



**VANUATU ECONOMIC ASSESSMENT OF THE REHABILITATION AND
EXTENSION OF PORT LUGANVILLE MAIN WHARF PROJECT**

PAPER PREPARED BY

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Executive Summary

The Agricultural and Services Sector potential in Luganville Santo has been kept at bay for the past 33 years. The result of the analysis undertaken indicates that there are substantial advantages in the construction and rehabilitation and Extension of Port Luganville Main wharf upgrade projects and the performance of most of the indicators collected during the economic assessment feedback indicates great potential still to be utilized in Santo Rural and Urban areas. The economic assessment also considers the option of the increasing wharfage fees since the last increase was made in 1992 and the fees still remain the same to date. Vessels berthing on the new wharf upgrade extension projects would be higher once completed and as consequences both users and societies are better off, as total savings are higher and externalities lower than the user fee option. With the introduction of a user fee system, basically to generate revenues for financing the loan or maintenance purposes, the new upgrade wharf would outweigh the cost of construction during the initial years. This can be attributed to the fact that both Container and tourist boats can berth at the same time along the existing wharf networks and would be high enough to induce a significant proportion of the demand to pay for the increased stevedoring fees advantages allowed by the new wharf upgrade extension projects.

I. Introductions

The new rehabilitation and extension of Port Luganville Main wharf is a commercial port that usually on average handles closed to 100,000 tons of freight annually (around 82 boats including tankers and 17 tourist boats arrive in 2012). The proposed port is accessible to existing tarsal roads and located around 1 kilometer to Luganville town. Copra, Cocoa, Kava, Coconut oil and coconut mills are the primary commodities received and shipped at this port, but the port also provides specialty services on- demand to local business located within Sanma Province and other customers.

Significant growth in the handling of the port's primary commodities, as well as the expansion of the types of commodities received, is currently limited by the main wharf's size and the damage wharf structure due to natural disasters. Recently the port has been approached by various tourism stakeholders (Luganville Tourism association) in improving the wharf's deteriorating conditions in order to encourage more large tonnage capacity tourist boats to the ports.

The current length of the ports' longest wharf is 270 meters and is insufficient for providing full service for all cargo currently served and tourist boat arrivals due to wharf berth space availability. In addition, new business that require the ability to transfer certain heavy cargo off large vessels and into trucks cannot currently be served, due to the physical conditions of the wharf. The proposed rehabilitation and extension of Port Luganville main wharf project would lengthen the existing wharf at the port by 231 meters east towards samanson wharf with total length of berth at 361 meter, providing the opportunity to better serve existing customers and potentially expand customer base.

The total cost of the proposed project would be around US 93.4 million dollars equivalent to VT 8,840 million Loan provided by bank of china as a soft loan to the Vanuatu Government with 2 percent interest with repayment over a period of 22 years including grace period of 5 years.

The Benefit-Cost Analysis described in the following sections estimates the benefits and cost associated with the proposed infrastructure improvement. The construction work will be undertaken by a Chinese company (Shanghai Construction Group) schedule to commence in June 2014 and ends in June 2017, a period of 3 years.

Summary of Benefit –Cost Results

The economic team use the TIGER guidance recommended discount rate of 5 percent; the expansion of the main wharf will result in a strong return on investment:

Total benefits of VT 11.09 billion in present value terms:

A benefit-cost ratio (BCR) 2.75 at a 5 percent discount rate indicates that the benefits of the project outweigh the costs considerably; suggesting that the rehabilitation and extension of Port Luganville main wharf is economically justifiable.

Organization of the Report

This report will also provide an economic structure of Vanuatu as background information and it will also provide background study of infrastructure development from the global, regional and national perspective. The rest of the report will cover the economic analysis and assessment, social benefits, challenges and recommendations.

Vanuatu's Economy

Vanuatu's population reach 260,000 in 2013 and nearly 75 percent of the population reside in rural areas. Agriculture, cattle farming, kava and fishery is the main commercial activity within the village communities and contributes to around 20 percent of the country's GDP. However, attempts to enhance and broad the economic growth development and revenue basket was inadequate, basic services delivery in rural areas is constrained by poor accessibility due to limited transport infrastructure and services by the Government. The transports cost within most of the rural areas are expensive and unreliable.

Infrastructure and Capital Investment is seen as a major foundation to economic growth and social development of most countries in the world, particularly in the developing countries and most Small Island Developing States of Vanuatu is part of. The need for infrastructure for Small Island Developing States, in Particular for Vanuatu, is crucial, given the high degree of vulnerability of these countries to exogenous shocks such as cyclones, earthquakes, flooding and external price shock. Like other Pacific Island countries, Vanuatu's economy depends entirely on Agriculture and the services sector of which tourism is a major economic growth contributor. The latter accounted for about 64.4² percent of GDP while Agriculture, although accounted for only 20.8³ percent of GDP, serves as the backbone of the economy as 75.6⁴ percent of total population reside in the rural areas and the most remote islands and are fully engaged in Agriculture, both for subsistence and commercial purposes.

Table 1.1 shows Vanuatu's GDP composition.

Table 1.1- Sectoral Contribution to Real GDP (percent)						
Sector	1990	1998	2000	2004	2007	2011
Agriculture, Forestry & Fisheries	24.1	21.6	20.3	21.8	19.1	20.8
Industry	12.6	8.7	11.2	7.7	8	8.8
Services	63.2	63.2	60	63.2	63.9	64.4
Total Real GDP (million vt)	31,598	41,569	44,171	42,561	51,126	57,959

Source: MFEM and VNSO⁵ (2013)⁶

² National Accounts of Vanuatu 2011

³ National Accounts of Vanuatu 2011

⁴ The 2009 National Population and Housing Census.

⁵ Vanuatu National Statistics Office

About 95 percent of Vanuatu's exports of goods is sourced mainly from Agriculture products of which the major ones are Copra, Coconut Oil, Beef, Cocoa, Timber, Kava, Coffee, Fish and other agriculture products.

Table 2 (b) Vanuatu's Main Export Commodities (in millions of vatu)						
Main Export Earnings	1990	% of GDP	2007	% of GDP	2012	% of GDP
Copra	598	1.90%	485	0.90%	1,088	1.88
Coconut Oil	0	0	492	0.96	1,162	2.0
Beef	368	1.20%	385	0.75	518	0.89
Cocoa	248	0.80%	241	0.47	258	0.45
Kava	0	0	442	0.86	661	1.14
Timber	91	0.30%	80	0.15%	42	0.07
Coffee	0	0	0	0	3	0.00
Fish	0	0	0	0	185	0.32
Real GDP	31598		53256		57959	

Source: MFEM⁷ and VNSO⁸ (2013)

According to the Report on Trade Policy Framework by Professor Biman Chand and the Vanuatu Department of Trade (April 2012), it is noted that Vanuatu has comparative advantage in the above mentioned agriculture products as well as in the Tourism sector and it was also recommended that Vanuatu should specialize in these two sectors. However, growth and development in these two sectors cannot be achieved without proper infrastructure especially the construction of better roads, bridges and feeder roads to the major agriculture production areas. The tourism sector, which is the main driver of Vanuatu's economy, has a big potential for the generation of more foreign exchange earnings, but its success depends entirely on good infrastructure network in place. According to the Government Priority Action Agenda (PAA), Vanuatu's domestic production is narrow, accounting for about 20 percent of GDP; therefore, there is a need to further develop the external markets of international trade. The two important areas being recommended is in Agriculture production and tourism.

⁶ Ministry of Finance and Economic Management (2013)

⁷ Ministry of Finance and Economic Management (Vanuatu)

⁸ Vanuatu National Statistics Office

1.1 Problem Statement.

Vanuatu has big potential and comparative advantage in the production of Agriculture goods and the development of tourism. However, these cannot be achieved to the maximum capacity due to major impediments such as lack of proper infrastructure in place, particularly wharf access.(see appendix 1) The continue depletion of the western side of the Luganville main wharf as cause a number of safety concern that should be address as urgency. The current wharf is limited to one boat per day for loading and unloading, since there is insufficient berthing space to accommodate both boats thus causing delays and time wasting. It is noted that the bulk of the main agriculture production, of which Copra, Cattle, Kava, Sandalwood, Cocoa, comes from Sanma province where Luganville Town is located. According to COPSL, more than 400 tons is supplied to the Coconut Oil Mill factory on a monthly basis and exported around 1,000 tons of raw coconut oil per month, from South Santo Area, including Aore, Malo and West Coast. According to the recent economic assessment, it was noted that there is a big potential for expansion in production in several sectors once the wharf extension is completed. However, the major problem encountered is lack of length wharf to accommodate bigger tonnage vessels and the port conditions needs to be extended as proposed.

II.Economic Assessment Methodology

The economic assessment of the proposed rehabilitation and extension of Port Luganville main wharf been done in accordance with normal procedures and using the best and updates available data as a basis for defining and valuing costs and benefits.

The benefits have some proportion of judgment to be applied in which many cases hard data are scarce or simply unavailable, however that has improve over time with non- Government organization (NGOs) ‘world vision’ aid in improving country’s statistical base and partly because benefits are by their nature conjectural.

Consultations have been made with various private sectors particularly large business shops owners (importers and exporters) and Luganville tourism association chairman on tourist boat activities and arrivals and we are confident that our estimates are based on reasonable assumptions and we have presented those assumptions as clearly as possible.

The Shanghai Construction Group Co Ltd company aims to reduce poverty through access to rural and urban economic development and it’s in line with the national planning on economic and self-reliance development and improved agricultural market ease of trades. The benefits being identify focused on enhance production and value added, thus GDP growth through (a) reduced transport costs and (b) improved reliability of access (save time).

The methodology used in undertaking this economic assessment is twofold (1) Literature review using publications from the Vanuatu National Statistics Office on the 2009 Population Census⁹ data, National Accounts data and Quarterly Statistical Indicators on exports of major Agriculture commodities. Cross sectional survey includes Personal Interview, Discussion with Business entrepreneurs on current imports

⁹ Data on the 2009 National Population and Housing Census data, were focused mainly on SANMA province, Luganville, total Population and population of the two major urban centers of Port Vila and Luganville. These population data assist in comparing with Survey data and those from World Vision report.

of goods and services and exports and future imports and exports once completion of the new wharf extension presentation of findings, format was sent out listing the Agriculture Production tons of containers imports and exports and tourism activities per boat arrivals in Luganville Main wharf (refer to appendix table 3) Visitation to COPSL¹⁰.

III. Vanuatu's Economic Structure

Vanuatu is traditionally an agriculture economy. The population is predominantly rural accounting for roughly 75.6 per cent of the total population and 24.4 per cent are urban people who engage in the service and industry sectors. Access to main markets in Port Vila and Luganville is usually denied via inadequate infrastructure facilities, immature business network and lack of real commitment from the Government. In addition to being isolated from main markets, the rural population is very poor and dispersed. Given the lack of employment opportunities in the rural areas, most locals have been very mobile in anticipation of better life in the urban centers. The lack of proper infrastructure has disconnect trade links and contributed to raising poverty in the rural areas; albeit heavy dependence on subsistence farming. This is one of the many contributing factors to volatile agriculture production over the years let alone economic activity to be driven by services and industry sectors in the urban centers of the country. Having better access to road infrastructures will facilitate increasing activities in the agriculture sector raising the livelihood and welfare of the rural population.

Total domestic production was estimated to have rebounded in 2012 with an estimated growth of 3.3 per cent following disappointing growth performances of 1.6 per cent in 2010 and a further 1.4 per cent in 2011 owing to the delays in the implementation of planned public investment projects and the fall in global copra prices driven by external factors, including falling demand and improved supply conditions. However, there are expectations that the total impact of falling global copra prices and delay in the implementation of public projects have been partly offset by improvement in the services sector particularly from tourism related activities.

The Real Sector Agriculture

Production in the agriculture sector is estimated to register slow growth of 3.8 per cent in 2012 supported by falling global prices of exported copra, coconut oil, kava and animal production as a result of improved supply conditions and weak external demand for local commodities. Despite the decline in the global price, crop production – led by cocoa, kava and copra continue to reveal strong performances with the latest estimate suggesting that activity in the sub-sector recorded an estimated growth of 2.8 per cent in 2012. The sector is forecasted to level off in 2013 and over the medium term with a growth of 2.6 per cent as global supply conditions improved. Across the entire sector, animal production, forestry and fishing are estimated to record mixed growth of 9.6 per cent, 6.8 per cent and 3.4 per cent respectively in 2013 from their records in 2011. Growth in this sector is driven by domestic demand and population size. Similarly, international commodity prices, excluding fuel, has minimal pass-through effect to domestic prices given that majority of local resides in the rural areas with heavy dependence on subsistence farming.

¹⁰ Coconut Oil Productions Limited Santo.

Industry

Industrial production is estimated to have rebounded in 2012 with an estimated growth of 6.4 per cent following 2 consecutive years of disappointing growth in 2010 and 2011. The recovery is expected to have driven mainly by manufacturing and construction. It is estimated that manufacturing activities especially the purchased of domestically manufactured raw materials to be used in construction related activities grew by an estimated 2.6 per cent while construction related activities recorded significantly increase compared to past two years of negative growth. Close proxy of private sector developments, particularly imported materials confirm to falling activity in this sector. The improvement in the manufacturing sector is further supported with a growth contribution to GDP of 0.1 percentage points. Over the last 8 years, the construction sector's growth contribution to GDP was average at 0.3 percentage points. Construction activity is projected to pick-up relatively stronger commencing in 2014 following the expected scaling up of fiscal expenditures related to publicly funded projects. In the same sense, the overall industry sector is forecasted with an average growth rate of over 10.0 per cent over the medium. Similarly, the growth contribution to GDP is now projected to average at over 1.0 percentage points.

Services

The services sector although estimated to have recorded 4.3 per cent in 2012; it is the most entertaining sector of the economy driven by the increasing volumes of tourism activity generating foreign exchange earnings into the economy. The services sector have provided the much needed partial insulation against the impact of the GEC with spillover effect trickle down to the rural areas. Actual data released by the National Statistics Office (NSO) and the Reserve Bank of Vanuatu (RBV) reveal that tourism arrivals (both air and sea) continue to increase in the last three years (2009-2011) and is estimated to have grown by 2.7 per cent in 2012 following the recent increasing number of day visitors as well as new and additional air routes that connect Vanuatu with international destinations. The estimated 2.7 per cent growth in tourist arrivals in 2012 is expected to raise foreign earnings generated from inward international travelers by 4.1 per cent; after the big contraction of 3.8 per cent recorded in 2011.

The direct benefit from world tourist and travelers activities – proxy by accommodation, food services, retail trade and transportation, is believed to have generate in an average inflows of foreign earning that is equivalent to VT 12, 606 million (in real monetary terms) over the last five years. In the same sense, the estimated average spending per tourist per day over the same period is estimated at VT 19,477.4. Over the past five years (2008-2012), growth in average spending per visitor per day have increased by 4.0 per cent and is expected to remain high over the medium term (2013-2016) with forecasted increased in total tourist arrivals and continue liberalization of the international aviation industry. The spillover effect of these developments mean that total arrivals over the medium term is expected to grow by an average 8.3 per cent. The economic implications of such a development suggest that tourism direct contribution to real growth is expected to average 0.01 percentage points over the medium term.

Table 3. Total Productions by Sectors (% change)

	Actual		Estimate		Projection		
	2010	2011	2012	2013	2014	2015	2016
Agriculture, Forestry and Fishing	4.8	5.9	3.6	3.8	3.9	4.4	5.6
Crop Production	3.8	5.8	2.8	2.6	2.6	3.0	4.2
Forestry	6.8	6.8	6.6	6.8	7.3	7.4	7.4
Industry	12.6	-20.9	-1.0	6.4	10.7	12.7	9.5
Manufacturing	86.5	-8.6	2.6	3.7	3.9	4.7	5.2
Construction	-11.2	-39.4	-4.0	9.7	21.4	24.2	14.6
Services	3.0	3.6	4.3	5.0	4.3	4.2	4.3
Accommodation	1.8	-0.1	18	6.7	7.0	6.6	5.9
Transportation	0.1	1.6	3.6	3.7	5.5	4.2	4.3
Retail Trade	9.6	4.7	4.9	6.9	6.7	5.7	4.9
GDP (2006 Prices)	1.6	1.4	3.3	4.5	4.6	4.9	4.9
GDP (Current Prices)	4.3	3.6	4.9	6.9	6.8	7.9	8.1
GDP (Deflators)	2.6	2.1	1.6	2.3	2.1	2.9	3.0
Sources: National Statistics Office & Macroeconomic Committee Estimates							

Employment and wages

Data on employment remain a critical issue in formal policy formulation about Vanuatu's labor market. On this front, we use data on compensation of employees – a good proxy for employment as guide to formal assessment. Total employment has grown significantly over the period 2005-11 averaging at 6.4 per cent in line with domestic economic development. Disaggregating total compensation of employees shows that public sector employment contributed about 9.1 per cent in growth while private sector accounts roughly for 5.9 per cent during the period. In recent years, total employment have moderated with recorded growth of only 3.5 per cent in 2011 following temporary tight fiscal controls and the overall impact of the GEC which affected the industrial and financial sectors coupled with continue delay in the implementation of public sector projects. This is evidenced in the public sector compensation of employees growing by only 0.5 per cent in 2011; but with strong offsetting growth seen from private sector employment in 2011 of 4.5 per cent – mostly attributed to increasing employment in the retail and wholesale production and tourism related services.

Wages that are not formally been accounted for in the system of national accounts released by the NSO includes those of the Recognized Seasonal Employers (RSE) scheme. These wages make up the group of under reported wages which is slightly difficult to capture but remain as an important source of earnings for least qualified workers. Labor migration is one of many important policies for PIEs with abundance of labor supply in trying to reduce poverty and at the same time raises welfare of their citizens. Since its inception in 2007, the RSE scheme has grown by about 0.2 per cent with estimation that growth in 2012 will surpassed 2011. Recently, the opening of the Australian Labor Market for RSE workers is good news for Vanuatu's labor market. Together with the NZ RSE schemes, there are estimations that growth in inward remittances will increase significantly. The Melanesian Spearhead Group (MSG) has taken further steps in addressing this issue by introducing the MSG skills movements in 20122 allowing member

countries with special skills to mobilize labor supply to meet shortage of labor supply under certain specified conditions.

The medium-term outlook for employment is expected to correlate with activities in the construction and real estate sectors. On the other hand, average growth in public sector employment is expected to remain below 3.0 per cent over the medium term following current fiscal policy stands to contain growth in current consumption. However, should growth in revenue receipt recover more than expected; then it is likely to see response in growth in public employment.

Inflation (Consumer Price Index (CPI))

The annual rate of inflation measured by the CPI rose during the period 2008 - 2011 to 3.9 per cent from its average growth rate of 2.0 per cent attained over 2004-07. The average movement in inflation is in line with both the average growth rates in food inflation and the fiscal positions of the Government. However, developments in 2012 reveals that both non-food and energy inflation are expected to contribute to movements in overall inflation. On the other hand, both the non-energy inflation and the food and energy inflation rates are estimated to remain low in 2012 following improved supply conditions of most imported commodity and lower input costs of factor of productions (i.e. fuel).

It is estimated that the annual inflation rate reached 1.4 per cent in 2012 given the slowdown in fuel and non-fuel related commodity prices and development in neighboring Australia. The forecasted inflation rate is well within the RBV's target range of between 0-4 per cent. The estimated inflation rate is a signal that economic recovery is currently underway while the annual inflation rate is projected to grow at an average pace of 1.9 per cent over the medium term with production expected to be driven by construction activity.

The External Sector Current Account Balance (CAB)

Vanuatu's competitiveness in few non-fuel commodity goods (copra, coconut oil, beef, coffee, coco) have been affected by improved global supply conditions and weak external demand. The trend in export openness has continued to under-perform. Over the period 2003-11, Vanuatu's export of goods (in per cent of GDP) grew by 8.0 per cent on average compared to 11.0 per cent achieved during the period 1993-02 and was down by 5 percentage points compared to the averaged 13.0 per cent growth recorded between 1983-92. On the other hand, average exports of services continue to outperform expectations having registered 38.5 per cent of GDP between 1993-02 now extended the positive growth averaging at 34.5 per cent of GDP between 2003 and 2011. The recorded low growth was attributed to weaker real external demand; particularly shrinking value of household's disposable income in Vanuatu's major trading partners and the rising value of their production.

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34.5 per cent of GDP between 2003 and 2011. The recorded low growth was attributed to weaker real external demand; particularly shrinking value of household's disposable income in Vanuatu's major trading partners and the rising value of their production. Another possible explanation why Vanuatu's net export continued to decline is in line with the real appreciation of the Vatu against those currencies of major trading partners, particularly the USD, the AUD, the NZD and the Euro. Depending on the relative weights assigned to these currencies; a closer review show that between 2008 and 2011, the Vatu has appreciated in real terms on average by 2.0 per cent. And between 2004 and 2007, the Vatu depreciated by approximately 1.0 per cent in real term which is in line with trend in export openness. The real appreciation was driven by external factors mainly the rise in fuel prices but normalisation is expected in late 2011 and 2012 following falling international fuel prices.

Furthermore, the poor export growth experienced by Vanuatu may have also been exacerbated by external factors such as transportation costs. It is commonly assumed that due to innovations and competition across time, advances in transport technology should have helped remote countries such as Vanuatu more than other countries. This may have been the case until recently when transportation cost has risen as a result of increases in fuel prices. The increase in fuel prices are much more pronounced in the airline costs increasing the costs of air travel as well as having major impacts on the exports of perishable products such as fish, fruits and vegetables.

Vanuatu's net transfer contracted in 2011 by 46 per cent; following political instability in the country which affected external confidence through official grants leading to the 53.7 per cent decline in official grants. Between 2007 and 2010, net transfers recorded an average growth rate of 4.3 per cent. Over the medium term, net transfers is expected to grow by an average growth of 114.8 per cent – driven by an average 151.7 per cent increase in official grants expected to flow in following several planned Government development projects.

Net income is estimated to contract by 76.0 per cent in 2012 reflecting growth in interest payment of foreign debts to foreign creditors as well as declining interest received from domestically owned assets invested abroad. Meanwhile, investment income (foreign direct investment – dividend and re-invested earnings) grew by 39.5 percent in 2012 outweighing development in outward direct investments. Over the medium term net income is forecasted to rebound following expected improvement in global economic environment which in essence should drive expectations and raised investments leading to increase in earnings from foreign assets.

As a result of weaker growth in net transfers, net income, net services and trade balance, Vanuatu's current account balance declined by 66 per cent in 2011. The CAB position is rebounded in 2012 supported by strong growth in net services and secondary income transfer which all recorded positive growth. Over the years, 2013-2016, the country's CAB is expected to be buoyant driven primarily by official grants (project related) and net transfers (from visitors arrival), despite downward pressure emanating from domestic demand. Any unexpected growth in real domestic demand could worsen the CAB adding more pressure to the level of gross official reserves. However, imports are expected to react relatively slow to movements in relative prices and in economic activity.

Capital Account Balance (KAB)

Vanuatu's KAB was rebounded by around 4.2 per cent in 2011 following increased in general government transfers and other inflows of capital investments. Although growth expanded in 2012 by a further 3.6 per cent this was nonetheless slower than previously anticipated due mostly to delay in the implementation of publicly funded projects and other minor private sector investment projects. In the last four years to 2010, growth in this sector has been very strong averaging at 58.4 per cent reflecting capital

investments related to the Millennium Challenge Corporation (MCC) projects. Over the next 4 to 5 years, performance of the capital account is projected to pick up relatively well in anticipation of the influxes of capital investments associated with planned government investment projects.

The Fiscal Sector

The Vanuatu Government has no forms of direct taxation but rely heavily on indirect types of taxation such as VAT and administrative fees and charges to administer its operation. Collection has been very volatile and moves in line with economic activity. Taxes on domestic goods grew by 2.0 percentage points less between 2008 and 2011 (10.0 per cent) compared to its average pace of 12.0 per cent growth recorded over the period 2004-07. On the other hand, taxes on international trade has been the most category of taxable goods affected, contracting by 2.0 per cent over 2008-11 after growing by an average rate of 11.0 per cent between 2004 and 2007. The swing in international trade receipts reflected structural changes to import duty legislations taking into account Vanuatu's *international trade obligations to trade liberalization by 2020*.

Overall public expenses has been expansionary between 2008-11 averaging at 8 per cent, although moderately slower compared to 12.0 per cent averaged growth recorded between 2004-07. Government policies have been closely linked to increasing consumption; which recorded an average increase growth of 4 per cent between 2008-11 compared to the average growth of 3 per cent recorded over 2004-07. Similarly, public investments recorded increases in growth by an average rate of 101 per cent during 2008-11 compared to its *low* record of 33 per cent attained over the period 2004-07. Essentially, the average growth experienced during 2008-10 is attributed to the Millennium Challenge Corporation (MCC) infrastructure project which is aid donor driven. The Government implemented policies is been characterised by concentrating on maintaining consumption overtime, '*consumption smoothing*' let alone public investment at the expense of foreign tax payers.

The history of uneven growth rates between recurrent expenses and revenue receipts mean that financing recurrent expenses must be through other sources. Indeed, the high expenses recorded over the period 2008-11 compared to the level of revenue collected led to the budget deficits recorded during those period. This development was no different to the fiscal performance achieved in 2012 with estimated outturn pointing to another disappointing deficit equivalent to -0.1 per cent of GDP. Together these developments forced the Government to resort to borrowing in order to finance public consumption. This is in violation of economic theory where agents borrow to finance productive investments with future positive economic rate of return. It is estimated that real public consumption increased by 2.3 per cent in 2012 while real public investments, on the other hand, contracted by 31.9 per cent due to delay in implementation of public projects. Over the medium term, real consumption is forecasted to grow by an average rate of 3.3 per cent supported by a slow growing labor force on the back of '*sticky wages*'.

Public Debt

Following relatively strong revenue receipts, the Government's financing needs have declined in 2013 compared to 2012, which has led to lesser borrowing. Furthermore, it estimated that the stock of public debt at the end of 2013 will decline by 0.7 per cent over the year to stand at VT 15,214 million (20 per cent of GDP). The estimated decline is possible as there were no new external loan drawdown transacted or expected to occur in 2013 whilst with the exception of the new domestic borrowing in mid-2013 to finance the supplementary budget, there is anticipated to be no further new domestic borrowing.

The estimated decline in stock of debt can be attributed to delays to the drawdown of several major, new donor funded projects loans expected to kick start in 2013 as well as old external loans continuing to be

repaid. Furthermore the domestic financing gap has been reduced in 2013 due to strict expenditure control measures imposed by the Department of Finance and Treasury and strong domestic revenue collections.

Domestic borrowings has grown by an estimated 5.7 per cent in 2013 adding to the stock of debt while the stock of external debt declined owing to amortization totaling at VT 458 million with repayment of the e-government loan constituting the highest share at VT 98 million in 2013. Meanwhile, the stock of public debt as per cent of GDP is estimated to remain well within the IMF's recommended threshold of 40 per cent as end of 2013.

However, this ratio will rise closer to the comfortable threshold over the medium term, following the Government's new borrowing plans for several major public funded infrastructure projects.

The Monetary Sector

Monetary Aggregate

Monetary policy is link to fiscal policy through printing of notes to finance excesses of public expenses over revenues and the need to control inflationary pressure emerging from expansionary fiscal policies. In Vanuatu, there are evidences of linkages between fiscal policy, inflation, monetary policy, exchange rate development and national income. Growth in broad money (including foreign currency deposits) during the period 2008-11 contracted by 0.2 per cent against an average growth of 14.0 per cent registered over the period 2004-07. Much of the movement in broad money was link to the contraction of foreign assets of the monetary institutions by an average rate of 5.0 per cent. Meanwhile, credit to the private sector increases at an average rate of 4.0 per cent over the period 2004-07. Recently, the annual average growth trend has intensify, growing by 8.0 per cent owing to the introduction of new comers; Bred Bank (Vanuatu) Limited, Credit Corporation (PNG) Limited into the banking system and other new private sector developments.

Broad money (excluding foreign currency deposits) (M2) grew by 7.0 per cent on average between 2008 and 2011. The average growth rate in M2 reached 22.8 per cent between 2004 and 2007. This is attributed to increasing growth in net foreign assets (NFAs) during those periods growing at an average rate of 11.0 per cent. However, growth have recently contracted by 13.0 per cent over the period 2008-11 reflecting large movement in transactions associated with strong domestic demand as well as increases in foreign liabilities of deposit money banks (DMBs). There are evidences that the 2011 trend was worsened in 2012 with M2 contracted by 1.1 per cent owing to drawdown in times and savings deposits over the year.

Development in this sector over the medium term is expected to be driven by inflows related to public investment projects and investor sentiment following development on global economic environment. Specifically, growth in M2 is forecasted to be driven by increasing economic activities supported by expected inflows of external funds to finance public projects.

IV. Background Study.

Global perspective

Poverty eradication, according to the UNGA resolution 66/288 (adopted in July 2012) is the greatest global challenges facing the world today. The current increase in global poverty is believed to have resulted from frequent occurrence of severe natural disasters (such as cyclones, typhoons, flooding, earthquakes and landslides etc) emanating from Climate Change. Climate change is, therefore, one of the greatest challenges of our time. The United Nations General Assembly (UNGA) has expressed grave concerns that all countries, particularly the developing countries and Small Island Developing States are most vulnerable to the adverse impacts of climate change and is now taking serious measures and is calling on all organizations and institutions worldwide to work together to mitigate these problems. The UNGA has passed a number of resolutions on protecting our Biosphere and Global Environment and to ensure that there is Sustainable Development, taking into account the economic, environment and social development aspects as the three major Pillars. The recent UNGA resolution 66/288 adopted on 27th of July 2012, is titled “ **The Future we want**”. The Common Vision established in this resolution states that “ UN Leaders have renewed their commitment to sustainable development and to ensure the promotion of an economically, socially and environmentally sustainable future for our planet and for present and future generation.

Infrastructure development, therefore, is seen to be one of the main Panacea that would assist in mitigating these global challenges and to achieve sustainable development, particularly in many Developing countries and Small Island Developing States. About 70 percent of the world’s poor people reside in the most remote and rural areas of most developing countries and Small Island Developing States and these people do not have access to roads and transports, no access to health centers and schools. The situation is currently getting worst with the frequent impacts of natural disasters) such as flooding, cyclones and typhoons, earthquakes, Tsunamis, Volcanic activities and other exogenous shocks).

Regional Perspective.

In the Pacific region, infrastructure is significant in supporting sustainable economic development. Infrastructure has been supported by cornerstone documents including the Forum Compact (formerly known as the Cairns compact), the Waiheke Declaration on Sustainable Development, and reflected in Forum Leaders communiqués.

Economic Infrastructure plays a major role in poverty alleviation and sustainable economic development in the Pacific region. Furthermore, it is a cross-cutting issue since almost all sectors are dependent on it to support their daily operations and activities. Infrastructure such as roads and bridges plays a vital role since it provides linkages to markets, improves governance, assists with social and economic development and is critical for basic health and education.

Roads, Transport and ICT are key enablers of sustainable economic development in the Pacific, supporting growth of productive sectors such as agriculture, fisheries and tourism and providing the necessary links for trade and commerce. The need to priorities and support the long-term development of infrastructure is clearly high.

The Pacific Plan identifies infrastructure as one of its priorities. In particular, the Plan calls for improved efficiency and effectiveness of infrastructure development and associated service delivery. This call has been strengthened and supported in later meetings. At the Pacific Islands Forum Leaders' meeting in Cairns, August 2009, the Leaders in addressing the urgency of achieving the Millennium Development Goals (MDGs) by 2015 specified greater investment in infrastructure which would underpin greater economic development as one of the guiding principles to achieving real progress in the MDGs.

Furthermore, the Forum Leaders at the 2011 Forum Leaders meeting in Auckland agreed on the Waiheke Declaration on sustainable development and acknowledged the importance of infrastructure as one of the sectors providing an environment in which the Pacific's potential can be realized. The Declaration was presented to United Nations in 2012 for the RIO+20 process to recognize the importance placed on sustainable economic development in the region, with a particular focus on the productive sectors and the importance of enabling sectors such as transport, infrastructure, energy and education in providing the environment to achieve that potential.

The 2012 Forum Leaders communiqué highlighted that Leaders reaffirmed the importance of infrastructure to the sustainable economic development of the region and encouraged CROP¹¹ agencies and development partners to work closely together to resource and address key gaps in regional infrastructure.

The Pacific's aspirations in transport and ICT are reflected in the RIO+20 outcomes, which call for global action on sustainable transport noting that transportation and mobility are central to sustainable development and can enhance economic growth and improve accessibility.

National perspective

The Government's Vision as outlined in the Priority Action Agenda (PAA) is "An Educated, Healthy and Wealthy Vanuatu". This Vision is supported by seven national strategic priorities, namely:

1. Private Sector Development and Employment Creation;
2. Macroeconomic Stability and Equitable Growth;
3. Good Governance and Public Service Reform;
4. Primary Sector Development;
5. Provision of better basic services
6. Education and Human Resource Development;
7. Economic Infrastructure and Support Services (Roads, Bridges, Transport and Telecommunications).

According to the PAA, Private sector development and employment creation including tourism, agriculture, and fisheries are very important and accorded with high priority by the Government. This means that creating an environment in which economic opportunities can be generated is at the core of national development strategy. The Government has placed more emphasis on the development and expansion of infrastructure especially in the rural areas in order to boost agriculture and the productive sector as well as alleviating poverty. The Rural areas have always been regarded as the heart of the nation.

¹¹ CROP is the acronym for Council of Regional Organizations in the Pacific.

However, most parts in the rural areas, since 1980 Independence, have been disadvantage and are without roads, bridges and poor infrastructure to date. This has greatly impacted on the lives of the people especially difficulties in access to health and schools and also in getting agriculture products to the main urban market centers and for exports.

The Government believed that a strong economy driven by the private sector should assist in alleviating poverty and achieve sustainable development. However, the domestic economy is narrow with limited natural resources; therefore, Government Policies also encourages the development of the external sector of Trade in Goods and Services (Tourism, Labor Mobility, Financial services, Banking and Insurance, Telecommunications). Research has shown that Vanuatu has more comparative Advantage in Tourism¹² (80 percent) and 20 percent on trade in goods (Agriculture 20 percent). It is also recommended that Vanuatu should specialize in Agriculture products of comparative advantage (include Fish, Copra, Coconut Oil, Beef, Cocoa, Kava, Timber, and Sandalwood).

Background Information on Santo

According to the World Vision¹³ Socioeconomic Assessment Report, Santo Island covers an area of 3,956 sq.km and is the biggest island in the Republic of Vanuatu. It currently has a population of about 46,000 most of whom are resident predominantly along the coastline. As in most developing economies where urban settlements are the engines of economic growth, the Town of Luganville with an estimated population of 13,500 is the center of economic activity in Santo.

The island has two main regional roads which take off from Luganville town. One is towards the north and the other is towards the west of the island. The road to the north provides access to the east coast and the northern parts of the island while the road to the west provides access to the regions in the south and west coast. Both the roads were gravel roads until 2006 at which time, the East Coast Road (ECR) was upgraded to a two lane tar sealed road with the support of Millennium Challenge Corporation¹⁴ of USA while the South Santo Road (SSR) remained a gravel road, however work is on progress for 2014 for the SSR road to be tarsal from Canal to Tasiriki by the China Railway first Group company.

Economic Analysis and Assessment

The economic assessment is based on Treasury Economic Team survey and the assessments provided in the recent world vision report. The survey aims to provide some analysis on the economic benefits (Luganville Main Wharf rehabilitation and extension) from the production of Agricultural Commodities, Forestry, Fisheries export and imports and the services sector particularly Tourist boat arrivals spending on the local economy. The analysis shows that the main agriculture production is from Copra which totaled up to average of 314¹⁵ tons per month. Kava production is ranked second with 24,757 plants, Root crops totaling 3,466,000 crops or 360 tons produced for the local market on a monthly basis. In terms of Forestry, Sandalwood production accounted for about 80 percent of total forestry production with total number of 2,809,000 trees, mainly concentrated in the West Coast of Santo. This is followed by white

¹² Trade Policy Framework Report, by Professor Biman Chand and the Vanuatu Department of Trade.

¹³ The Office of the World Vision based in Santo, has undertake a Socio Economic Assessment, on the social aspects and benefits of the South Santo Road. This study has greatly assisted in integration of the two pillars of sustainable development (Social and Environment) into the current Economic Assessment by Treasury Division.

¹⁴ www.mcc.gov/vanuatu

¹⁵ This figure excludes copra production from Malo to COPSL, estimated at around 200 tons per month.

wood of more than 399,400 trees and Mahogany of more than 133,500 trees. Other local timber including Blue water, Namalaus, Koyo, are grown as part of the natural forest with estimated total of 23,980 hectares. These agriculture and forestry production is hindered by poor road infrastructure which may lead to less shipment of exports of agricultural production internationally. It is believed that these potential, especially in Timber, Sandalwood, Kava, Coconut, Cattle and Root Crops as well as tourism can be further increased once the infrastructure particularly expanded wharf and roads is in place.

FRAMEWORK OF THE ANALYSIS

A comparison of the benefits and costs of a project can give an indication of whether or not a project is worthwhile investment. In order to be deemed economically feasible, projects must pass one or more value benchmarks: the total benefits must always exceed the total costs on a present value basis, or the rate of return on the funds invested should exceed the cost of raising capital, often defined as the long-term treasury rate or the social discount rate.

For this analysis on rehabilitation and extension of Port Luganville wharf, the cost to build and transfer operation the Niscol administration represents the foregone value of an alternative investment. The benefits of the project refer to the improvement in the social well-being delivered by the proposed project.

Benefit-Cost Analysis

In the benefit-cost analysis for the main wharf expansion, benefits are estimated for current and future users on an incremental basis; that is, the change in welfare that consumers and, more generally, society derive from the port's improvement, as compare to the current situation. As in most transportation projects, the benefits derived from the implementation of an infrastructure project are actually a reduction in the costs associated with transportation activities. For instance, the reduction of costs due to the expansion of the Port Luganville wharf by extra 231 meters affects users differently, depending on their preferences and the way the project changes their individual transportation costs. The primary users of the main wharf are the shippers that utilize the port of their freight transport.

The benefits of a project are the cost reductions that may result from the project's implementation. These cost reductions may come in the form of average time save by users, reductions in operating expenses, and reduction of pollutions.

Principles

The Benefit-Cost Analysis was conducted by Treasury Economic Team using methods and parameters consistent with US Department of Transportation and specifically Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants guidance. The following principles guide the estimation of benefits and cost in the analysis;

Only incremental benefits and costs are measured

- Incremental benefits of the project include transportation cost savings for the users of the main wharf.
- Incremental costs of implementation for the project include initial and recurring costs. Initial costs refer to capital costs incurred for design and construction for the main wharf improvement.

Recurring costs include incremental operating costs and maintenance expense. Only additions in cost to the current operations and planned investments are considered in the analysis.

Table 4: Benefits and Description of Evaluation Criteria Identified in Long Term Outcomes

Criteria	Benefit(s)	Description
State of Good Repair	Pavement Maintenance Savings	Pavement maintenance savings by diverting traffic to marine
	Maintenance and Operating Cost Savings	Savings in costs associated with longer term maintenance and operation of Infrastructure
	Vehicle Operating Cost Savings	Reductions in monetary costs to auto/bus drivers diverted to marine
Economic Competitiveness	Long Term Employment	Value of long-term jobs and whether they will be created in areas of economic distress
	Shipper Cost Savings	Cost savings associated with movement of cargo from one mode of transport to another (e.g, truck transport to marine transport)
Job Creation and Economic Stimulus	Short Term Employment	Value of new short-term jobs created

Valuation

All benefits and costs are estimated in 2013 dollars in the analysis, and annual costs and benefits are computed over a long-run planning horizon and summarized through a life cycle cost analysis. The main wharf expansion is assumed to have useful life of 20 years.

Model Structure

When conducting a benefit-cost analysis, a baseline scenario is compared to an alternative. For this study, the current main wharf condition is considered the baseline condition. The expansion of the wharf is the alternative. Data from numerous sources are combined using a variety of relationships and TIGER II guidance to develop benefit and cost estimates.

Port Luganville Main Wharf Activity Freight Activity

The following section provides the information about capacity at the main wharf today and in the future, should the main wharf be expanded. The port's ability to expand its operations is significantly limited by the wharf condition and size at this time. If no improvements are made, operations will be reduced at the Main wharf. If the main wharf is expanded, operations will increase and the port will be positioned to expand its existing customer base and cargo.

It should be noted that South Sea Shipping have shown considerable interest in initiating larger capacity tourist boats into Luganville wharf in 2016-17 if the wharf is expanded and meet international standards

of marine regulations. Although still in its initial stages expansion of the main wharf would further promote the opportunity for the new bigger passenger tourist boats.

Activity Data

The port currently handles more than 100,000 tons per year. The volume of tonnage from cargo and tourist ships is expected to have minimal growth in the “no build” scenario – a rate of 0.6 percent per year. In the “build” situation, with the expansion of the Port, tonnage is expected to increase at an average of 12 percent over the first five years, with a spike in the first two. This would eventually lead to an expected increase in tonnage handled of nearly 50,000

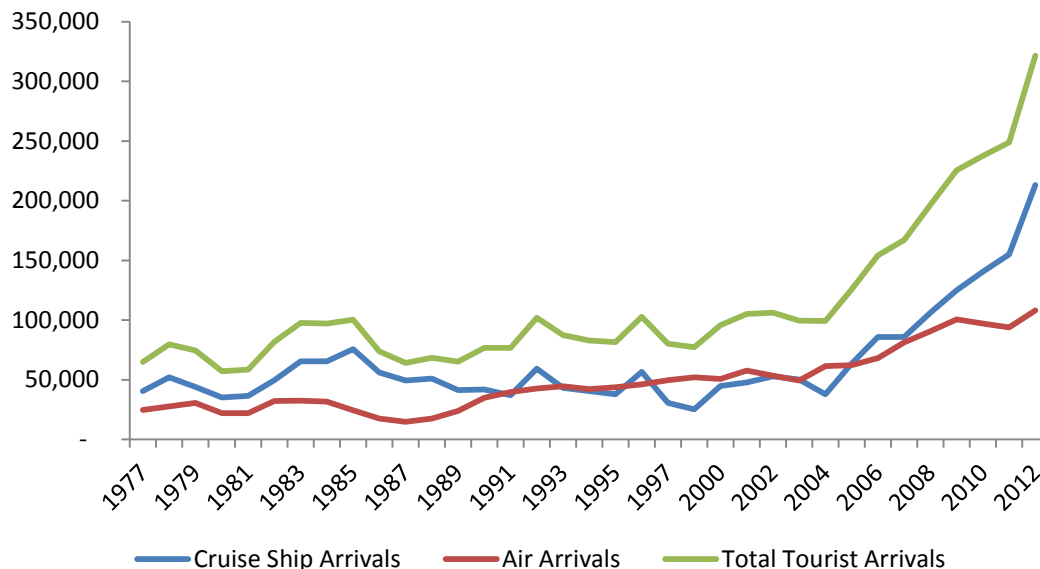
Development in the Tourism Sector.

Tourism is one of the major drivers of economic growth and socio economic development in the world, and in particular, the Small Island Developing States of which Vanuatu is part of. According to the Commonwealth Secretariat outcome statement in its 2012 Biennial Conference, Tourism is seen as one of the economic activities that have been performing well during the period of the global economic crisis from 2008 to 2010. The Small Island Developing States are classified to be more vulnerable to exogenous shocks such as natural disasters but they are also endowed with some of the most beautiful places, with spectacular sightseeing, white sandy beaches, clear crystal waters, tropical climate, green environment, rich cultural heritage with friendly people. These natural assets have created significant value and a source of main tourist attraction. Tourism contribute about 60 to 70 percent of most economies in Small Island Developing States, therefore, these countries have more comparative advantage in this sector. The tourism sector not only generates foreign exchange earnings but also contribute to socio economic development by way of providing more employment opportunities for the local people in the areas of handicraft, and small business enterprise. It also provides employment for the farmers and fishermen and other small businesses.

Government Policy.

The Government Policy as outlined in its Priority Action Agenda (PAA) has clearly outlined its main priority on the development of the productive sector including Tourism, Agriculture, Forestry and Fisheries. The latter (Agriculture and Forestry) formed about 90 percent of Vanuatu’s export of goods but the export base is so narrow and the Agriculture sector accounts for only 15 percent of GDP. Given this unfavorable condition, the Government, therefore, has placed more focus in further developing the export of services especially in tourism, given our comparative advantage we have in this sector. Tourism is a major contributor to Vanuatu’s economic growth, accounting for about 30 to 40 percent of GDP. The number of tourism keeps on increasing over the last six years both Cruise ship and Air Arrivals (See Chart 1). However, in terms of growth there is a slight decline which is due to a number of factors of which the major ones are poor infrastructure including roads wharves, bridges, transport and other major infrastructure. Research has shown that the development of tourism depends on better infrastructure in place including good Governance, Security and better environment. The development of better wharves and infrastructure to accommodate bigger cruise ships of up to 300 meters length would assist in increasing the number of cruise ship and tourist arrivals thus will boost economic growth.

Chart 1: Vanuatu's total Tourism Arrivals by Air and Cruise.



Source: Vanuatu National Statistics Office

The Potential for Tourism Activities in Santo.

Santo has great potential for tourism development, given its more adventurous sites, a World War II site which can attract many tourists. President Coolidge is a famous tourist attraction, the clear crystal waters and diving sites, magnificent Caves and Waterfalls, Blue Hole, and many beautiful Offshore Islands including Ratua, Aore, Tutuba and many more. According to the Chairman of Santo Tourism Association, work is currently underway in developing a tourism marketing plan with an aim of developing Santo as the Hub of Tourism in the Northern region. The upgrading and extension of Santo's main wharf and the plan of the construction of the new Pacific World War II Museum is a major development that will attract more tourism to Santo and should create more employment opportunities, generate income and contribute significantly to Vanuatu's Economic Growth. In addition, the construction of the 64km road from Canal to Tasiriki South Santo should open up new potential areas and sightseeing for tourism especially to some of the magnificent Waterfalls and caves, Mount Tawemasana and many more adventurous sites.

Revenue from Cruise Ship.

According to the Chairman of Santo Tourism Association, about 5 to 6.0 million vatu is injected into Santo per cruise ship and this figure is estimated to double once the new wharf extension and the South Santo Road are completed. Currently, there are about 800 to 900 tours for each cruise ship visiting the Blue Lagoon, Fire walking, Water Music, Visiting Cultural Parks, Santo dive sites and many more. The income generated assists more local people in meeting their basic needs and alleviating poverty. According to the chairman of the Tourism Association there will be 15 new extra cruise ships scheduled to come to Luganville wharf in 2015 and the extra 15 in 2017. The current cruise ships accommodate

about 2,500 tourists. The berthing fees for each cruise ship are 1.5 million vatu which goes to the Government as part of its recurrent revenue.

Cost Benefit Analysis of the Rehabilitation and Extension of Port Luganville Main Wharf.

This analysis looks at the Cost Benefit analysis of the Luganville main Wharf and to determine its viability. The analysis is twofold; the first part is on the Net Present Value (NPV) of the project. A positive and greater NPV would imply that the project is viable and has great potential to generate revenue; where as a negative NPV would mean that the project is not viable and has to be rejected.

The data used in this analysis are based on estimates of Luganville main wharf (Stevedoring administration by Niscol Company) revenues and those collected from Ports and Harbor and data collected from The Chairman of Santo Tourism Association. The major revenue of the Santo NISCOL Wharf is sourced mainly from wharf age and berthing fees from major cruise ships and International cargo boats and oil tankers. The berthing fees for each boat is 1.5 million vatu, with the assumption that there are four cruise ships per month and four cargo ships per month. The total wharfage fees collected annually is about 200 million Vatu. This amount is estimated to double after completion of the new wharf extension and improvement of the existing wharf. The new wharf is schedule to commence in 2014 and completed in 2015 and it should accommodate cruise ship of up to 300 meters in length or two large cargo boats. It is therefore, anticipated that wharfage fees would escalate as from 2017 onwards. According to the Chairman of Santo Tourism Association, Dave Cross, about 15 extra cruise ship is anticipated to arrive into Luganville and this should further boost tourism foreign exchange earnings as reflected in 2017 with a value of 1,732.5 million vatu. It was also noted that the planned construction of the Pacific World War II Museum in Luganville will attract more tourist around the world and this would also be a major contributor to the tourism earnings.

The final analysis shows a Net Present Value of the NISCOL Wharf to be positive and significant with a value of VT 11.09 billion.

Net Present Value (NPV) for Santo NISCOL Wharf.			
	R's	Discount factor	$Rn/(1+r)^n$
2014	797.5	1.05	759.52381
2015	798.5	1.1025	724.26304
2016	258.5	1.157625	223.30202
2017	1,732.5	1.21550625	1425.332
2018	1,874.5	1.276281563	1468.7198
2019	2,076.5	1.340095641	1549.5163
2020	2,436.5	1.407100423	1731.5751
2021	3,206.5	1.477455444	2170.2854
2022	5,056.5	1.551328216	3259.465
2023	5,056.5	1.628894627	3104.2524
2024	5,056.5	1.710339358	2956.4308
2025	5,056.5	1.795856326	2815.6484
			19,372.67
		NPV	11,096.67

$$NPV = \frac{R_1}{(1+r)^1} + \frac{R_2}{(1+r)^2} + \dots \frac{R_n}{(1+r)^n} - I$$

r= 5%

n=12.1 years

I= Initial investment=VT 8,840 million

R_n= net cash flow over the years

Values in Millions of Vatu

Cost-Benefit Analysis for Santo NISCOL Wharf.

Cost-Benefit Analysis for Santo NISCOL Wharf.						
	Revenues	Expenses & Interest	Total cost	Discount factor	Disc.Benefit	Disc.Cost
2014	820.0	4,160.5	4,161	1.05	780.952381	3962.381
2015	820.0	4,160	4,160	1.1025	743.7641723	3772.7891
2016	1,010.0	333.5	334	1.157625	872.4759745	288.08984
2017	2,454.0	303.5	304	1.21550625	2018.911873	249.6902
2018	2,554.0	261.5	262	1.276281563	2001.125829	204.89209
2019	2,756.0	261.5	262	1.340095641	2056.569633	195.13533
2020	3,116.0	261.5	262	1.407100423	2214.483025	185.84317
2021	3,886.0	261.5	262	1.477455444	2630.197761	176.99349
2022	5,736.0	261.5	262	1.551328216	3697.476743	168.56523
2023	5,736.0	261.5	262	1.628894627	3521.406422	160.53832
2024	5,736.0	261.5	262	1.710339358	3353.720402	152.89363
2025	5,736.0	261.5	262	1.795856326	3194.019431	145.61298

Discounted Benefit	Discounted cost	B-C Ratio
27,905.10	10,163.42	2.75

The Cost Benefit Analysis is an important analysis of any project as it determines the viability and potential revenue and profits anticipated from the project. The Cost Benefit Analysis of any project should be positive and greater than 1 to be more viable and accepted. The higher the Cost Benefit Ratio implies that the project should be accorded high priority.

The Cost Benefit Analysis of the Santo NISCOL Wharf is positive and greater than one with a value of 2.75. This implies that the Santo NISCOL Wharf project is viable with potential rate of return and should be accepted.

Social Benefit Analysis

Santo Island is the largest island and covers an area of 3956 square kilometer. Although the largest island it still lacks proper infrastructure in rural areas to facilitate on potential agricultural produces that would stimulate economic growth. The completion of the wharf extension will certainly have its filtering impact on the Sanma province including neighboring Northern islands. The agricultural productions potential of around 80 percent are still untapped for commercial activities since access to proper road infrastructure is not convenient for local farmers to invest on potential business activities which would results in more of imports and exports of goods and services in which the Government benefits from VAT sales of goods and services.

Vanuatu's key to economic self-reliance lies at rural economic development where 75 percent of population reside. The Government needs to provide the basic service delivery such as standard wharfs and roads to encourage and facilitate rural development.

The opening up of infrastructure such as standards wharf and roads is vital key priorities of the market economy development. Economic development requires the basic three factors of production utilization, Land, Labor, Capital. Santo has excess land (underdeveloped), poor road, bridges and wharf conditions continue to hold back on self-reliance development. Proper wharf infrastructure in Luganville main wharf will certainly boast economic development for locals and facilitation of trade to urban and rural population and the economy experience economic growth.

The rehabilitation and extension of Port Luganville main wharf will also benefit the neighboring Province such as Malampa, Penama and Torba which also are shareholders on the Niscol Stevedoring Company in Luganville that also used the current wharf facility to sell their commodities particularly agricultural products such as copra, cocoa, kava, and beef for exports.

Challenges/Issues

The Santo, Luganville wharf has been constructed and funded by Asian Development Bank (ADB) well back in 1991 by the New Zealand Company. Over the years natural disasters gradually reduce the wharf infrastructure state with results in the current poor conditions.

The wharf poor conditions further limit the wharf's length, thus limit container boats berths to only on vessel per period of time. Thus container boats and tourist boat cannot berth at the same time for offloading cargo and passengers. The wharf usage of one boat berth at a particularly time causes delay and adding extra costs with more time and less revenue collection on both on loading and offloading vessels.

The new upgrading expansion of 231 meters wharf expansion in Luganville aims to lessen and solved the poor wharf conditions and less cost and facilitate trade development to urban centers and improve the loading and unloading requirements in Santo and further improve the local population within the Sanma Province communities and its neighboring provinces (Malampa, Penama, Torba) and the overall economy.

Conclusion and Recommendations

The proposal for the ‘Rehabilitation and Extension of Port Luganville Main Wharf’ is economically viable and financially sustainable in the long run. The Ports for long as suffered from an inadequate wharf deteriorating conditions and consistent representative voice on the issue of improving the wharf in Luganville regarding both safety of boats berthing and offloading of cargo and passengers. Wharfs, roads and bridges are vital links that help people access clinics, markets and schools, the new proposed wharf rehabilitation and extension will ease market access to trade externally and domestically, particularly in Luganville alleviating burden of transport costs and shipper cost savings.

The wharf extension project is vital to commence to accommodate future expansion in terms of exports and imports demand for goods and services within the Northern Province particularly Sanma province and neighboring provinces. The upgrading of the south Santo roads (canal – Tasiriki) are some important planned infrastructure in place to add further to the demand for export/imports facilities and tourist destination sites once the wharf is completed in 2016. The wharf extension falls in line with the proposed upgrading of south Santo road which would eventually boast and encourage tourism activities access that will link up to beautiful waterfalls at Balatiliu, proposed bungalows at Molisavomo, world famous Wusi pottery, access to Vanuatu’s highest mountain Mt Tabwemasana using the south Santo road. Services sector particularly and Tourist perspective 80 percent of Santo is still untouchable access wise and a sealed road to the south will definitely deliver similar economic growth experience by the east road of Santo.

The Cost Benefit Analysis of the Rehabilitation and Extension of Port Luganville Main Wharf is positive and greater than one with a value of 4.37. This implies that the proposed Wharf project is viable with potential rate of return and should be accepted.

Table 4: Sanma population Census

	Total Population (Male & Female)	Male population	Female Population	Number of Households
SANMA (Population)¹⁶	45,855	23,623	22,232	9,729
Aore	556	279	277	110
Araki	140	65	75	30
Bokissa	56	30	26	16
Malo	4,279	2,260	2,019	967
Malokilikili	13	6	7	4
Mavea	207	104	103	42
Santo	39,601	20,369	19,232	7,922
o/w Luganville	13,156	6,766	6,390	2,582
West Coast ¹⁷	2,050 est			
Tassiriki +2	800 est			
Nasulesule	300+			
Pakataura	500+			
Ukoro	686+			
Namoru	378+			
Malatao &	450			
Morkary				
Maliukaloi &	250			
Fortjinal				
Ibaiato	600			
Narango	400			
Jaraland	700			
Belmol	300			
Tangoa	394	199	195	87
Tutuba	609	311	298	101
Total Vanuatu Population	234,023	119,091	114,932	47,582

Source: The 2009 National Population and Housing Census, and 2013 Survey.

¹⁶ The 2009 National Population and Housing Census.

¹⁷ Data from West Coast, South Santo Villages (Tassiriki, Nasulesule, Pakataura, Ukoro, Namoru, Malatao & Morkary, Maliukaloi and Fortjinal, Ibaiato, Narango, Jaraland, Bel Mol) are estimates based on Economic Survey and Assessment conducted by Mr Trevor Mele and Michael Busai from 15th to 18th of November 2013.

Table 5: Niscol Stevedoring Charges Revenue

Importers	Containers Numbers/Annually	Feet	Metric Tons/Year	Price/container/Tariff	Proposed Revenue
New Look Shop	34	20		38,160	1,297,440
LCC store	24	20		38,160	915,840
John Lum	20	20		38,160	763,200
Wong Sze Sing	30	20		38,160	1,144,800
SSP - Petroleum			15,000	1,000	15,000,000
Valent store	1	20		38,160	38,160
LCM Store	300	20		38,160	11,448,000
Santo hardware	200	20		38,160	7,632,000
LSC Store	25	20		38,160	954,000
Unity Store	10	20		38,160	381,600
LYC Store	35	20		38,160	1,335,600
Others	15	20		38,160	572,400
Total					41,483,040
Exporters					
Au bo Store	25	20		38,160	954,000
VCCE	35	20		38,160	1,335,600
Peter Colmar	30	20		38,160	1,144,800
COPSL			12,000	38,160	457,920,000
Total					461,354,400
Total Exports and Imports Annually					502,837,440

Source: Niscol Stevedoring Company

Table: 6 – Coconut Productions by Tons Area 1 and 2 South Santo 2013.

Area 1	No.Bags	Total tons/Month	Area 2	No.Bags	Total tons/Month	Total Area 1+2 (Tons)
January	2,373	154,245	January	2,460	159,900	314,145
February	2,583	167,895	February	3,423	222,495	390,390
March	2,146	139,490	March	3,044	197,860	337,350
April	1,900	123,500	April	2,846	184,990	308,490
May	3,083	200,395	May	2,341	152,165	352,560
June	1,750	113,750	June	1,946	12,649	126,399
July	2,612	16,980	July	3,279	213,135	230,115
August	3,156	205,140	August	3,569	231,985	437,125
September	1,600	104,000	September	2,358	153,270	257,270
October	1,856	120,640	October	1,648	107,120	227,760
Total	23,059	1,346,035	Total	26,914	1,635,569	2,981,604

Source: COPSL November 2013

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Appendix 1: Deteriorating Copra Docks and wharf (west side of wharf)



Appendix 2 – Raw Copra Exports Docks and Raw Coconut oil export tanks Storage

