad economic development: Issues affecting Incorporated Land Groups (ILGs) and their sustainability in PNG (Case Study of Morobe Province) Lepani Karigawa, PNGIVLA</p>
10:30 – 11:00	Refreshment Break
Social Development: Chair – G. Montoru	
11:00 – 12:30	<p align="center">Income and livelihood challenges in Port Moresby settlement Michelle Rooney, Development Policy Centre, ANU</p>
	<p align="center">Facilitating economic development through the use of mobile phones Amanda H A Watson, PNG Economic and Public Sector Program</p>
	<p align="center">Strategies for tertiary education in PNG David Kavanamur, Lonnie Baki and Jeanette Baird, Office of Higher Education, PNG</p>
	<p align="center">Role of tertiary education for economic growth and sustainable development in Papua New Guinea Ponnusamy Manohar, Lekshmi N. Pillai and Joyce Rayel, University of Papua New Guinea.</p>
12:30 – 01:30	LUNCH BREAK
SMEs and International Competitiveness: Chair – Evelyn Kua	
01:30 – 03:00	<p align="center">Challenges facing growth of SMEs in PNG: A case study on resource owned landowner companies in the Ramu Nickel Project area Brodney Kambjak Seip, Ramu NiCo Management (MCC) Ltd</p>
	<p align="center">The value of PNG merchandise exports: Is it real growth? Pulapa Subba Rao, Albert Mellam, Joyce Rayel, Benedictta Mellam, Peter Tulapi, and Raymond John</p>
	<p align="center">Facilitating youth entrepreneurial spirit through entrepreneurship programs in Papua New Guinea Peter Kanaparo and Joyce Rayel, University of Papua New Guinea, Benedict Imbun, University of Western Sydney and Jerry Jacka, North Carolina University.</p>
	<p align="center">Beyond the build, rebuild paradigm: infrastructure maintenance reforms in the Pacific. Matthew Dornan, Development Policy Centre, ANU.</p>
03:00 – 03:30	Refreshment and end of 2014 PNG Update

Abstracts

Two decades of poverty in Papua New Guinea

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Papua New Guinea (PNG) recently completed its second national household consumption survey, enabling poverty comparisons with baseline estimates from 14 years earlier. While methods of the 2009/10 Household Income and Expenditure Survey (HIES) are not exactly the same as those of the 1996 PNG Household Survey (PNGHS), there is enough similarity to enable comparisons. The average incidence of poverty appears unchanged; with more than one-third of the population below poverty lines formed using international best-practice methods. Thus PNG has made no progress towards the first of the Millennium Development Goals of eradicating extreme poverty.

Although the National Capital District (NCD) is only a small contributor to national poverty, special attention is paid to NCD because longer term comparisons are possible (by also using the Urban Household Survey of the 1980s) and the comparisons are less affected by changes in survey methods. In NCD poverty has become more widespread, and the poverty rate is no different than the national average while previously it was much lower than the average. The rapidly rising cost of living appears to be a major contributor to this rise in poverty.

The challenge of sustainable development for a resource-dependent economy: current policy issues in PNG

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PNG is one of the most resource-dependent economies in the world. The economy is booming, but international experience confirms that in a resource-rich economy, growth and development are two very different things. This is illustrated for PNG by the fact that current economic growth is unsustainable in the sense that physical and human capital investment is more than offset by natural resource depletion. What needs to change? This presentation provides a quick and broad, though by no means complete, survey of recent and current economic policy initiatives in PNG, including in relation to: the Sovereign Wealth Fund and Oil Search; Ok Tedi and the Sustainable Development Program; fiscal policy and the development budget; free health and education; and the new District Authorities legislation. It assesses policies in each of these areas from the perspective of whether they promote sustainable development in a resource-dependent economy.

Papua New Guinea: Fiscal policy at a crossroads

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Fiscal policy in Papua New Guinea (PNG) has been loosened substantially since 2012. This change is a sharp departure from the 2002-11 decade when a fiscal surplus was witnessed in most of the years and government debt was reduced from 74 percent of GDP to 22 percent of GDP. While the 2012-14 fiscal expansion is well intentioned to deliver quicker development results through large increases in development expenditure, it has raised concerns over

fiscal sustainability despite the expected increases in resource revenue as a result of the LNG project. In this presentation, we use the permanent income hypothesis and its variants to compute sustainable levels of fiscal balance and compare the results with the proposed fiscal deficits in the government's Medium-Term Fiscal Strategy (MTFS) 2013-17. The analysis shows that PNG will likely need to reduce its fiscal deficit to a greater extent than indicated in the MTFS 2013-17 in order to achieve a sustainable fiscal position and the government's own debt target.

From resource boom to development: The case of basic service delivery in PNG over the last decade

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Managing the resources boom in PNG to sustainably benefit the whole country has been, and continues to be, a major challenge for government. Policy makers in PNG have sought to direct the country's unprecedented revenues from the boom to improving basic service delivery, particularly in education, health and infrastructure sectors. In this paper we draw on time series data from PNG national budgets and facility level panel data in education and health sectors in PNG to assess the PNG Government's performance in improving basic service delivery. Our findings indicate that while the allocation of government revenues to basic service delivery has improved, improvements to the condition of primary schools and primary health facilities has been mixed. We identify a number of facility level characteristics that appear to be important determinants of the performance of primary schools and primary health facilities in our sample. Our findings highlight the need to focus on the effectiveness of spending on basic services and the quality of institutions that implement and oversee that spending rather than just the quantity of spending allocated to basic service delivery.

Long-term changes and trends of gross domestic product and national government budget-expenditures in PNG: Has ‘economic development’ also been taking place?

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The paper has two parts. First, it shows some computations about long-term changes and/or trends of Budget-Expenditure and Gross Domestic Product in PNG, in the period 1977-2014. Second, it opens-up crucial discussions, about some broader questions or issues about real ‘economic development’. The basic Keynesian income-determination model and Todaro’s development insights provide the theoretical underpinning of the research.

The paper presents some long-term changes and trends of Budget-Expenditure and Gross Domestic Product. It also provides some basic analysis, in particular calculations of Central government expenditure elasticity and Central expenditure propensity.

In general the paper raises several crucial development hypotheses with respect to real ‘economic development’ of PNG, and briefly discusses each one.

The paper concludes that Central Government Budget-expenditure might have been used *inefficiently* in most of the period of the study. The inefficient utilization of the Central budget-expenditure might have led to generally poorer ‘economic development’ performance-outcomes than we would have liked. The unfavourable outcomes are inconsistent with the five stated goals and directive principles of the National constitution, especially for the majority of the people, who live in rural village environments, about whom the government has talked so much about, in recent years.

Public sector pay scales in PNG: Are academics underpaid?

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PNG's public universities face difficulties in retaining academic staff, many of whom join government departments, statutory authorities, public enterprises, or the private sector for better paid jobs. We compare university pay in PNG with public service, statutory authority, and state-owned enterprise pay. We include allowances in our comparison, among them, importantly, the imputed value of university-provided housing. Although PNG academic salaries are broadly competitive by international standards, and generous compared to those in other developing countries, they are uncompetitive for professors, and uncompetitive for all positions relative to the salaries offered by state-owned enterprises and probably some by statutory authorities. They are relatively competitive for positions below that of professor relative to the salaries offered by the public service. The PNG government will need to raise salaries to improve the competitive position of universities in those disciplines that are facing shortfalls. However, given that universities are likely to remain at a competitive disadvantage for some time to come, improving job satisfaction for academics and expanding the supply of quality candidates for areas where there are shortages will also be important.

Capacity building through development cooperation strategy: An analysis of electoral partnership between the PNG Electoral Commission and the Electoral Support Program Phase 2 (2006-2010)

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According to Kavanamur (2009) “strategic alliance management is the process of strategically managing dynamic cooperative-competitive relationships between two or more partners involved in a simultaneous network of alliances, in order to capture synergy thereby enhancing the competitive position of each partner”. It is important to know the strategic alliance management approach used in development cooperation strategy to improve electoral governance. To validate these objectives a case study of the PNG-Australia Electoral Support Program Phase 2 (2006-2010) impact is analysed. The survey revealed positive results for the Program’s Impact and Effectiveness. These positive results are linked to the improved strategic alliance between the Commission and the Technical Advisors. The progress towards the overall outcomes of the program are linked to the PNGEC alliances with the key stakeholders such as the Civil Society Organisations (CSOs) , Inter-Departmental Election Committee (IDEC) and the Provincial Election Steering Committee (PESCs). A survey conducted tests the effectiveness of the program’s impact. The lessons learnt from the review sets the framework for the next five year strategic alliance between PNG and Australia in improving electoral governance. While the focus is on Electoral Governance, there are also other cross cutting issues such as HIV and AIDs, Gender, and Corruption that have impact on the program.

A systematic bottom-up model is needed to revive the cocoa industry

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Cocoa is an important economic tree for cocoa growing rural communities. The cocoa pod borer (CPB) attack is having a crippling effect not only to these communities but also on the cocoa industry. Relevant Government of Papua New Guinea (GoPNG) agencies, and in particular the PNG Cocoa Board (PNGCB), were quick to respond to the aid of some cocoa growers (CGs), with assistance from development partners but with mixed results.

The important consequence is that a vast number of rural communities from the Sepiks, Madang, East New Britain, Milne Bay to Bougainville are still in distress and crying out for help.

There are obvious weaknesses in what appears to be a top-down sporadic approach, where not all CGs are involved in the preventative measures being implemented. Therefore, a more systematic model needs to be adopted, where all CGs participate nationwide.

The revised model must be underscored by three complementary thematic areas namely, land user rights (social), group economic activities and a sun-set legislation to compel participation by all CGs.

Through a sun-set law, the bottom-up nucleus estate enterprise (NEE) concept is to be preferred. Under the concept both CGs and cooperatives combine under their respective NEEs. Through such combined efforts better cocoa management practices will effectively control CPB, amongst other outcomes. The roles of GoPNG and development partners will still be vital for this endeavour, both financially and technically.

All relevant GoPNG agencies right down to local level governments including community identified resource persons, will have a part to play. The anticipated outcome is that within a 5-6 years period, the

cocoa industry should be revived as key income earner for CGs and their families, as well as regain its position in the top four export commodities for PNG.

Understanding coconut developments and its socio-economic impact on the people of Tong Island in the Manus Province, Papua New Guinea”

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Coconut had for many years been the major cash crop cultivated in Tong Island, Manus Province, Papua New Guinea. The first commercial planting of coconuts in Papua New Guinea (PNG) began in the 1880s in East New Britain Province around the Gazelle Peninsula (Robson 1965). Plantation production throughout the New Guinea islands expanded rapidly and received great stimulus from the high prices of the World War 1 period. Most of the copra produced from coconut in the early was in fact produced on plantation. Dywer (1936) and Hutchinson (1941) revealed that plantations and traders purchased village-produced copra, however, there was no official encouragement given to the development of smallholder production.

By late-1960s, Tong islanders were encouraged to plant coconut for income generation. By mid 1970s, majority of Tong islanders had depended on income generated from copra to sustain their livelihoods. After the PNG's independence in 1975, the government's Copra Marketing Board was created to regulate copra quality control, exports, and ensured copra prices were stabilized through government's Stabilization Fund. In the early 1980s, the Stabilization Fund was depleted by successive governments. Consequently, copra prices began to drop to a point where it is no longer economical to manage small hold coconut plots. Coconut smallholder plots were abandoned and left to grow into thick bushes. Peoples' income per householder annually according to the

researcher is less than K500.00. This is not sufficient to improve living standards.

The government's lack of intervention in stabilizing copra prices, promote research proven farming systems which suits conditions on atoll islands like inter-cropping and downstream processing would contribute to high level of poverty. The government's vision of PNG to become an industrialized economy by Year 2050 may not be achievable.

Tourism in Papua New Guinea: Its economic contributions for sustainable development

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Tourism is now regarded as one of the world's leading industries and fastest growing economic sectors. It has been described as a diverse and global industry that integrates various sectors within the government of which its economic perspective and contribution is very much significant to the nation. Using phenomenological approach with documentary analysis and desktop research as primary methods of gathering data, this paper introduces theoretical understanding of tourism as an economic activity and dynamic industry that creates substantial economic impacts while protecting the sensitive environment and delicate social fabric of the local community. Likewise, this paper unfolds tourism economic contributions utilizing relevant global, regional and national tourism statistics to draw a vivid portrait of the sector and its inherent capability to act as catalyst of economic growth particularly in a country where extractive resource industries dominates the economy. The highlight of the discussion centres on the tourism status of Papua New Guinea as a destination in the Pacific Region and the role tourism will portray in making Papua New Guineans to be happy,

healthy and smart by 2050. The analysis of the discussion indicates that tourism has a huge potential to be developed in PNG because of its innate natural beauty and fascinating diverse culture. However, tourism in PNG is still experiencing fledgling stage with relatively slow pace of development compared with its neighbouring countries within the South Pacific Region. This study concludes with viable recommendations that fine tuning economic growth strategies and diversion of focus to a more sustainable industry that can drive a healthy national economy is crucial in achieving PNG's Vision 2050. Strong political will, effective tourism planning, strategic leadership and alliance amongst tourism stakeholders and positive outlook of the local people as resource owners about tourism are prevailing contributory factors to bringing a real paradise in the "land of unexpected".

**Facilitating broad economic development –
Tourism marketing PNG destination**

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Broad economic development can be facilitated using tourism sector become a dynamic and growing industry for Papua New Guinea (PNG). In facilitating broad economic development three fundamental issues are vital. What sector to use, which strategy to use and how to implement broad economic development. These issues can be translated into three broad questions in the context of tourism sector. Where is PNG tourism now? Where do we want PNG tourism be in 2017, 2030, 2050? How do we take PNG tourism from where it is now to where we want it to be? This report focus discussions around a particular key priority area of tourism Master Plan and its strategy and discusses the findings on how the strategy was used to explore critical issues in marketing PNG destination. 'Marketing the Destination' is the key priority area of Tourism

Master Plan 2007-2017. This study provides researched and theoretically proved knowledge essential for implementing the sixth strategy of 'Marketing the Destination' – *Review the current tourist market positioning and tagline by key source markets and test the consumers and travel trade. A Positivistic Research Paradigm* (Hussey & Hussey, 1997) was used and philosophical framework for 'Marketing the Destination' was developed. The research measured *quality of tourist products and employee service performances* in five main tourism sectors and *satisfaction from key source markets and potential markets* of PNG. The *quality of employee service performance* were measured using Service Quality Dimensions (SEVQUAL) and their core capabilities were analyzed. The study tested the assumption that the variables making up core capabilities determine the match between tourist expectations and satisfactions. Total of N=271 tourists (*n=80 Australia, n=54 Japanese, n=137 other potential markets*) responded. The research used SEVQUAL to measure quality of employee service performances. The results showed that each of the SEVQUAL variables enables or disables service quality performances. The result for all tourism sectors showed that all variables scored low on excellent and do not match tourist expectations. For example, customer service performance at the international airport; dimension of reliability service performance scored only 9% for dependability as excellent, only 28% rated very satisfactory, 45% satisfactory, 12% fair and 6% poor. The results show that service provided by employees lacks core capabilities. The research found out that improvement in facets of service quality dimensions will improve employee performance and contribute to core capabilities. The research proved that core capabilities determine match of tourist expectations to satisfaction. The factors determinants for tourist satisfaction were examined and ontological assumptions were articulated using *a destination-oriented system classification model*. In addition, the phenomena of *quality employee service performance* being investigated proved the *epistemological assumption that core capabilities of employees are the determinants of tourist satisfaction* and can be used to match all stakeholders' needs as operationalized by *yawarakai (soft) analytical model*. Furthermore, the research provides theoretical and policy

implications and provides appropriate recommendations to both public and private sectors.

Facilitating broad economic development: Issues affecting Incorporated Land Groups (ILGs) and their sustainability in Papua New Guinea (Case study of Morobe Province)

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Papua New Guinea today is faced with a lot of land issues and many argued that customary land is an obstacle to economic development. Indeed Earth is the only planet that supports living things known to man. It is one of the reasons that have made people fight each other to keep possession of their land.

In the early days of European colonisation, Europeans travelled all over the world in search of new lands or territories. Discoveries of the continents of North and South America, Australia, Asia and Africa were the result of such European colonial expansion.

In western society, land is deemed to be a marketable commodity, that is, it can be bought and sold freely in the open market. This is in contrast to PNG society where land is not a marketable commodity as it is a sacred resource that links the past, present and future generations. The present owners or holders of customary land are deemed to hold land in trust for future generations. This inalienability makes land an important part of societies.

The intention of this paper is to identify the problems faced by the ILGs and find alternative ways to improve those problems so that customary land can be brought to the main stream of economic development. Land is considered to be the most important resource in the world, because it sustains life.

Income and livelihood challenges in Port Moresby settlement

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With high costs of living, and population growth outpacing the ability of governments to respond in urban areas of Papua New Guinea, increasing numbers of people are opting to live in settlements. Settlements are often referred to as “informal” or “illegal” spaces in which residents are portrayed as the “other” in relation to “legal and formal” urban spaces, population groups and development discourse. This PhD research explores how settlers go about making ends meet, and how they view and manage vulnerability and risk to their livelihoods. Who they are and how they position themselves in relation to each other and the outside world is important for understanding their livelihood strategies, and their claims for legitimacy in regard to land, social services, access to public utilities, and security. These issues will be explored through the lens of the domestic and settlement economy in relation to the broader economy and society.

This presentation will include some of the preliminary findings of one of the chapters of the author’s thesis that looks at employment, income strategies and informal safety nets.

Facilitating economic development through the use of mobile phones

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Mobile phone network coverage has spread across many parts of Papua New Guinea (PNG) since 2007. Increased mobile phone access has raised questions as to whether the newly available

technology could be used to address urgent service delivery needs, particularly in rural areas of the country.

The ‘Utilising Mobile Phones for Development in PNG study’ has consisted of three pilot research projects conducted during 2012-2013. These three ‘mobile phone for development’ (M4D) pilot projects have been run simultaneously in order to synthesise lessons learnt in a coherent manner. The study has been conducted in partnership with the Government of PNG, with funding from the Australian Government. The three research projects included: a maternal health phone line, a data collection project using mobile phone text messaging, and a controlled trial in which resources were sent to teachers using mobile phone text messaging.

This paper presents cross-sectoral lessons learnt from the three research projects. All three projects have now been completed and show very pleasing results, leading to a strong indication that strategic use of mobile phones can aid service delivery and economic development in PNG. Guiding principles about how best to utilise mobile phones in development efforts will be presented. It is intended that the paper would be useful for any organisation or individual considering the incorporation of mobile phones in service delivery in PNG.

Strategies for tertiary education in PNG

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The contribution of tertiary education to economic development is well-documented (e.g. World Bank, 2002; Bloom, Canning and Chan, 2006). However, studies on public investment in tertiary education show that many lower income countries struggle to meet the twin challenges of increasing access while also improving quality. As a consequence, increased public investment in tertiary education in these countries often leads to a fall in the resources

available per student, because access is expanding rapidly (Millot, 2012). This is the situation in PNG. To meet these challenges will require innovation, efficient use of resources and accountability for outputs.

In our paper, we explore the enablers and strategies that could assist tertiary education to make a stronger contribution to PNG's economic development. We outline future projections in respect of Grade 12 school-leavers and available pathways for tertiary study, and discuss the unit costs of tertiary study for TVET and for higher education. We explore the ways resources are currently used, including the challenges for a tertiary sector that is expected mostly to provide housing for students and staff.

A multi-faceted strategic approach is suggested, involving re-balancing of provision between higher education and TVET, greater emphasis on maths and science, and institutional diversification. Better links to industry will be important, as will more transparent funding models tied to minimum standards. Other features include: provincial and national government co-operation; increased private provision and public-private partnerships; open access; more efficient use of resources; and expanded outreach programs.

The role of tertiary education for economic growth and sustainable development in Papua New Guinea

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In general, education in every sense is one of the fundamental factors of socio-economic development. None of the countries can achieve sustainable economic development without substantial investment on education. Education enriches people's understanding of themselves and world. It improves the quality of their lives and leads to broad social benefits to individuals and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. In addition it plays a very crucial role in

securing economic and social progress and improving income distribution.

General education and tertiary education require huge amount of investment in order to provide services for the human capital development. It has been felt that for several decades, development agencies/government have placed great emphasis on primary and, more recently, secondary education. But they have neglected tertiary education as a means to improve economic growth and mitigate poverty.

The role of tertiary education as a major driver of economic growth and development is well established, and this role will increase as further changes in technology, globalization, and demographics impact of countries like PNG. To remain competitive in light of these changes, country will need to improve productivity and adopt an innovative spirit. Tertiary education endows with the capacity, knowledge, and research necessary to overcome these challenges.

It is timely and important to understand the nature of tertiary education system globally and the issue of tertiary level education in Papua New Guinea. The socio-economic development of any country is largely dependent on the educational level of the population. In PNG, literacy ratio is 57.3%, the rate of participation in primary schools is about 63.6%, enrolment in secondary education is 56.9% and tertiary education enrolment rate is 18%. Along the line, statistically there are 72% of the population some how neglected in the tertiary education system. An attempt is made to discuss the educational system of PNG and the significant role of the tertiary education and its contribution for economic growth. This paper discusses the nature of education in general and tertiary education in particular, and its contribution for economic development. It analyses the capacity of the various tertiary educational institutions to accommodate the tertiary level educational intakes. Finally, this paper presents suitable suggestions and strategies to overcome the challenges faced in the tertiary educational sector and the economy.

**Challenges facing growth of SMEs in PNG:
A case study on resource owned landowner companies in
the Ramu Nickel project area**

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The Small to Medium Enterprises (SME) sector is widely recognized for making enormous contribution in terms of employment creation and business growth to the economics of countries that embraced it into their development priorities. For instance 99% of Japanese companies are SMEs and all this SMEs hire 78% of the workforce, share 50% of shipping sales and trade in total in Japan during 1998 to 1999. More than 90% of the companies are SMEs (Kameyama and Kobayashi, 20??). Many similar success stories have been told for other countries

SMES can also make a positive contribution to the PNG economy if effectively empowered by the government. In recognizing this potential the National Development Bank (NDB) with support from local business owners hosted a number of National development forums since 2010 to promote the SME agenda. A number of legislative and policy changes has been proposes and debated in parliament as a result. A massive K149million has been allocated to the sector by the government with an additional K80million directly to the NDB specifically to empower the SME sector. Actual implementations and the impact of these initiatives however, would take time to show.

This paper will be built on from the theory on Stages of Growth of Small Business. There are a number of stages that all small businesses grow. Eg. survival, take-off, and resource maturity into until they become very big and successful. However at each stages awaits challenges that all must overcome in order to succeed to the next level. I will analyze the challenges facing landowner companies from the Ramu Nickel Project in Papua New Guinea as a case study to reach my conclusion and recommendations.

Value of PNG merchandise export: Is it real growth?

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Papua New Guinea is endowed with mineral resources and rich in agriculture and forest resources. It exports primary products like gold, copper, crude oil, coffee, tea, rubber, cocoa, copra, palm oil, rubber and logs owing to dismal growth of manufacturing sector. The value of total merchandise exports increased from K 1390.5 million in 1991 to K15, 579.5 in 2010 recording an annual growth rate of 51.02% during 1991 to 2010. The value of total merchandise exports after eliminating the influence of price changes, declined from to K 2362.00 million in 1994 to K1738.40 million in 2010. The growth in the value of merchandise exports was almost due to significant increase in international prices of the products that the country exports. Hence it is suggested that the country should build manufacturing sector to get the advantage of exporting value-added products.

Urban youth unemployment study in selected urban centres in Papua New Guinea

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Youth involvement in urban crime and violence in Papua New Guinea's (PNG) urban towns and cities are a topic that has received increased attention over the last few years. The rapid urban growth is

occurring without planning and growth in urban youth unemployment levels multifaceted by deficiencies in government delivery systems compounded by ‘snail phase’ multifaceted by deficiencies in government delivery systems compounded by ‘snail phase’ or weak government involvements. The crisis calls for an instituting of a sustainable urbanisation policy as a priority for manageable urban development in acknowledgement of acute formal urban youth unemployment problems. A properly implemented sustainable urbanisation and employment policy would stimulate economic growth and mobilise resources at the urban centers to accommodate urban youth. This would occur first with an undertaking of comprehensive reform on existing policies based on integrating vision of governance and collective commitment to manage efficiently sustainable urbanisation and productive employment opportunities in the urban centers of PNG.

The main purpose of this paper is to provide a perspective for identifying risk and resilience factors that shape whether unemployed urban youth will become involved in crime and violence or not, is a useful tool to understanding the complex context in which young people develop into adults. Together with the concrete recommendations, the study provides stakeholders a range of options to tackle the issue of urban youth unemployment. This research will be a useful reference and a stimulating starting point for National Youth Commission (NYC) and other stakeholders for further ideas and approaches to tackle urban youth unemployment and other associated problems. Resources will have to be mobilised, but the high return on investment in urban youth in the long term in terms of development gains and cost savings has to be proven on in time and time again. For a number of years, ‘urban youth study’ has not been conducted and has framed a number of critical discourses, both popular and academic. At the same time, parliamentarians and other government leaders have, in addition to urban youth, should focus on the growing rates of unemployment and the growth of networks of establishing more employable institutions to accommodate the growing number of youth in the urban centers. This study investigates the driving forces, issues and challenges by utilization of

a rapid appraisal research methodology. The methodology is utilized in the research to compare the relative strength of both the ‘cause’ and ‘effect’ factors determining unemployed urban youth to establish whether; ‘cause’ forces are stronger than the ‘effect’ forces over the period of reform. This insight raises the question of whether the anticipated rates of crime and violence by unemployed urban youth in the main urban centers are likely to be ‘excessive’ or not. We conclude that urban centers in PNG needs to maintain reasonably high growth to alleviate the crime and violence issues associated with rapid urbanisation and government reforms in the public sector. This can be achieved by encouraging and promoting private sector development and ‘private-public partnership’ in supporting employment creation in the economy for youth in general. The services sector needs to be expanded further to absorb urban youth unemployment and economic growth associated with rapid urbanisation.

Infrastructure maintenance: Issues and challenges

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Inadequate maintenance of infrastructure has long been recognised as a challenge. This paper presents the findings of a recent Pacific Region Infrastructure Facility report on infrastructure maintenance in the region, highlighting lessons for Papua New Guinea. It discusses the underlying reasons for why maintenance is so often sub-optimal, drawing on economic theory regarding public and private goods, and on the academic literature of incentives. The paper then explores road maintenance in Papua New Guinea, outlining why government initiatives to improve maintenance have not met (often lofty) expectations.
