



Assessment of the Economic Impact of Cruise Ships to Vanuatu **Report**

AUGUST 2014



This study into the economic impact of cruise ships to Vanuatu was commissioned by the Australian Department of Foreign Affairs and Trade, Carnival Australia and IFC, a member of the World Bank Group.

It was conducted by consultancy firm Net Balance Management Group Pty Ltd using methodology similar to that of studies undertaken in Australia and the Caribbean on a regular basis.

Data for the study was provided by Carnival Australia and Royal Caribbean Cruises International.

About the Australian Aid Program

On 18 June 2014, Australia's Minister for Foreign Affairs launched a new development policy, Australian aid: promoting prosperity, reducing poverty, enhancing stability. Australia's aid program has a stronger focus on private sector development, including aid for trade, recognising that the private sector is the primary driver of economic growth and poverty reduction. Australia is investing in education, health, humanitarian assistance, and empowering women and girls, reflecting the links between human development and economic growth. Australia's aid effort is focused firmly in the Indo-Pacific.

About the International Finance Corporation

The International Finance Corporation (IFC), a member of the World Bank Group, is the largest global development institution focused exclusively on the private sector. Working with private enterprises in about 100 countries, IFC uses capital, expertise, and influence to help eliminate extreme poverty and boost shared prosperity. In FY14, IFC provided more than \$22 billion in financing to improve lives in developing countries and tackle the most urgent challenges of development. For more information, visit www.ifc.org.

IFC's work in the Pacific is guided by the Pacific Partnership, through which IFC works with the Australian and New Zealand governments to stimulate private sector investment and reduce poverty in the region.

About Carnival Australia

Carnival Australia was formed in July 2004 to meet the growing demand for cruising and the number of Carnival Corporation & plc cruise companies homeporting ships from Australia and New Zealand. Since then, Carnival Australia has led the rapid expansion of the industry, which has tripled in the past five years alone and now sees well over 600,000 Australians take a cruise holiday each year. Today Carnival Australia represents three homeported brands in Australia – Carnival Cruise Lines, P&O Cruises and Princess Cruises – as well as another four international cruise brands that visit the region annually – Cunard Line, Holland America Line, P&O Cruises World Cruising and Seabourn. For more information, visit www.carnivalaustralia.com.



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Executive Summary

The World Bank Group, DFAT-Australia, and Carnival Australia have partnered to conduct this study of the economic impact of cruise ship tourism in Vanuatu. Data gathering and analysis for this study was carried out by Net Balance Management Group.

Over the past 10 years, Vanuatu's cruise arrivals have grown by 15% per year. Cruising to Vanuatu has been buoyed by an advantageous location within a few days' sail of Australia, a varied destination offering centred on Port Vila, and consistently positive passenger feedback. In 2013, more than 240,000 people arrived in Vanuatu by cruise ship. This translates into 490,000 passenger days.

The goal of this study is to quantify the economic impacts of cruising, and to provide data on the cruise sector's effect on economic activity. The study then identifies a set of investment opportunities that can help to increase the economic benefits of cruise tourism in Vanuatu. This report therefore seeks to provide a platform that can be used by government, the private sector and donor partners to support further strategic, targeted development of cruising.

Data on tourism, and by extension on cruise tourism, is not readily available in Vanuatu. This report is an attempt to capture initial economic information about the cruise industry and to provide a point of departure for additional research into the economic, social and environmental impacts of the cruise sector.

Key Findings

The key results from the study are summarised in the bullet points below. All amounts are in Australian dollars (\$).

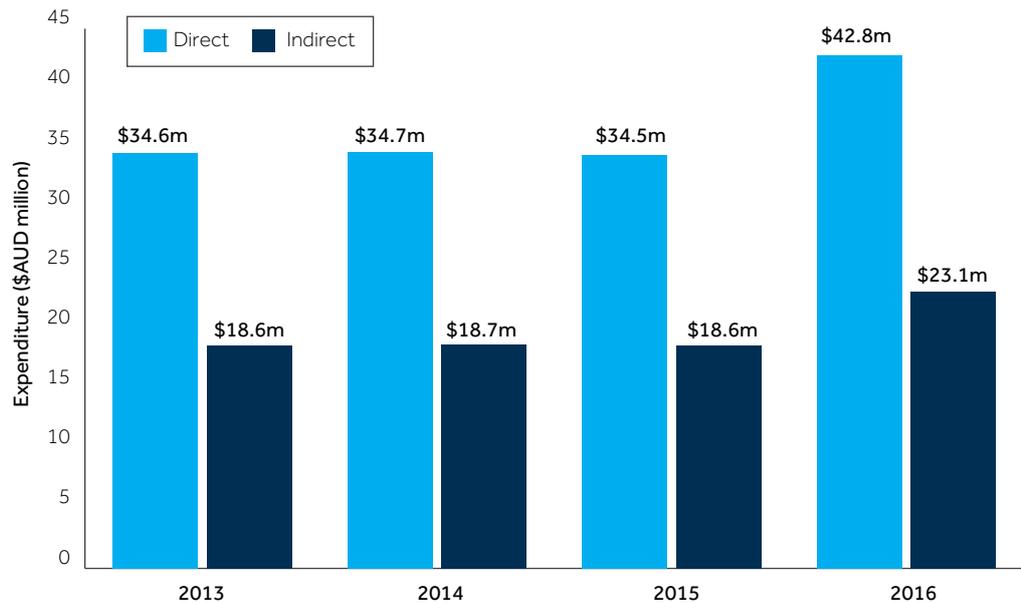
- Cruise companies, their passengers and crew spent \$34.6 million in Vanuatu in 2013¹. This is equivalent to approximately 10% of Vanuatu's exports². Private businesses receive 90% of this expenditure.
- Additional indirect stimulus impacts, estimated at \$18.6 million, resulted from second round spending by businesses benefiting from direct cruise-related expenditure.
- Each cruise ship voyage brings an average of \$260,000 in spending to Vanuatu³ and one cruise ship passenger brings \$125 of spending.
- Additional economic benefits estimated at \$30 million over 10 years, have been identified through priority investments profiled in this report; these opportunities are focused on destination development and providing improved access to the cruise market for Vanuatu businesses and individuals.
- In Vanuatu, the cruise industry is estimated to generate up to 3,250 total employment opportunities⁴.
- Cruise passengers spend \$96 per day in Port Vila, \$45 per day in Luganville and \$11 per day in Mystery Island⁵.
- Port Vila receives 85% of all passenger expenditure in Vanuatu (and 80% of all direct expenditure). This is due to Vila's high number of calls and well-developed excursions and shopping opportunities.

-
- 1 Expenditure impact is extrapolated from detailed data gathered at the three major ports of call: Port Vila, Luganville, and Mystery Island. It is assumed that the three remaining ports of call, Champagne Beach, Wala and Pentecost, see benefits similar to Mystery Island. The capacity of some ships (the Carnival Spirit) is almost 20% greater than some others and this assumes the mix of ships would remain the same over time. The projected number of calls to each port in Vanuatu was sourced from the cruise industry.
 - 2 VNSO, 2012 National Accounts of Vanuatu
 - 3 Calculated as direct expenditure of cruise tourism in 2013 divided by the number of Carnival and RCI unique ship voyages to Vanuatu in 2013. This is an average and impact varies by the number of calls and mix of ports included in a particular itinerary.
 - 4 The wage portion of cruise tourism spend in 2013, divided by average salary in relevant sectors leads to an estimate of 1,170 full time equivalent (FTE) jobs resulting from cruise ship activity. Given the nature of employment in developing countries in the sectors concerned, which rarely corresponds to a notion such as FTE, a range has been provided to account for part-time (not less than 33%) employment opportunities resulting from cruise tourism. 1,061 businesses working in sectors that supply cruise tourism were registered in the municipalities of Port Vila and Luganville in 2013.
 - 5 Average spend of all passengers going ashore at each port, including local portion of tour spend and including passengers who went ashore but did not spend money.

- The survey found a strong positive correlation between passenger satisfaction and spending: the more satisfied a passenger with the variety of things to see and do, the longer they stay ashore, and the more they spend.
- The survey found some unmet demand in sales of handicrafts, clothing and jewelry, pointing to the need for better market research to capitalize on missed sales opportunities.
- Port Vila receives 85% of all passenger expenditure in Vanuatu (and 80% of all direct expenditure). This is due to Vila’s high number of calls and well-developed excursions and shopping opportunities.
- The survey found a strong positive correlation between passenger satisfaction and spending: the more satisfied a passenger with the variety of things to see and do, the longer they stay ashore, and the more they spend.
- The survey found some unmet demand in sales of handicrafts, clothing and jewelry, pointing to the need for better market research to capitalize on missed sales opportunities.

In the coming years, cruise industry related expenditure coming into Vanuatu is expected to grow with increases in size and number of cruise ships traveling into the South Pacific.

FIGURE 1: SUMMARY OF ECONOMIC IMPACTS, VANUATU



Future Outlook

In 2014, Vanuatu is scheduled to host more than 230 cruise ship calls across 6 ports: Port Vila, Santo (Luganville), Mystery Island, Pentecost, Champagne Bay and Wala. The three ports of Port Vila, Luganville and Mystery Island host 85% of all cruise ship calls to Vanuatu.

Cruise tourism in Vanuatu is anchored around Port Vila, which is a popular destination with passengers and is one of two Vanuatu destinations, along with Luganville, which allows ships to moor alongside a wharf. While Luganville wharf awaits repairs and potential upgrade to services, Port Vila remains the key destination in Vanuatu which allows ships to receive critical supplies and to complete customs and processing formalities in Vanuatu. Ensuring that Port Vila can continue to accommodate more ships, and ships of increasing size, are key to supporting the stable development of cruise tourism in the medium term.

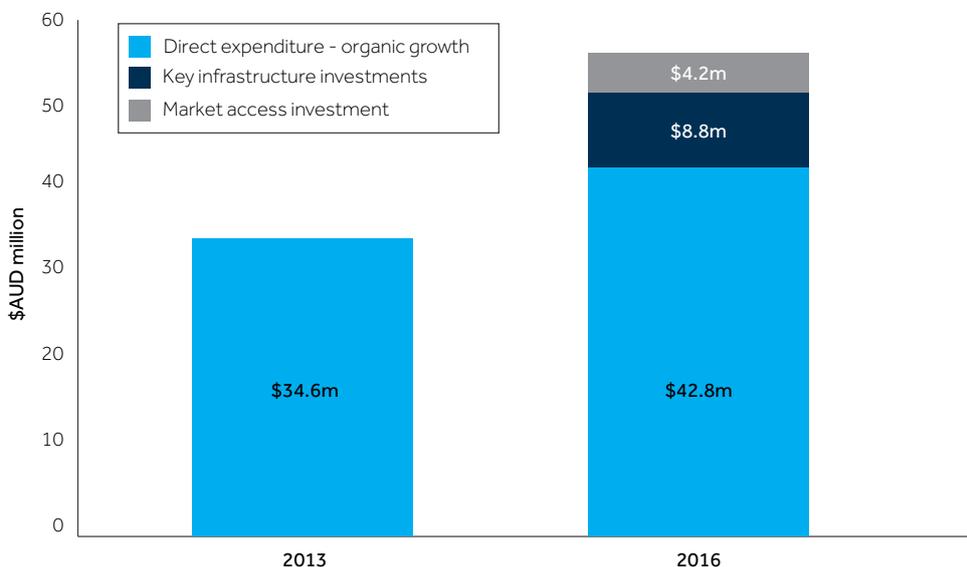
A development plan for the industry which seeks to support Vila being able to moor two ships simultaneously, or, alternatively, to develop Luganville as a functional alternative to Vila, is important if Vanuatu seeks to receive an increasing portion of the expected growth of the cruising industry over the coming 5 to 10 years.

Looking beyond the objective of increasing revenues by increasing the number of cruise ship visits, Vanuatu can also enhance and more equitably distribute the economic benefits it sees from the cruise industry. This study profiles a set of investments that can help Vanuatu to achieve these goals. The investments can be broadly categorized into the following types:

- Improvements to mapping and repairs/upgrades to critical infrastructure
- Development of a limited number of new destinations
- Ensuring Vanuatu's businesses and individuals have more direct access to the cruise market

While this report presents investments through the lens of net economic benefit, this analysis does not capture distributional effects, which will clearly be larger for some opportunities than others. Investments that can measurably improve the circumstances of a diverse set of communities in a sustainable manner can be given particular attention if a wider segment of the population is to be included in the economic benefits brought by the cruise industry

FIGURE 2: POTENTIAL GROWTH IN DIRECT ECONOMIC IMPACTS FROM INVESTMENT OPPORTUNITIES



Summary of Methodology

A survey of passengers and crew was undertaken in Port Vila, Luganville and Mystery Island between March and May 2014. These three ports account for 85% of all cruise calls to Vanuatu. Carnival brand (P&O, Princess, Carnival, Holland America) and Royal Caribbean ships participated in the survey. A total of 4,039 passenger and 926 crew surveys were processed for data (this excludes unusable surveys). Passenger surveys reported on behalf of 8,839 passengers, given an average of 2.2 people per party. Passengers' response rate was 21%, in line with methodology parameters.

The study was structured to capture the direct and indirect economic impact of cruise ships in Vanuatu:

- The **direct impact** is the cash-flow generated by cruise ship activity in Vanuatu: direct expenditure by passengers, crew and the ship operator on goods and services. Data was captured through surveys of passengers and crew on board ships, as well as through information obtained from cruise ship companies.
- **Indirect stimulus** impact has been calculated as the second round of expenditure on the cruise tourism supply chain: local businesses using cash-flows received from cruise ship activity to purchase the inputs required to carry out their business activities. Indirect stimulus impact therefore measures the value of cash redistribution of cruise ship tourist expenditure through the economy⁶. Data was collected through a survey of businesses in Port Vila and Mystery Island; methodology included face to face interviews and focus groups with businesses and government.
- **Direct employment impact** is estimated through a business survey and face to face interviews carried out in Port Vila. The total employment was calculated using estimated average full time monthly wage and proportion of cruise ship tourism expenditure flowing to wages for each sector. A range was then provided between the resulting number of FTE jobs and part time jobs, to account for the nature of employment in a number of sub-sectors affected by cruise (handicrafts, transport).
- **Induced impacts** measure the economic impact of flow on expenditure by private beneficiaries who indirectly benefit from cruise ship tourism spending – for example when employees spend their salaries on purchases or living expenses. These impacts have not been considered as part of this study.

6 For example, indirect economic impacts are created when a tour operator spends money on fuel and salaries to carry out its activity. New beneficiaries (fuel provider, employees) are then involved.

Background

Globally, the cruise ship industry has grown substantially over the past decade and while the Pacific islands have participated in this growth, the Pacific region most likely accounts for only about 2% of global passenger numbers⁷. The Australian market accounts for about 70-75% of regional passengers, with New Zealand the next most important source market.

Increasing numbers of cruise ships (P&O brand) are now being based year-round at Australian ports (Sydney & Brisbane). The general pattern is for itineraries to be focused on Australian, New Zealand and nearby Asian destinations over the September – March Australian summer period; with Pacific island destinations being favoured during the April/May – July/August period⁸.

In terms of overall passenger numbers for cruises departing and returning to Australia, Carnival Australia⁹ is the biggest operator in the region (about 60%). Royal Caribbean is the next largest (about 35%); but with no full-time Australian-based ships. In line with global trends, the sizes of vessels operating in the region are increasing, with most now having 2,000 plus passenger capacity.

Despite its small share of the global market, the Pacific cruise ship business is growing steadily; with annual growth of about 20% to 25% experienced over the past 5 years, with New Caledonia and Vanuatu destinations accounting for the large majority of this growth.

The majority of cruise ships visiting the Pacific islands operate out of bases in Sydney and Brisbane. Customer preference for relatively short duration (7 to 10 day) itineraries and maximum port calls, effectively restricts most itineraries to New Caledonia and southern/western Vanuatu destinations. Other destinations, such as Samoa and Tonga, are disadvantaged by distance (and required sailing days) from Australian ports. The trend to shorter duration itineraries has also meant that cruise ship calls at Fiji destinations, while they have experienced some growth (roughly 15%-20% over the past 5 years), have experienced much lower growth than calls in Vanuatu and New Caledonia. The latter have increased by about 80% over the same period.

7 Cruise Lines International Association (CLIA) Australasia data indicate that the Australasian region accounted for nearly 6% of global deployments in 2013, and about 30% of the region's deployments targeted the South Pacific.

8 Though some ships are focused on New Caledonia & Vanuatu on a year-round basis.

9 Carnival, P&O Cruises and Princess brands.

Summary of Findings

On average, one cruise ship voyage brings in \$260,000 and one ship passenger brings \$125 to the economy, in direct expenditure. While these headline numbers present an overall picture, impacts are not evenly distributed, with Vila stops capturing more spending per call and per passenger, given the number of activities and shopping opportunities.

TABLE 1: DIRECT ECONOMIC IMPACT PER SHIP CALL AND PER PASSENGER (2013)

PORT	DIRECT IMPACT PER SHIP CALL	DIRECT IMPACT PER PASSENGER
Port Vila	\$243,900	\$117
Luganville	\$133,600	\$64
Mystery Island	\$43,100	\$21

Remaining data in this report refers to the three surveyed ports of call: Port Vila, Luganville and Mystery Island, unless specifically noted. These ports account for the majority of the cruise sector's total impact on Vanuatu.

Direct Economic Impacts

The main sources of direct economic expenditure in country are:

- expenditure by passengers going ashore on the day of their visits (including local portion of pre-purchased tours)
- expenditure by cruise companies on services such as port agent services, and port/landing fees and dues;
- expenditure by crew members going ashore (concentrated on food/beverage and local transportation).

Passengers, crew and the cruise companies spent a total of \$34.6 million in Vanuatu in 2013; of this direct expenditure, the 3 surveyed ports account for \$33.0 million. When extrapolated over a whole year, this direct expenditure translates into the following impact for industries servicing the cruise sector in Vanuatu.

FIGURE 3: DIRECT EXPENDITURE (3 PORTS) PER INDUSTRY (AUD)

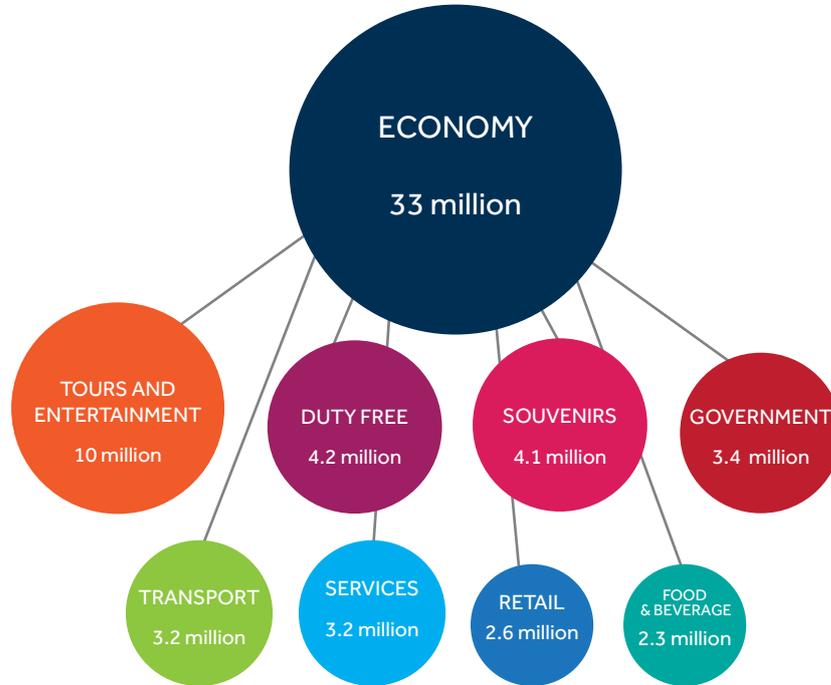
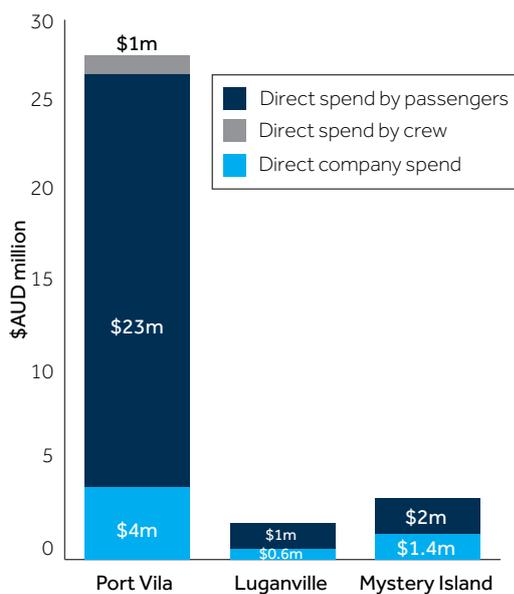
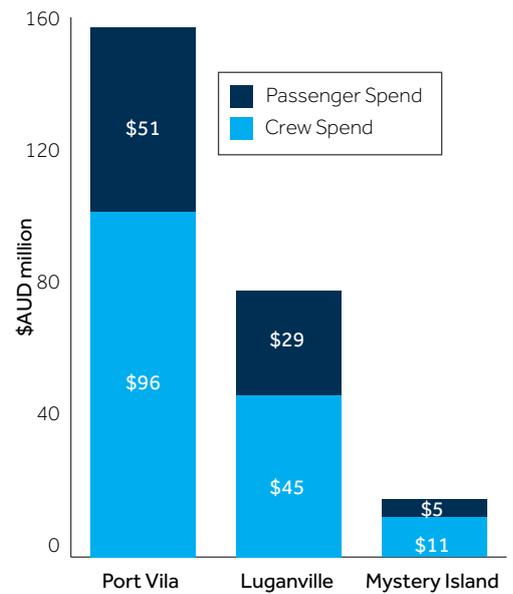


FIGURE 4: SUMMARY OF DIRECT EXPENDITURE BY SOURCE AND INDIVIDUAL EXPENDITURE PER PORT

Direct spend by Source



Individual spend per Port

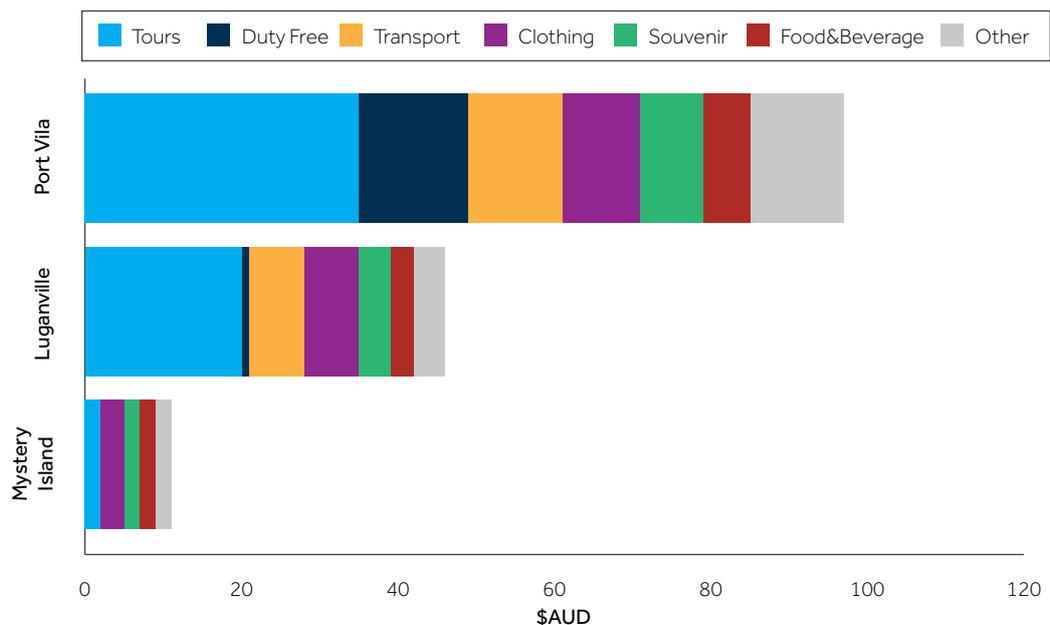


Direct expenditure by passengers dominates total direct impact, especially in Port Vila, where both excursions and shopping opportunities are well developed¹⁰.

The number of visits to a port of call is as important a driver of overall impact as individual spend, as can be seen from a comparison of Luganville and Mystery Island – while average passenger and crew spend in Mystery Island is only 22% of spend in Luganville, the number of calls to Mystery Island render total annual impacts larger. Luganville, which has the alongside berthing facilities favoured by the industry, is scheduled to receive more visits in 2014 than 2013, but the state of repair of the wharf has been one of the factors that has slowed growth in ship calls.

Figure 5 presents a comparison of the share of expenditure on key items, per port of call. According to industry data, on average 97% of passengers go ashore in Port Vila, and 91% go ashore in Luganville, where ships dock and the same in Mystery Island, where passengers are tendered to shore¹¹. The breakdown shows that the patterns of spending vary between ports of call, as expected given different spending opportunities in each location.

FIGURE 5: PASSENGER SPEND BREAKDOWN

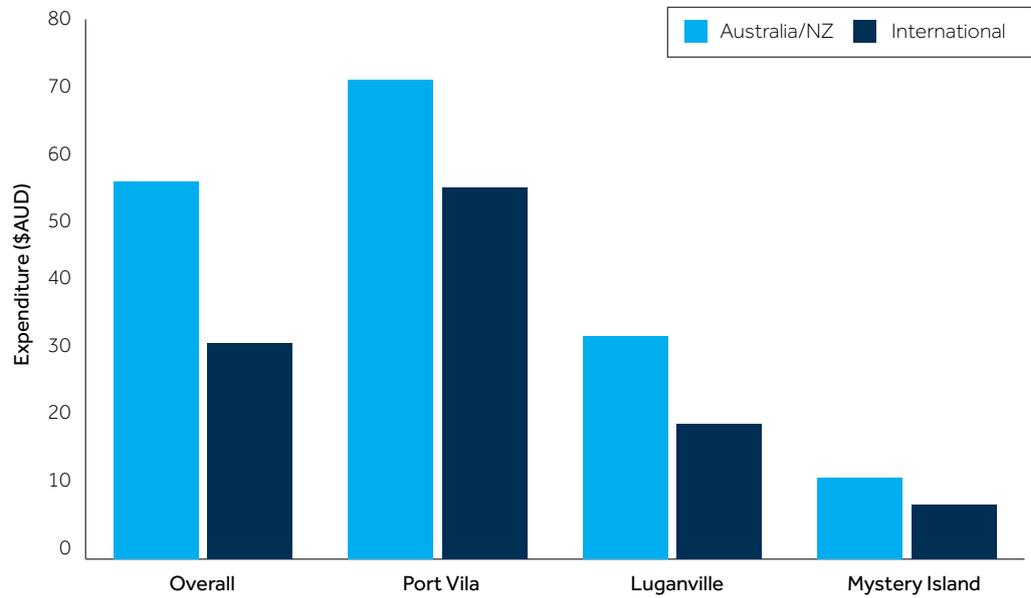


Australian and New Zealand passengers were found to spend more at each port than 'international' (chiefly North America and Europe) passengers coming to the region.

10 Note that expenditure by the cruise companies has been allocated to each location based on number of calls. It may however go back to companies or government bodies based in Port Vila. In Mystery Island, the landing fees are paid directly to the land owning community and can be allocated to community projects (schools, health services, etc). This is classified under "government" for convenience. No indirect economic impact has been calculated on these landing fees.

11 Based on information provided by the cruise companies on the ships surveyed in March – May 2014. These estimates were used in the extrapolation of the impacts over a whole year, as only people going ashore have the opportunity to spend.

FIGURE 6: PASSENGER SPEND COMPARISON, BY PASSENGER ORIGIN¹²

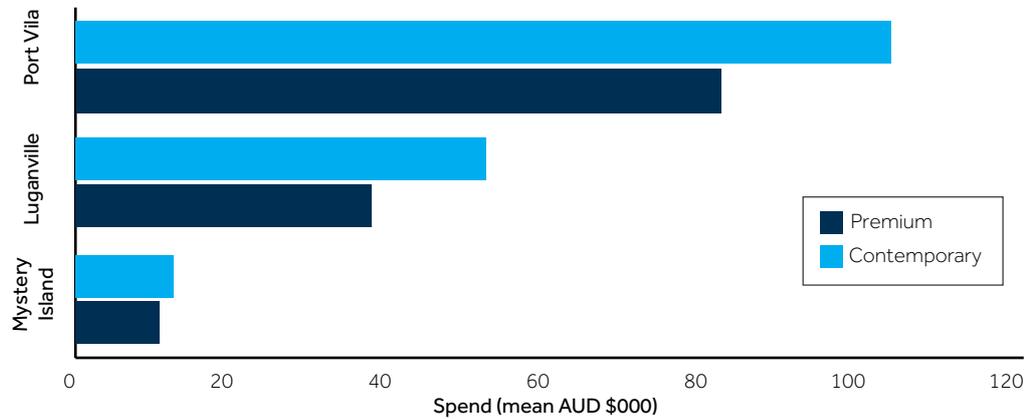


The most significant factor influencing levels of passenger spending is class of ship. Driving this difference are the premium ships' longer itineraries and higher number of port calls. Vanuatu results are in line with global industry data, which shows that premium ships tend to have lower average spend per call. When extrapolating for a year of economic impact, survey data was weighted to account for this difference.

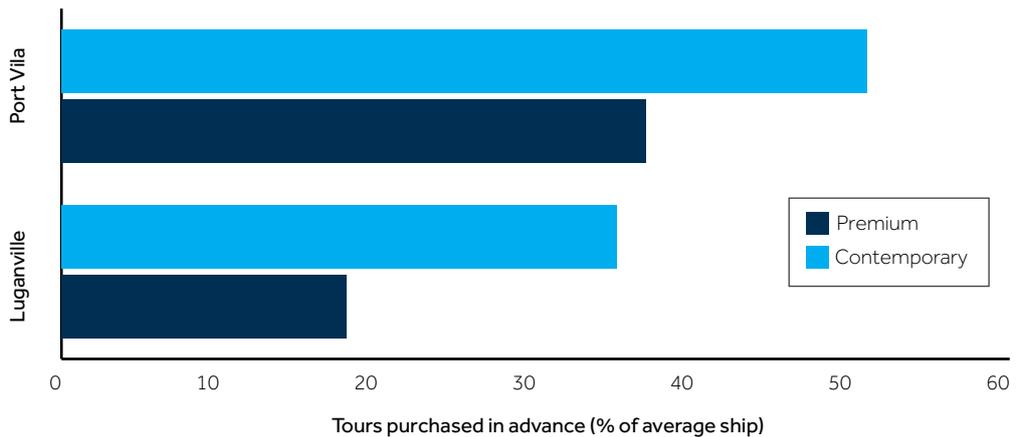
¹² Pre-booked tour spend is excluded

FIGURE 7: PASSENGER TOUR AND OVERALL SPEND COMPARISON, BY SHIP CLASS

Passenger spend comparison by ship class



Tours purchased in advance (% of passengers on average per ship)



A number of driving factors of passenger expenditure were explored:

- There is a significant difference in total expenditure per passenger on the day of the visit between those who purchased tours in advance and those who did not for both Port Vila and Luganville, with passengers spending less if they pre-purchased a tour. There are also differences for certain items of expenditure, with slightly less spend on transport and duty free for those who pre-purchased tours, but slightly more on souvenirs.
- There is a significant negative correlation between total passenger spend and trip duration, i.e. passengers on longer cruises spend less, as previously observed by cruise companies.
- There is a strong correlation between the amount of expenditure and the ship class (contemporary / premium) but no difference in the makeup of expenditure, i.e. passengers on contemporary ship spend more than premium passengers do, on the same items.
- There is a strong positive correlation between satisfaction with the variety of things to see and do and expenditure on souvenirs, entertainment and total spend per passenger.
- There is a positive correlation between the number of hours spent ashore and the mean expenditure (up to 7 hours, after which mean expenditure reduced).

FIGURE 8: CORRELATION BETWEEN SATISFACTION WITH VARIETY OF THINGS TO SEE AND DO AND MEAN EXPENDITURE

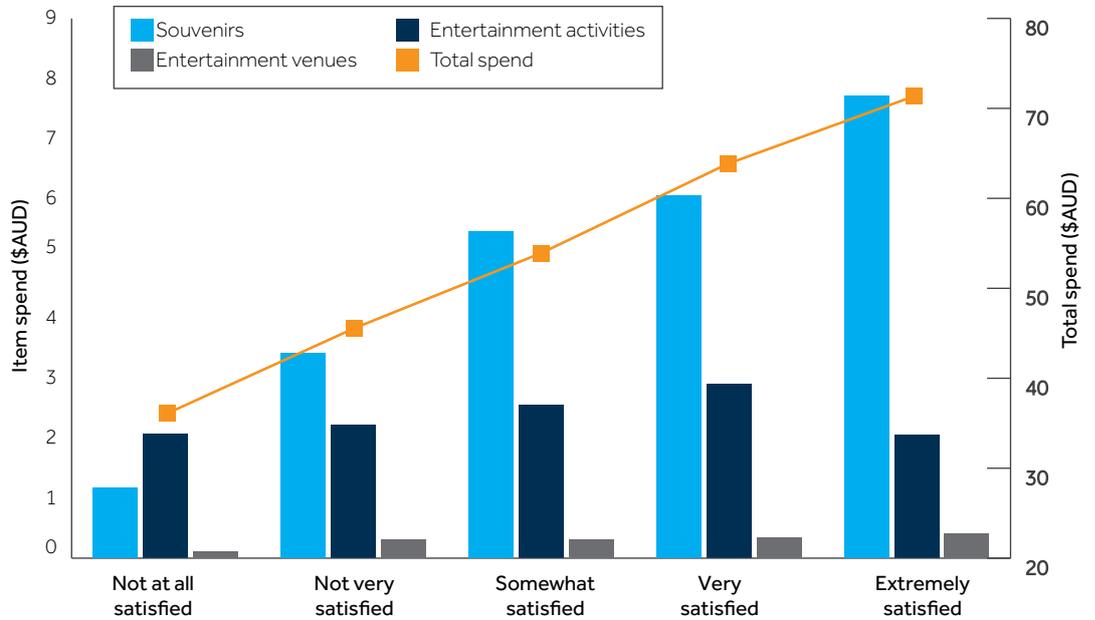
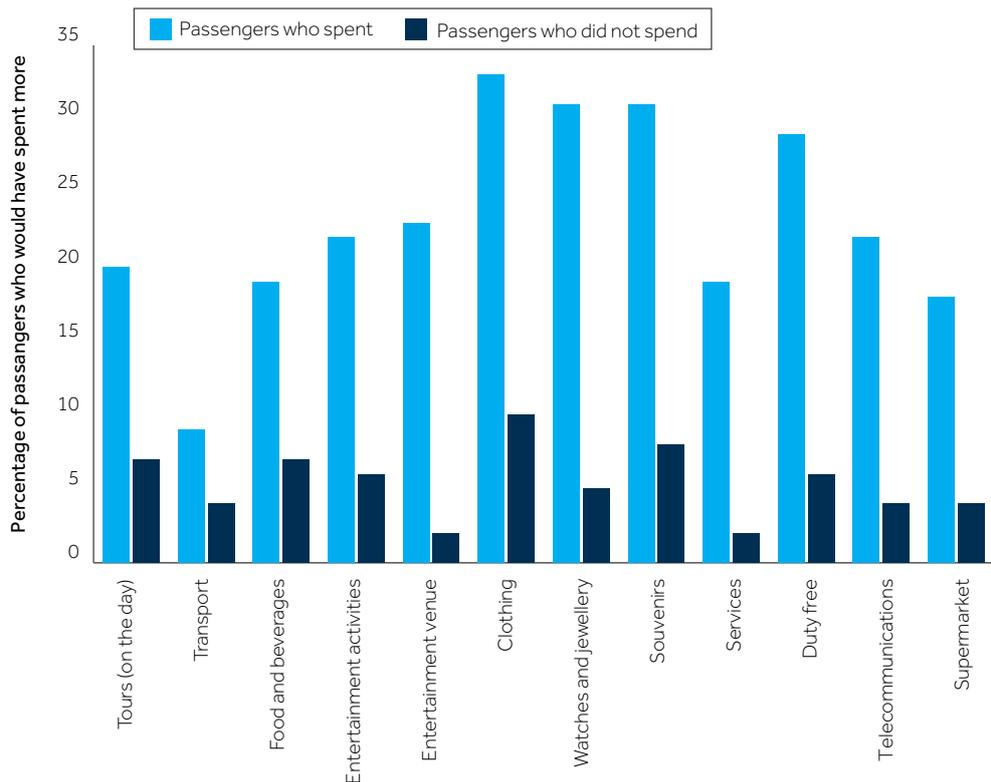


FIGURE 9: PERCENTAGE OF PEOPLE WHO STATED THEY WOULD HAVE SPENT MORE IF MORE WAS AVAILABLE

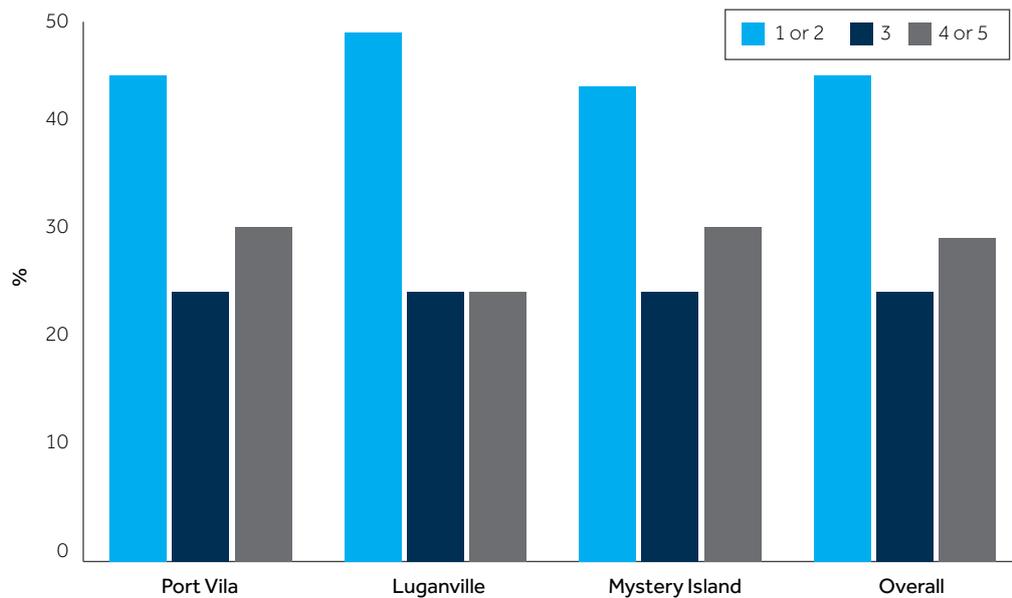


Between 20% and 33% of passengers who spent money on food and beverages, clothing, watches and jewellery, and souvenirs declared that they would have spent more on those items, if more options had been available. Survey data shows greater opportunities for increasing purchases from customers already spending money, than from finding additional sales through growing the customer base. These findings point to a need for additional research on passenger purchasing preferences.

Passengers were also asked to rate their likelihood of returning to Vanuatu for a land-based or resort vacation within the next three years. Vanuatu results were in line with responses seen globally: approximately 30% of respondents said they were either very likely or extremely likely (4 or 5) to return for a resort holiday. Responses did not differ strongly by port – with the exception of Luganville, where respondents were more negative.

FIGURE 10: PASSENGER LIKELIHOOD OF RETURNING TO VANUATU FOR A VACATION IN THE NEXT THREE YEARS, BY PORT OF CALL

(1=Not at all likely, 5=Extremely likely)

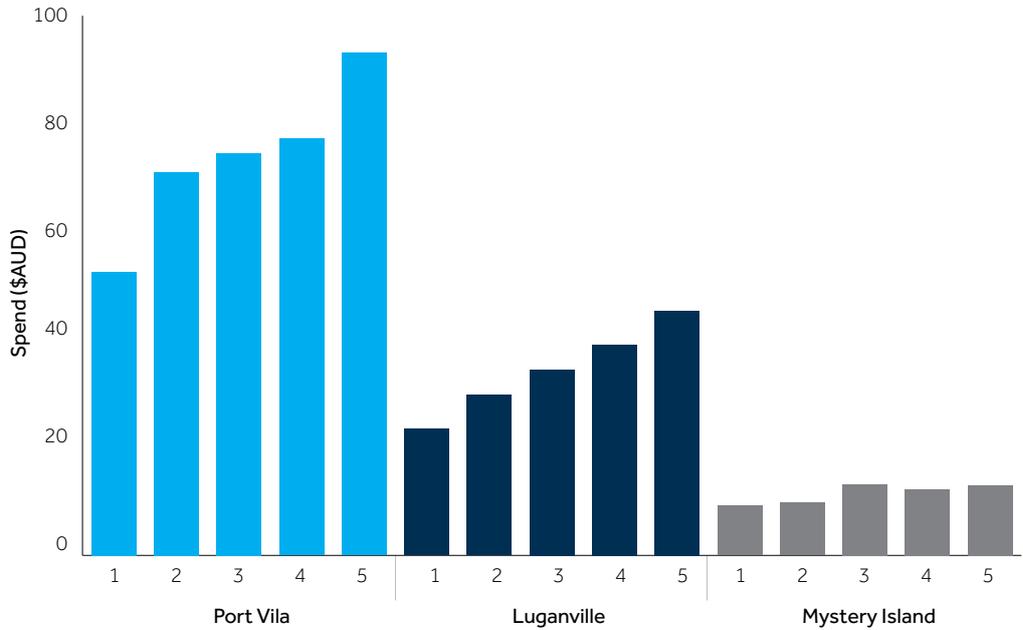


As a next step, Vanuatu can include a relevant question in upcoming international visitor surveys, to assess the share of tourists arriving by air that have previously visited on a cruise.

There was a significant positive correlation between passengers' likelihood of returning for a land-based vacation and total spend per passenger at Port Vila and Luganville. There was significantly less correlation at Mystery Island, pointing to either the nature of that port experience, or again to opportunities to increase the variety of activities offered.

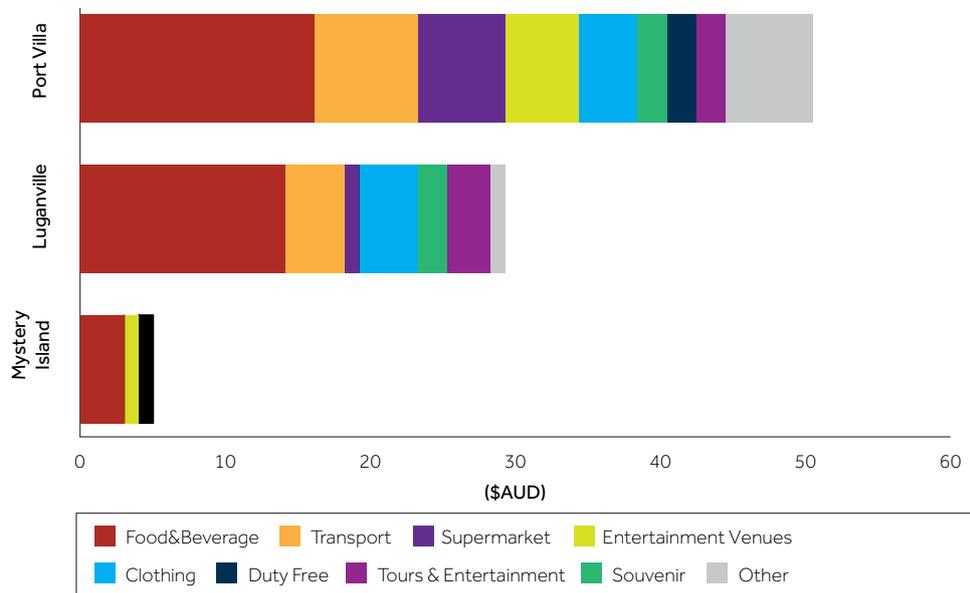
FIGURE 11: TOTAL SPEND PER PASSENGER (AUD) AGAINST LIKELIHOOD OF RETURNING TO VANUATU FOR A VACATION IN THE NEXT THREE YEARS, BY PORT OF CALL

(1=Not at all likely, 5=Extremely likely)



Per person, spending by crew members is roughly half of that by passengers. Overall, however, spend is a function of volumes; as there are fewer crew members than passengers on board a ship (around 700-800 for 2000 passengers), and a smaller proportion of the crew goes ashore (about 25% in Port Vila and Luganville and half this figure in Mystery Island), aggregate spend of ship crew is much smaller than that of passengers. A relatively high share of crew spend is allocated to food and beverage and transport.

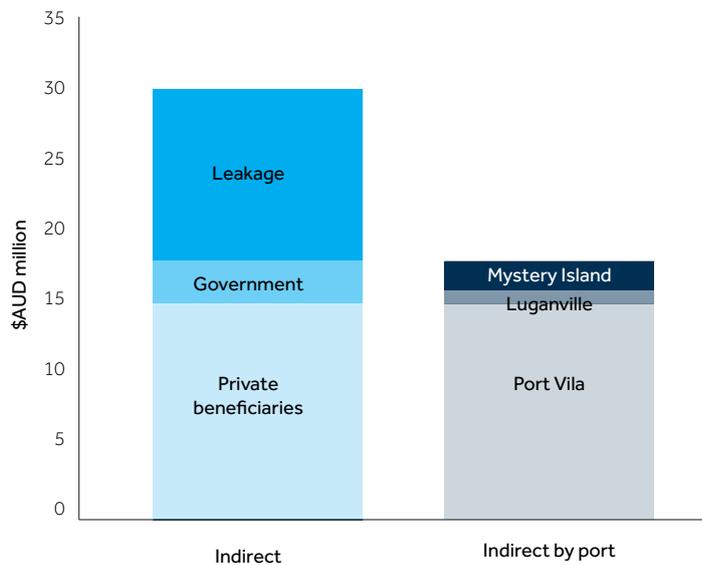
FIGURE 12: CREW SPEND BREAKDOWN



Indirect Economic Impacts

Indirect or stimulus impact occurs when businesses use cash-flows received from cruise ship activity to purchase the inputs required to carry out their business activities. As these businesses employ people and purchase goods and services, money is recirculated through the economy, effectively “multiplying” the direct impact. Overall the indirect economic impact is estimated at about 59% of the overall direct expenditure with businesses (“second round” impacts only)¹³. This means that “leakages” out of the economy correspond to 41% of the direct expenditure with businesses, bearing in mind that no leakage has been calculated or included on direct expenditure with Government.

FIGURE 13: SUMMARY OF INDIRECT ECONOMIC IMPACTS



As there is no income tax in Vanuatu, government benefits from the Value-Added Tax and the import duty (except on Duty Free items). The major part of the indirect economic impact (85%) benefits businesses and individuals. “Leakages” occur when cash-flows end up benefitting offshore operators (see glossary). Leakages are particularly significant in small island economies that depend heavily on imports.

13 The indirect impact is calculated on the direct spend by passengers and crew members. As most of the direct company spend is made of payments to government (and staff), no indirect economic impact is calculated on this portion of the direct expenditure.

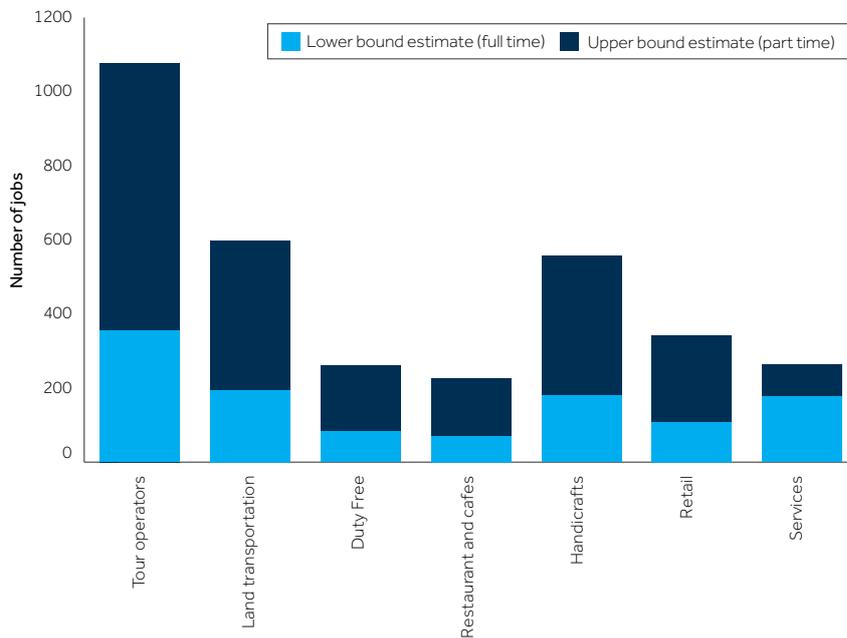
Employment

Overall, it is estimated that the number of jobs created/sustained by cruise ship tourism in Vanuatu ranges from 1,170 FTE jobs to 3,250 part time jobs.¹⁴

Direct employment impacts were derived and calculated using average full time salaries for employees in each sector. This information was obtained from interviews with businesses linked to the cruise ship industry¹⁵. However, it is recognized that the nature of employment in Vanuatu, in sectors such as handicrafts and transport in particular, varies from that of developed economies, having more part time and unregistered employment. In this sense, an approach such as "employment opportunities provided" may be more appropriate.

World Bank research, based on census data and data from the National Provident Fund, has found that approximately 12% of all working-age Ni-Vanuatu are formally employed¹⁶. For the purposes of this study, to capture the potential for a large proportion of the workforce to be part time, a range has been provided between an assumption of complete full time employment and part time employment (assumed to be greater than 33%).

FIGURE 14: EMPLOYMENT IMPACTS



A larger number of people can be assumed to benefit, as informal economic activities and subsistence agriculture are often combined with more formal means of employment, and full time employment may often not be sought by individuals. In particular in locations such as Mystery Island, the concentration of jobs on handicrafts and services reflects a more informal range of offering. It is therefore likely that services and goods sold to tourists would represent a part time activity, but the sole source of cash income for the individuals concerned.

¹⁴ This number includes the 120 ni-Vanuatu employed on P&O cruise ships

¹⁵ No impact on employment by government was included, as fees and contributions go to the general budget and it would be difficult to assess what proportion of the government employees are directly dealing with cruise-related issues.

¹⁶ Well-being from Work in the Pacific Islands Countries, World Bank, East Asia Pacific, 2013.

Summary of investment opportunities

As a part of the research for this report, 10 initiatives to increase economic benefits of cruise tourism were identified and costed out. The costing is based on standard assumptions (provided in the annexes), using best available information at the time of data gathering. Initiatives were selected through a consultation process involving the cruise industry, DFAT-Australia and stakeholders in-country.

Key criteria for selection were (i) potential to significantly increase the volume and/or the value of cruise ship visits to the country; (ii) not fully covered through ongoing or planned initiatives. A balance between infrastructure initiatives and initiatives to increase market access was sought. A summary of high-level results is given below and more detail can be found in the body and annexes to the report.

TABLE 2: SUMMARY COST BENEFIT ANALYSIS OF INVESTMENT OPPORTUNITIES IN CRUISE – AUD MILLION

INFRASTRUCTURE / DESTINATION DEVELOPMENT	NPV*		
	NET BENEFIT	BENEFITS	COSTS
Home-basing a cruise ship in the Pacific**	\$6.1	\$6.1	\$0.0
Opening Tanna as a destination - Lowanatom	\$5.9	\$11.8	\$5.9
Opening Tanna as a destination - Waesisi	\$4.9	\$7.8	\$2.9
Opening SW Bay	\$3.7	\$4.8	\$1.1
Mystery Island: inner and outer anchorage mapping	\$1.3	\$1.4	\$0.1
Luganville: wharf repair	\$1.1	\$19.1	\$18.0
Opening Ureparapara	\$1.1	\$2.2	\$1.1
MARKET ACCESS			
Increasing local purchasing by cruise companies	\$8.6	\$9.5	\$0.9
Employment for ni-Vanuatu people on board P&O ships	\$1.2	\$4.9	\$3.7
TVET business training for cruise micro-entrepreneurs	\$0.9	\$1.0	\$0.1
Handicrafts enhancement program	\$0.7	\$1.1	\$0.4

* Costs and benefits of infrastructure investments are estimated over 10 years. Cost and benefits of local purchasing and handicrafts estimated over 5 years; employment estimated over 3 years (a training cycle) and TVET business training over 2 years.

**Home basing a cruise ship in the Pacific is a relatively complex initiative that requires substantial additional scoping, making it a longer-term initiative than comparable items in this chart; it is included here for purposes of assessment against other potential infrastructure investments.

Key points from the assessment of infrastructure investment opportunities

- **Tanna destination development and Luganville wharf repair / redevelopment.** Only the expected benefits arising for cruise ship tourism have been calculated here; actual benefits are likely larger due to impact on overall trade of goods.
- **Repairing Luganville wharf** is an imperative if it is to retain cruise traffic, as its current state poses significant safety concerns. It is recommended that a scoping of repair costs be undertaken, (rather than a full redevelopment of the wharf precinct), to gain an exact understanding of the minimum investment required. The cost-benefit uses estimates for wharf repair only, as provided by Sanma Provincial Government Council. Wharf repair and targeted upgrade of services at Luganville could also help to reduce any future capacity constraints and congestion in Port Vila due to increase in cruise traffic.
- **Capacity constraints at Port Vila.** Port Vila, accounting for more than half of total port calls, is the main destination for cruise vessels coming into Vanuatu, and is likely to continue to play this role in future, due to positive passenger feedback and the requirements of ships on Pacific voyages. A sustainable development plan for cruising to Vanuatu should account for potential continued growth in number and size of ships coming to Vanuatu and needing to berth in Vila. Two approaches to managing this are enhancing the capabilities of the cargo wharf now being upgraded, to allow it to take cruise vessels when required, or revamping Luganville as a functional secondary option. The costs and potential benefits of these options are clearly different as revamping Luganville would likely have greater distributional effects (and address potential congestion resulting from two ships simultaneously in Vila) but would also require more resources.
- **Hydrography mapping in Mystery Island.** The cost of the mapping is minimal compared to the benefit this call brings to the local community (both in landing fees and benefits to the local market stall vendors). It should be considered a pre-requisite to further developing the destination from a value point of view (e.g. tours).
- **Home basing a cruise ship in the Pacific.** This is a longer term and more complex initiative than comparators on this chart, as it would introduce a fundamentally new offer to the market. Demand for such an offer requires further research. It would also require the involvement and cooperation of a number of entities, public and private. The benefits and costs noted here are for Vanuatu only. The calculation assumes a ship is based in Fiji. Basing a ship in the Pacific does not require additional investment for Vanuatu, unless the success of the initiative is such that airport infrastructure needs to be upgraded (being considered by the government independently of the impact of cruise ships).
- **Cannibalization.** An important consideration is the potential for new destinations to “cannibalise” traffic from existing destinations, as they may prove to be more popular. This has not been considered as part of the cost-benefit analysis (as much of the dynamic is currently not predictable), and every call has been considered additional to Vanuatu. This should be put in the perspective of an overall increase in traffic as additional, and often larger, ships are added to schedules (Carnival and RCI expect to add 6 ships in the region by 2016).

Key points from assessment of market access programs to increase the value of cruise tourism:

- **Accessing the cruise market requires focused support.** While the cruise industry presents an important market opportunity for Vanuatu businesses, market access initiatives would require a comprehensive approach. Support would need to be targeted to helping firms supply the cruise market specifically (including marketing), and structured to meet the specific needs and challenges of a small set of firms that have potential to become direct suppliers. If Vanuatu businesses were to gain access to sales channels onboard cruise ships, key distributional effects would be additional employment/wages generated, including through business models that aggregate the output of smaller producers, such as Tanna Coffee (which currently supplies P&O ships). Close involvement of the industry is needed for these initiatives to succeed.
- **Handicrafts have important distributional effects.** A comprehensive handicraft enhancement program, building on New Zealand's existing Ambassador Program and the proposed South Pacific Regional Handicraft Project, has the potential to add value and to deliver distributional impacts to the outer islands for the poorest segments of the population, which would make this initiative uniquely valuable.
- **Local sourcing for cruise ships.** P&O source Tanna Coffee and Vanuatu water for their ships. Increasing local purchasing would require a program of support to Vanuatu producers to meet operator requirements in terms of quantity, quality, and consistency; initial opportunities exist with a limited number of businesses that are already exporting and/or local market leaders.
- **Employment on board cruise ships.** The full value of training and upskilling of tourism staff in a rotational arrangement is difficult to assess through an initial cost-benefit review, as most of the value will accrue to individual employees in the sector over time. It would nevertheless represent a significant underpinning of the industry's commitment to 'local content' in the short/medium term.

Limitations of this Study

- The focus of the report is predominantly on economic impact from cruise tourism expenditure. The report does not aim to assess the environmental impacts – such as pollution effects and the management of waste streams – that result from cruise traffic. While the cruise industry aims to apply best environmental and social management practices to its activities globally, a review of environmental issues including: i) control of pollution in sensitive areas; ii) application of regional and national environmental standards; and iii) public health infrastructure to manage sewage and other waste streams, is warranted in order to have a more complete picture of the overall impact of cruise tourism.
- A number of additional impacts, related to pressure on existing infrastructure coming from cruise, have not been quantified through the impact calculations undertaken for this report: the opportunity cost of delays to cargo ships that are unable to berth in Port Vila while cruise ships are in port, and potential traffic congestion in Vila town on cruise ship days are examples. These broader impacts, which relate to the state of infrastructure and provisioning at ports of call, are outside the scope of this study. The urban development and wharf redevelopment programs coming online in Vila are looking at these issues in detail; Luganville wharf redevelopment should assess the value of 2 berths during the feasibility.
- The study does not assess in detail the relationship between cruise and land-based tourism or the economic value that each brings. A brief review of findings of the 2010 Millennium Challenge Account study, which provides these comparisons, is included in the report.
- The tax revenue impact for the Government of Vanuatu has been considered as part of calculation of the indirect stimulus in terms of import duty and VAT. Business registration fees have not been included, as these could not be accurately apportioned.
- A full list of people and business interviewed is not included in this report, for reasons of confidentiality. Data was aggregated so that information cannot be traced to any particular business. Similarly, for reasons of commercial confidentiality, information provided by the cruise ship companies has been aggregated.
- Data on tours booked by cruise companies on behalf of passengers was collected directly from the cruise companies, and included in the direct economic impact totals.
- For purposes of extrapolation, it was assumed that the three ports of call not surveyed (Wala, Pentecost, and Champagne Bay) would see benefits similar to Mystery Island. Call frequency is taken from cruise company data. Limited data is available on the Vanuatu economy. Estimates of sector employment as well as general information for indirect impact, was sourced through a direct survey of businesses, stakeholder interviews and focus groups, then cross-referenced with available data.
- The overall sampling rate used for (passenger) spend analysis was 21.4%, after filtering. While the response rate and the large number of passengers surveyed allowed for a low error margin on overall spend, the discrepancies in response rates between ships did not always allow for a detailed statistical assessment of sub-samples.

Glossary

Direct expenditure impacts – Captures the impacts arising from the direct cash-flows from cruise ship activity in Vanuatu. The direct economic impacts directly benefit those businesses where cruise tourists spend their money.

Direct spend – Refers to expenditure (i.e. cash flows) in Vanuatu from either cruise ship operator, cruise ship passenger or staff member. These are the cash-flows causing the direct economic impacts.

Government – Refers to any government agency in Vanuatu, as a recipient of benefit from the cruise ship expenditure, or as a legislator / regulator.

Indirect stimulus impacts – The flow on expenditure that is made by businesses that directly receive cruise ship tourist customers to deliver their services or products to the cruise ship tourist. These impacts include the payment of wages to employees, payment for intermediate goods or services, and tax to the Vanuatu Government. The indirect impacts occur as a result of the money being recirculated through the economy by these businesses or individuals, as they carry out their activity.

Intermediate consumption – Consumption of goods and services that occurs by businesses and sole operators to deliver a good or service.

Leakage – Income that is not used to stimulate the economy. For this assessment, leakage is used to describe the flow of money going offshore, thereby being lost to the local Vanuatu economy.

Private beneficiaries – Beneficiaries receiving income from cruise ship tourism who are located in Vanuatu. This category includes owners of businesses where cruise tourists spend their money, employees of these businesses and also includes downstream businesses who sell services or products to the businesses where cruise tourists directly spend their money (e.g. electricity companies, local maintenance businesses, or local retail businesses).

Introduction

Approach and methodology

This study was structured to capture the direct and indirect economic impact of cruise ships in Vanuatu:

- The **direct expenditure** information was captured through surveys of passengers and crew on board those ships, as well as through data obtained from cruise ship companies.
- The **indirect stimulus impact** data was collected through a survey of businesses, primarily in Port Vila, and included face to face interviews, and focus groups with participation from businesses and government.
- The **direct employment impact** was estimated using the same information collected through a business survey and face to face interviews carried out in Port Vila. The total employment was calculated using estimated average full-time monthly wage and proportion of cruise ship tourism expenditure flowing to wages for each sector. To provide a range, to capture the potential for a high proportion of the workforce to be working part time, one third of a full-time wage was assumed.
- **Leakage** has been estimated based on the findings of face to face interviews and business surveys as well as understanding of the ownership structures of key industries.
- **Induced impacts** can be calculated through measuring the economic impact of flow on expenditure by the private beneficiaries who indirectly benefit from cruise ship tourism spending.¹ These impacts have not been considered as part of this study. Calculating this would require understanding how the indirect private beneficiaries spend the money they receive from the cruise ship tourism.
- A total of 4,039 passengers and 926 crew usable² surveys were completed over the period March to May 2014. Passenger surveys reported on behalf of 8,839 passengers (2.2 people on average per party). Passengers' response rate was 21%, which is in line with what can be expected for surveys not offering incentives. The sample was at the lower end of the pre-determined range of surveys sought to ensure that a low error margin could be obtained.³
- Ports of call surveyed were Port Vila, Luganville and Mystery Island, which represent 85% of calls in Vanuatu in 2013 and 88% of calls in 2015 according to projections.

Comparison with / lessons from previous studies

The survey was structured to be in line with studies of the cruise sector carried out globally. Questionnaires and approach to surveying passengers and crew are based on the BREA methodology. The outcomes of the Vanuatu research, including levels of passenger and crew spend, are broadly aligned with results seen in the Caribbean. On a number of important measures – the share of cruise passengers willing to return for a land-based vacation, differences between premium and contemporary cruise passenger spending – the findings of this study align with global data gathered by the cruise industry over several years.

Two previous studies of cruise tourism in Vanuatu were reviewed and findings compared to this report. The South Pacific Tourism Organisation (SPTO) recently produced data on cruise passenger spending in Vanuatu. The study's methodology differed from that of this report, taking a different approach by surveying passengers at the wharf and using enumerators. The study did not publish data on crew spend and did not calculate indirect stimulus effects of expenditure.

1 This happens when employees spend their salaries on purchases or living expenses.

2 A number of surveys had to be excluded due to multiple ports being selected or obvious errors in the expenditure reported. Crew surveys from staff who did not go ashore were also excluded.

3 The proportion of cruise members surveyed is not as relevant, as only a small proportion of crew members go ashore.

The SPTO study (2013) found that the average spend for cruise ship tourists was \$116 in Port Vila and \$26 in Mystery Island. Given some difference in methodology, these results are similar to findings of this study of average spend at Port Vila port call of \$96, and Mystery Island of \$11. The differences may be explained by differences in the mix of ships whose passengers were interviewed, as this influences the expenditure.

The Millennium Challenge Account (MCA) undertook an assessment of tourist spending in Vanuatu in June 2008.⁴ The scope of the research included international resorts, international cruise ships, yachts and local tourism. The sample size included approximately 1,500 air passengers (interviewed on departure) and 750 cruise passengers. Direct comparisons are difficult, given the differences in methodology including categories of spend, study timeframes, the structure of the survey questionnaire and methodology of interviewing passengers. The methodology used for determining indirect impact is, however, broadly aligned to the MCA study of the tourism industry, which also surveyed businesses to estimate intermediate consumption.

The average spend per cruise tourist in the MCA baseline study was found to be 20,160 vatu or AUD \$235⁵ (the survey was undertaken in Port Vila only). This is compared to the finding of this project of AUD \$96 for Port Vila. A number of factors could explain the difference:

- Margins by intermediaries may have been integrated differently;
- The MCA surveys were undertaken at the wharf, not on the ship;
- The spending of cruise ship tourists may have decreased between 2008 and 2014, given changes in the market and potential increase in diversity of visitors.

Due to methodological differences these questions cannot be answered from a desktop review of the MCA study. Broadly speaking the key items of expenditure (tours, duty free, land transport and general shopping) ranked the same in both surveys.

The MCA survey's scope also provides an opportunity to compare the expenditure of cruise ship tourists against resort tourists. According to the MCA survey, cruise ship tourists spend on average modestly more than tourists staying at a resort; average daily spend was \$181 for a resort tourist compared to \$235 for a cruise ship tourist. However, this seems counter-intuitive, as resort tourists are likely to spend more on food and beverages and, of course, accommodation (which often constitutes roughly a third of daily spend). In the MCA research, the average length of stay was 7.7 days for a resort tourist compared to 1 day for a cruise ship tourist, generating a total (direct) spend of \$150 million for the former, compared with \$20 million for cruise ship tourists.

Clearly, given the accommodation expenditure of resort tourists and the higher average length of stay – tourist per tourist, the MCA study found that resort tourists bring more economic impact to the country. At the same time, the predictability of the cruise market, where calls are known in advance, and Vanuatu's advantageous geographical position for ex-Australia cruise travel, have resulted in strong cruise market growth, with cruise tourists now making up two-thirds of all visitors to Vanuatu.

A comprehensive view of tourism development in Vanuatu can take into account the differences between these groups of tourists and derive separate strategies for attracting each. As arrivals continue to grow, encouraging both air and cruise visitors to spend time in the outer islands, in order to reduce congestion and backlogs (in tour bookings) in Port Vila and to increase the distributional effects of tourist expenditures would support development of the industry.

4 TRIP consultants, 2008

5 Average 2007 exchange rate was used to determine AUD.

Direct economic impact

Summary

Based on the information collected the overall direct economic impact in 2013 has been estimated at \$33 million for the 3 ports of call surveyed, or \$34.6 million extrapolated across all ports of call. The share of calls for each of the 3 surveyed ports in 2013 is estimated to be 48% for Port Vila, 30% for Mystery Island and 7% for Luganville. A detailed breakdown is presented in Table 3 below. The activity (visits to various ports of call) varies year on year. In particular, Luganville is scheduled to receive more visits in 2014 than 2013.

This direct expenditure can be considered in the context of an overall figure of \$367M for exports of goods and services for Vanuatu in 2012⁶. The direct expenditure at all ports of call represents 9.4% of total exports⁷.

TABLE 3: TOTAL ESTIMATED DIRECT SPEND (2013 CALLS – IN AUD)

LOCATION	CALLS RCI AND CARNIVAL	PASSENGER -DAYS	DIRECT COMPANY SPEND	DIRECT SPEND BY PASSENGERS	DIRECT SPEND BY CREW MEMBERS	TOTAL
Port Vila	114	237,364	\$4,200,000	\$22,529,000	\$1,080,000	\$27,809,000
Luganville	16	33,298	\$607,000	\$1,437,000	\$93,000	\$2,137,000
Mystery Island	71	147,851	\$1,422,000	\$1,607,000	\$32,000	\$3,016,000
Total	201	418,513	\$6,229,000	\$25,573,000	\$1,205,000	\$33,007,000
Total extrapolated for all Vanuatu ports of call	237					\$34,559,000

Direct company spend is mostly related to port fees, but also includes corporate expenses and salaries paid out to Ni-Vanuatu people employed on board some ships.⁸ This has been allocated based on the number of calls in each location (see analysis in the corresponding section below).

Analysis of direct spend

Data collected from 4,039 surveys representing 8,839 passengers and 926 crew members was analysed and key results are presented below. More detail on the methodology is presented in Appendix 1.

Expenditure by cruise passengers

The central element of the passenger survey was expenditure on the day of the ship's visit to the port of call targeted. Data on pre-booked tours was included in total spend by passengers.⁹

⁶ VNSO, 2012 National Accounts of Vanuatu.

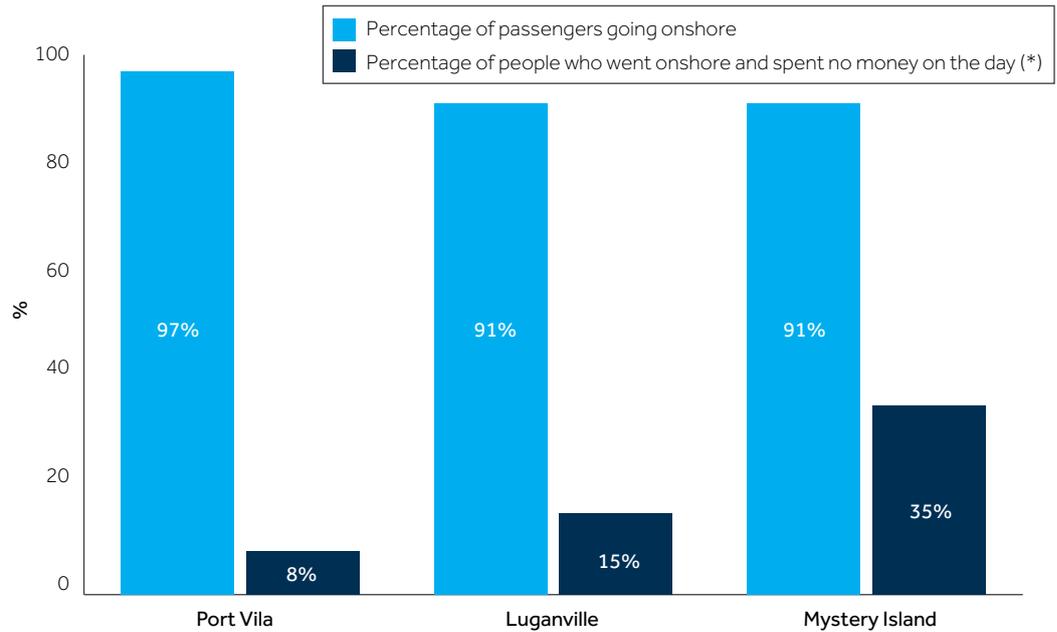
⁷ Although all these impacts may not be considered as exports.

⁸ This reduces the port fees due in Port Vila and Luganville, as an employment incentive by the Vanuatu government.

⁹ This information was obtained directly from the cruise companies for the year 2013 to allow the extrapolation to the whole of 2013.

The proportion of passengers who went ashore was also derived from the surveys to feed into the extrapolation of results (Figure 3¹⁰). It is worth noting that the proportion of people going ashore and spending money varies significantly depending on the port of call, a reflection of the spending opportunities available at the respective destinations.

FIGURE 15: PROPORTION OF PASSENGERS GOING ASHORE (SURVEYED SHIPS)



(*) The percentage representing people who spent no money includes those who may have pre-booked tours, which are considered separately.

Patterns of spending vary between ports of call given the different spending opportunities on offer. When extrapolating for a whole year, the direct expenditure impact was calculated by port and ship class to account for the differences in expenditure patterns.

10 Based on information provided by the cruise companies on the ships surveyed in March – May 2014. This was used for the extrapolation of results to a whole year of economic impacts, as only passengers going ashore have the opportunity to spend.

FIGURE 16: PASSENGER SPEND BREAKDOWN (2014 SURVEY)

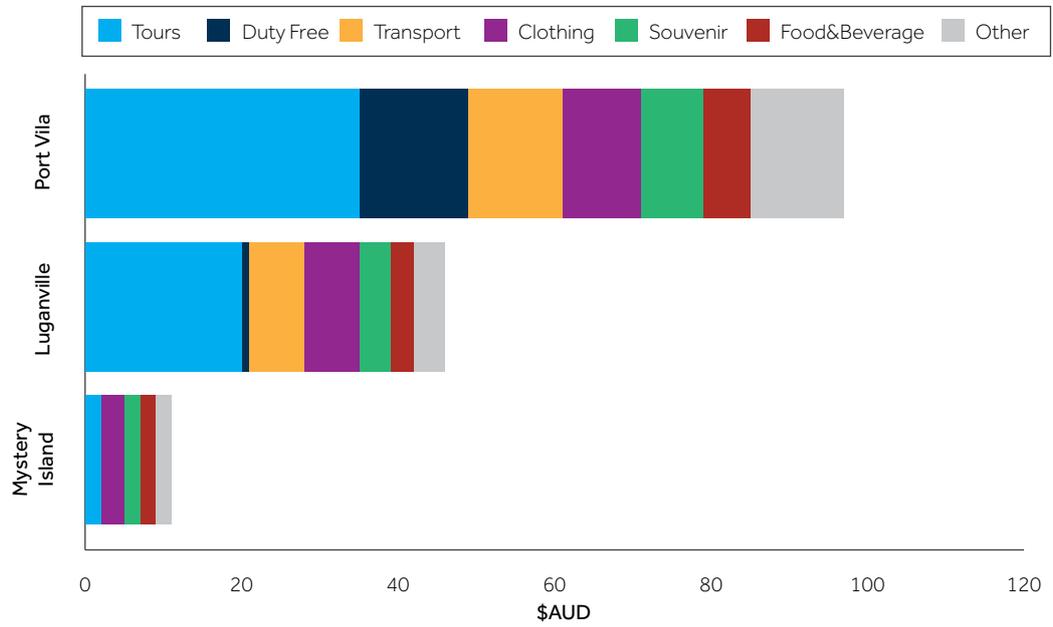


FIGURE 17: BREAKDOWN OF AVERAGE DAILY EXPENDITURE, BY PORT (AUD)

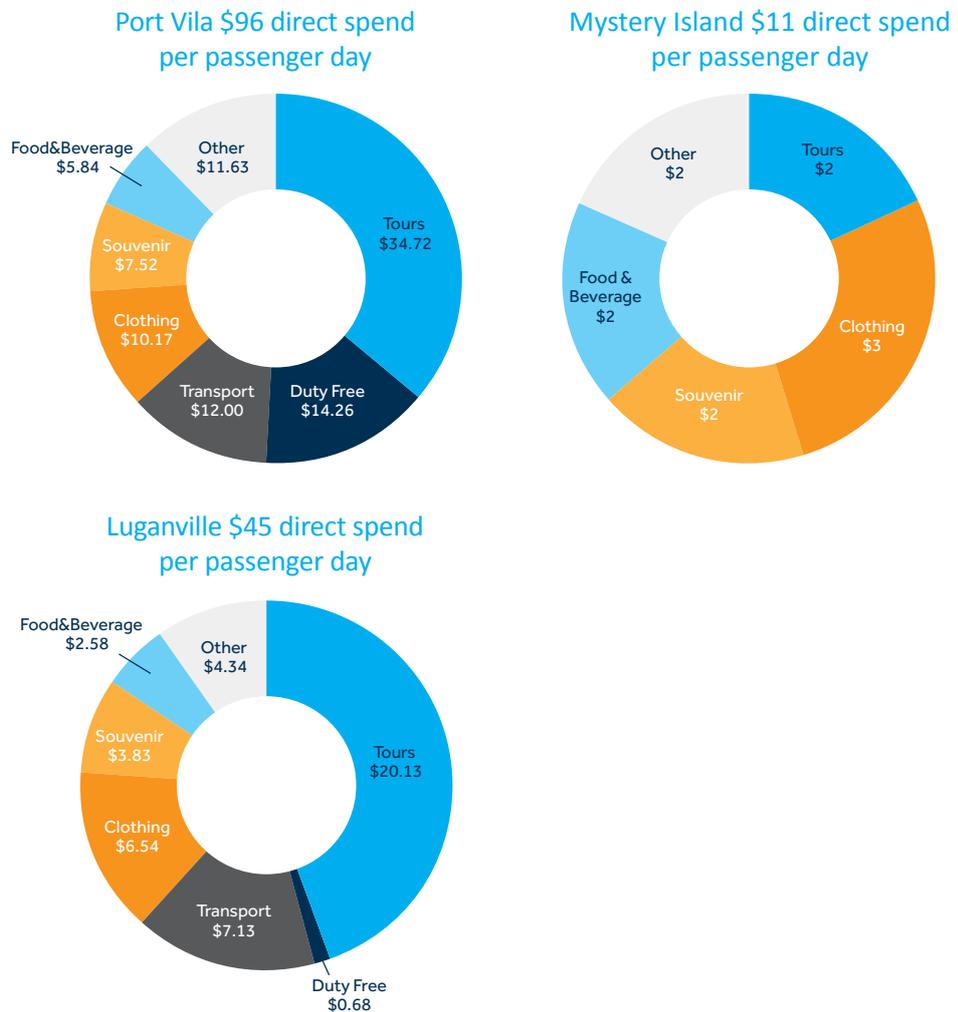


TABLE 4: WEIGHTED SPEND BY PASSENGERS

CATEGORY	PORT VILA				LUGANVILLE				MYSTERY ISLAND			
	AVERAGE SPEND PER PASSENGER WHO SPENT ON THAT ITEM (AUD)	SHARE OF ALL ONSHORE VISITS	WEIGHTED AVERAGE SPEND PER PASSENGER (AUD)	TOTAL PASSENGER EXPENDITURE (MAUD)	AVERAGE SPEND PER PASSENGER WHO SPENT ON THAT ITEM (AUD)	SHARE OF ALL ONSHORE VISITS	WEIGHTED AVERAGE SPEND PER PASSENGER (AUD)	TOTAL PASSENGER EXPENDITURE (MAUD)	AVERAGE SPEND PER PASSENGER (AUD)	SHARE OF ALL ONSHORE VISITS	WEIGHTED AVERAGE SPEND PER PASSENGER (AUD)	TOTAL PASSENGER EXPENDITURE (MAUD)
Tours (pre-purchased) ²	51.89	49.0%	25.42	5.9	41.46	33.2%	13.76	0.4	-	-	-	-
Tours (on the day)	52.86	17.6%	9.31	2.2	36.24	17.5%	6.36	0.2	16.50	12.0%	1.98	0.3
Duty Free	44.46	32.1%	14.26	3.3	32.94	2.1%	0.68	0.0	-	-	-	-
Transport	19.21	62.5%	12	2.8	22.40	31.8%	7.13	0.2	-	-	-	-
Clothing	20.39	49.9%	10.17	2.4	16.85	38.8%	6.54	0.2	10.59	27.9%	2.96	0.4
Souvenir	15.34	49.0%	7.52	1.8	10.45	36.6%	3.83	0.1	7.63	30.5%	2.33	0.3
Food & Beverage	13.89	42.0%	5.84	1.4	10.12	25.5%	2.58	0.1	7.12	29.3%	2.09	0.3
Watch and Jewellery	31.87	14.2%	4.52	1.1	7.54	8.0%	0.6	0.0	4.87	6.6%	0.32	0.0
Entertainment	18.68	16.1%	3.01	0.7	9.52	20.6%	1.96	0.1	5.59	7.2%	0.4	0.1
Other	24.36	10.7%	2.6	0.6	6.39	8.8%	0.56	0.0	7.42	8.4%	0.62	0.1
Supermarket	7.32	8.5%	0.62	0.1	6.20	7.3%	0.45	0.0	2.08	1.0%	0.02	0.0
Services	9.62	4.4%	0.42	0.1	8.20	4.0%	0.33	0.0	7.71	6.2%	0.48	0.1
Entertainment Venues	31.58	1.1%	0.36	0.1	24.53	1.0%	0.25	0.0	15.43	1.0%	0.16	0.0
Communications	6.13	1.6%	0.1	0.0	10.71	1.9%	0.2	0.0	-	-	-	-
Total (weighted)			96.15	22.5			45.23	1.4			11.35	1.6

Unweighted spend gives an indication of the unit spend. However, some categories may not be meaningful given the small number of respondents. The breakdown shows that the patterns of spending vary between ports of call, as could be expected. There are a number of factors affecting this, in particular availability of activities and goods at each location:

- **Tours** remain the biggest spend by far, in Port Vila (36%) and Luganville (45%), while in Mystery Island there are currently no pre-booked accredited tours available. Tours (17% of total passenger expenditure) in Mystery Island include, for example canoe and snorkelling activities.
- **Duty free** is a significant item of expenditure in Port Vila (15% of total) and is not readily available in other locations.
- **Land transport** (private taxis and minibuses) is the second highest item of expenditure, in Luganville (12%) and Port Vila (16%), mostly for those who want the freedom to organise their own visit. This is a 'reserved' ni-Vanuatu business, i.e. only ni-Vanuatu people can undertake this activity. There is no road on Mystery Island.
- **Clothing** expenditure is also significant in all locations (11% in Port Vila, 14% in Luganville, 26% in Mystery Island), although it is mostly purchased from market stall holders in Luganville where there are not many actual shops, and Mystery Island, where there are none. In Port Vila there are a number of clothes retail shops catering to tourists.
- **Souvenirs and handicraft** are sold in all locations by market stall holders. The section on indirect economic impacts elaborates on the characteristics and distributional impacts particular to this sector.
- **Food and beverage** complement the tourist purchasing 'basket', with significant differences in what is on offer in various locations (Port Vila offering a much larger range of opportunities).

Factors driving passenger spend

While there was a strong correlation between the class of ship and expenditure (Premium ship passengers spending less, except in Mystery Island, where they spent the same), the causal link could not be identified with certainty. It is thought that Premium passengers are more habitual cruisers¹¹ who do not spend as much time on activities as Contemporary passengers. Other factors that could be associated with the ship class were explored:

- The income of the main respondents had little influence over the amount spent.
- There is a significant negative correlation between total spend and trip duration, i.e. passengers on longer cruises spend less, as previously observed by cruise companies. This correlation is evident with both first time visitors and repeat visitors, and also with premium and contemporary class ships up to two weeks. However, total spend per passenger by repeat visitors on Premium ships has a weak positive correlation with trip duration up to two weeks to Port Vila¹².
- There appeared to be less spending on cruise during school holidays, but the sampling period does not allow for sufficient confidence in this conclusion.

In addition, the following potential influencing parameters were also explored:

- There was a strong positive correlation between passenger satisfaction with the variety of things to see and do and mean expenditure on souvenirs entertainment and total spend per passenger. Similarly, there was a strong positive correlation between satisfaction with shopping opportunities and mean expenditure on clothing, souvenirs, duty free and total spend per passenger. This does not demonstrate a causation, simply a logical relationship between the satisfaction of having found something that appealed and a corresponding need or purchasing intention.

11 The question of repeat visit to Vanuatu was asked, but not the question of frequency of cruising. It is suggested that such a question be added in future questionnaires.

12 It should be noted that Contemporary cruises are for up to 2 weeks, while Premium cruises are for up to 4 weeks.

FIGURE 18: CORRELATION BETWEEN SATISFACTION WITH VARIETY OF THINGS TO SEE AND DO AND MEAN EXPENDITURE

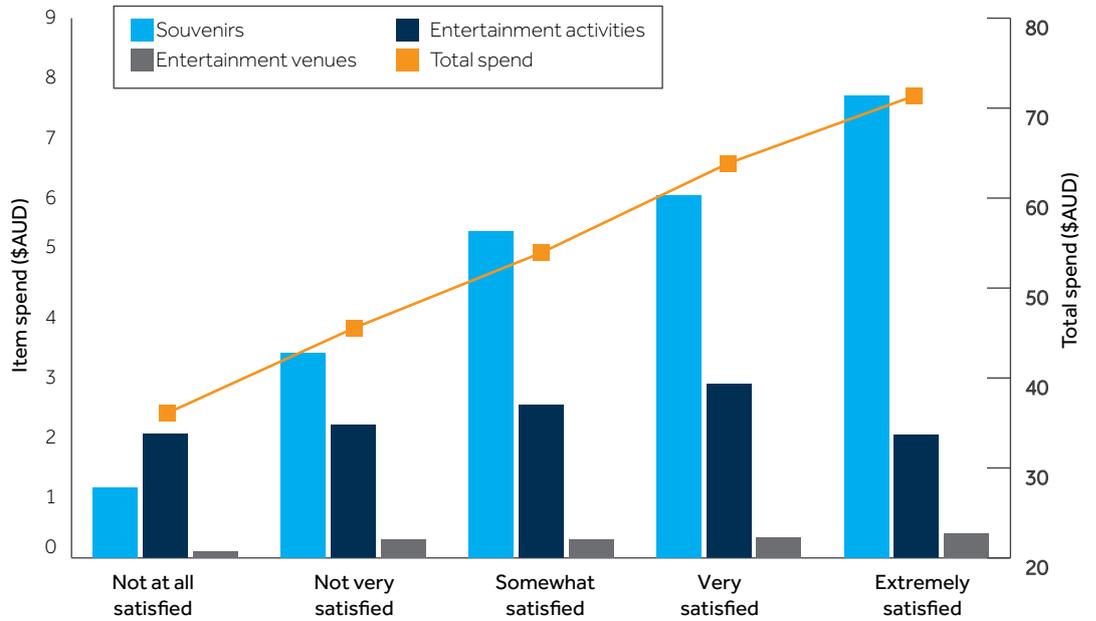
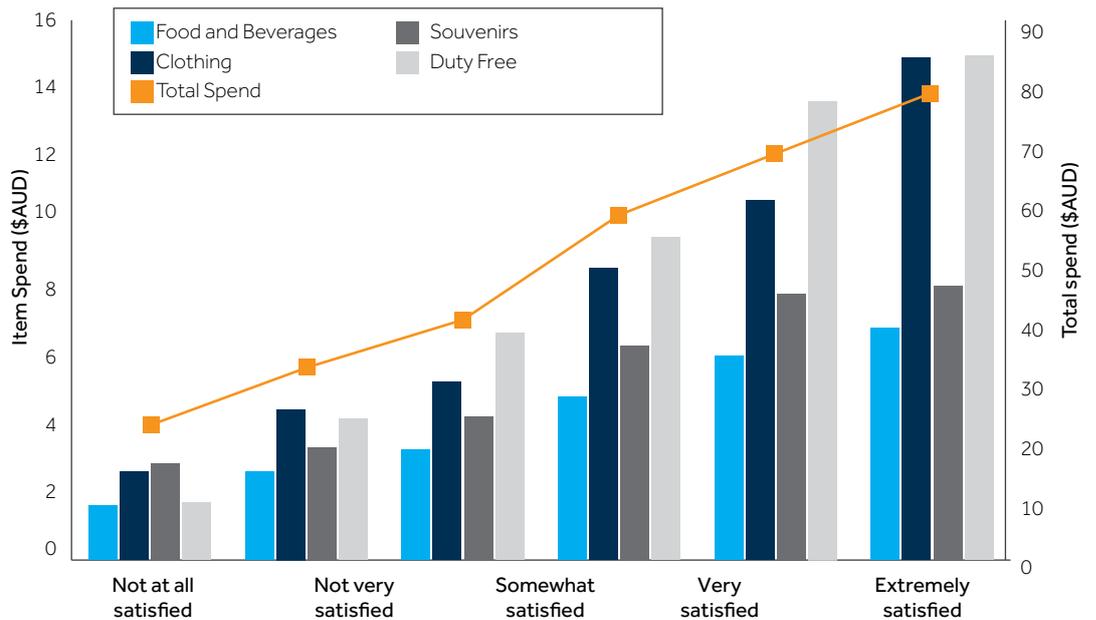


FIGURE 19: CORRELATION BETWEEN SATISFACTION WITH SHOPPING OPPORTUNITIES AND MEAN EXPENDITURE



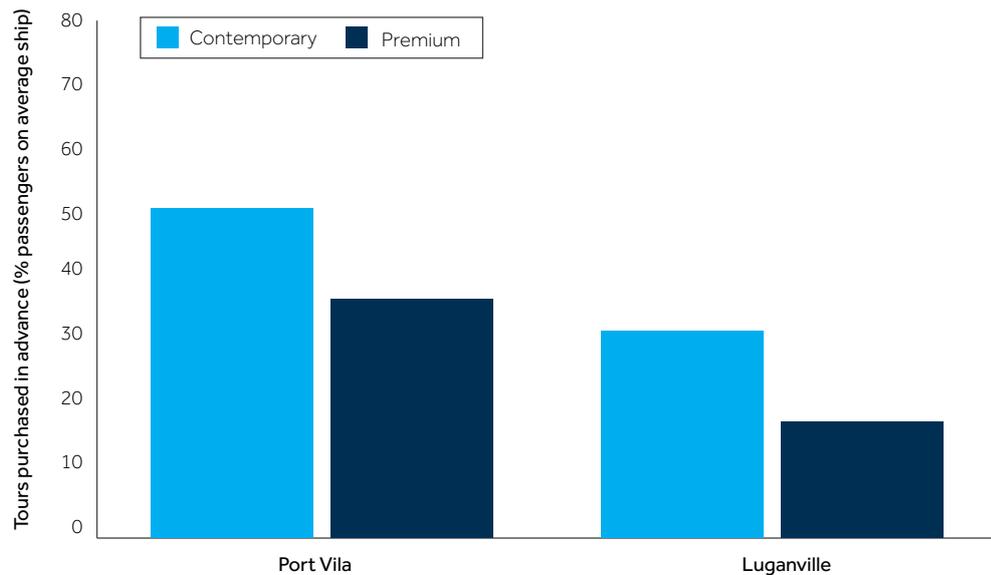
Passengers were asked to rate their likelihood of returning to Vanuatu for a land-based or resort vacation within the next three years. There was a significant positive correlation between passengers' likelihood of returning and total spend per passenger at Port Vila and Luganville, but less of a correlation at Mystery Island.

There was a significant difference in total expenditure per passenger on the day of the visit between those who purchased tours in advance and those who did not, for both Port Vila and Luganville; passengers spent less if they pre-purchased a tour. There are also differences for certain items of expenditure, with slightly less spend on transport and duty free for those who pre-purchased tours, but slightly more spending on souvenirs. This is generally consistent with the expectation that people going on a tour may have less time or interest to go shopping.

TABLE 5: COMPARISON OF SPEND BETWEEN PASSENGERS WHO PURCHASED TOURS IN ADVANCE AND THOSE WHO DID NOT

LOCATION	MEAN TOTAL SPEND PER PASSENGER		MEAN SPEND ON TRANSPORT		MEAN SPEND ON SOUVENIRS		MEAN SPEND ON DUTY FREE	
	Pre-purchased tours	Tours not pre-purchased	Pre-purchased tours	Tours not pre-purchased	Pre-purchased tours	Tours not pre-purchased	Pre-purchased tours	Tours not pre-purchased
Port Vila	\$67	\$80	\$10	\$18	\$8	\$7	\$13	\$19
Luganville	\$31	\$32	\$6	\$9	\$4	\$3	\$1	\$1

FIGURE 20: TOURS PURCHASED IN ADVANCE



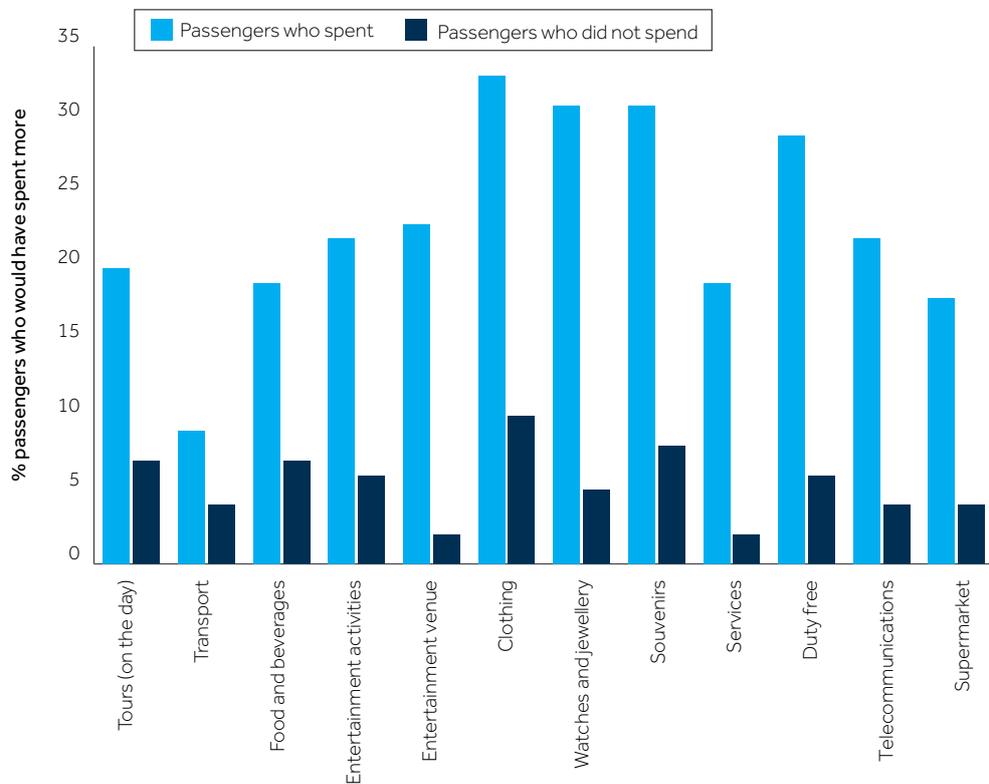
Passengers were also asked to indicate how well informed they were of tours and activities at the port of call, and there was no correlation between this and total spend per passenger at any of the ports.

In terms of the opportunities for spending, the following points were noted:

Between 20% and 33% of passengers who spent money on food and beverages, clothing, watches and jewellery and souvenirs declared that they would have spent more on those items, if available.

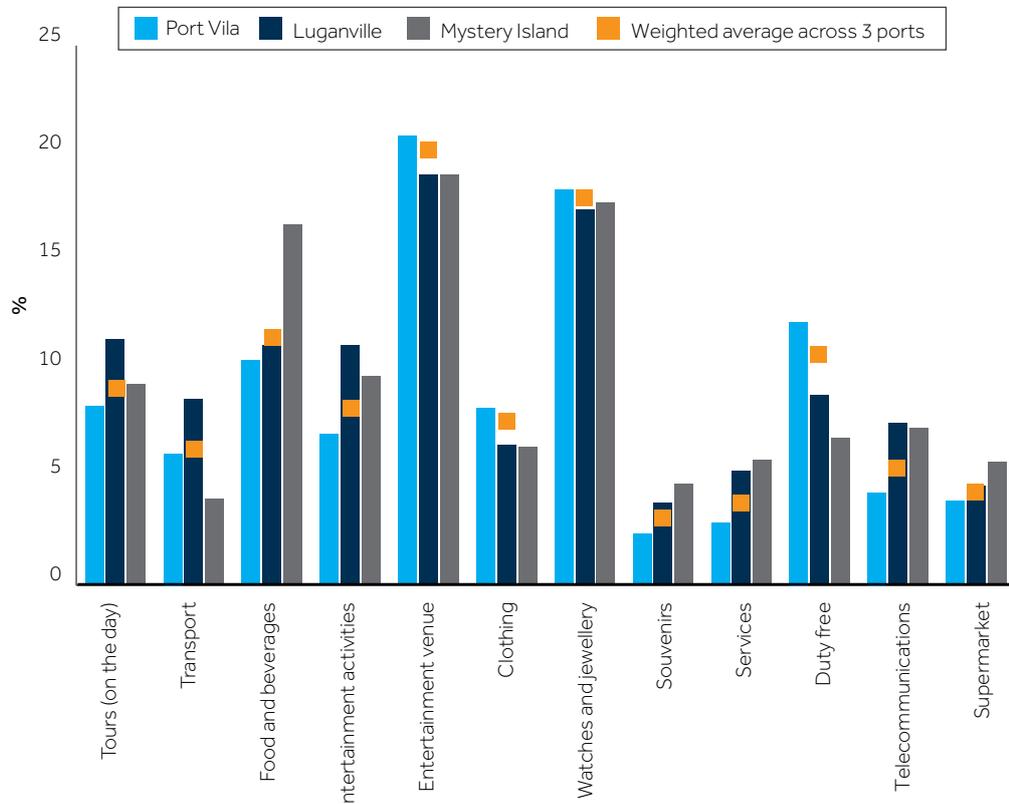
People who did not spend money on certain items were generally less likely to spend more even if available. However, 10% of those who spent no money on clothing declared that they would have spent on this item, indicating a potential gap in the market.

FIGURE 21: PERCENTAGE OF PASSENGERS WHO WOULD HAVE SPENT MORE, IF MORE WAS AVAILABLE



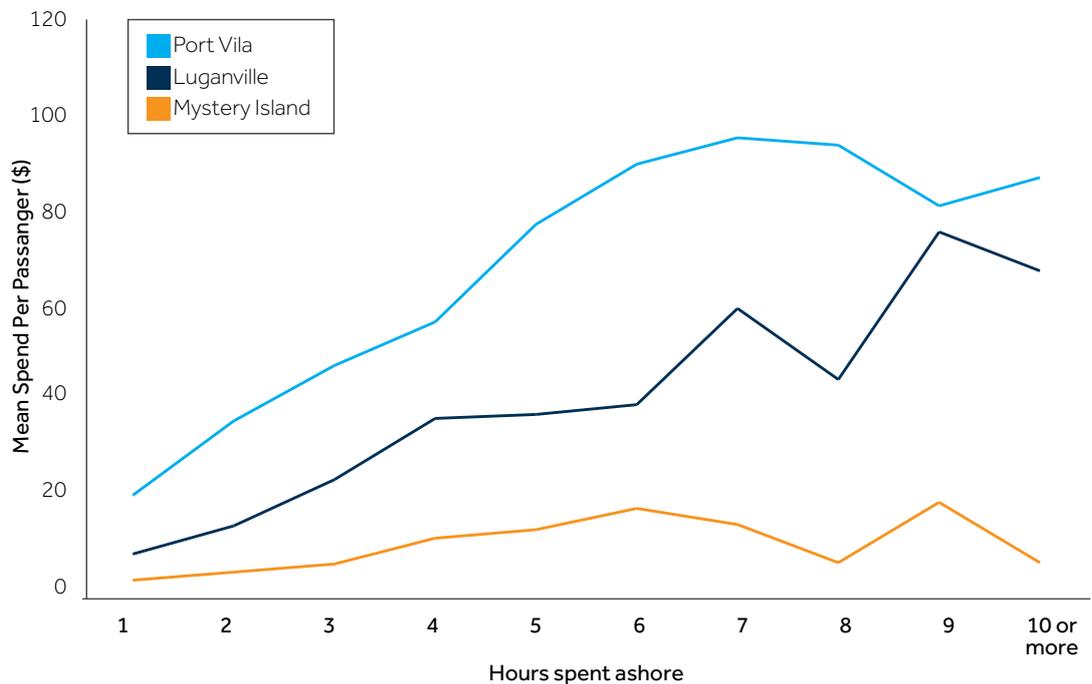
This suggests that there are different categories of passengers, the 'spenders' and the 'non spenders', the latter not willing to spend much money while cruising. This implies that marketing strategies should aim to identify and target the 'spenders' and make sure that their needs and wants can be satisfied by what is on offer.

FIGURE 22: SHARE OF ALL PASSENGERS STATING THEY WOULD HAVE SPENT MORE, IF MORE OPTIONS WERE AVAILABLE, PER PORT



There is a positive correlation between the number of hours spent ashore and the mean expenditure (up to 7 hours, after which the correlation becomes less clear).

FIGURE 23: HOURS SPENT ASHORE AND MEAN PASSENGER EXPENDITURE



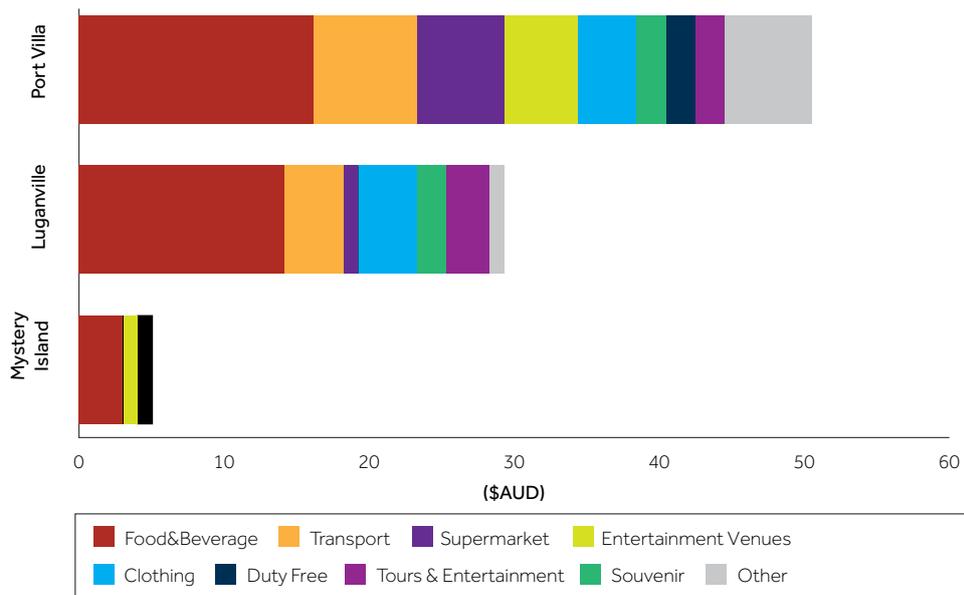
Spend reported by crew members

The same analysis was applied to expenditure by crew members. As expected, a smaller proportion of crew members go ashore, as only those with leave on that day can disembark the ship (see Table 6). Similar to passenger spend, the crew spend figures vary significantly depending on the port of call, shown below.

TABLE 6: PROPORTION OF CREW WHO WENT SHORE (SURVEYED SHIPS) BY DESTINATION

PORT(S) OF CALL	PORTION OF CREW GOING ASHORE
Port Vila	24%
Luganville	26%
Mystery Island	13%

FIGURE 24: CREW EXPENDITURE BREAKDOWN



The spend pattern for crew members varies more across destinations than the passenger spend:

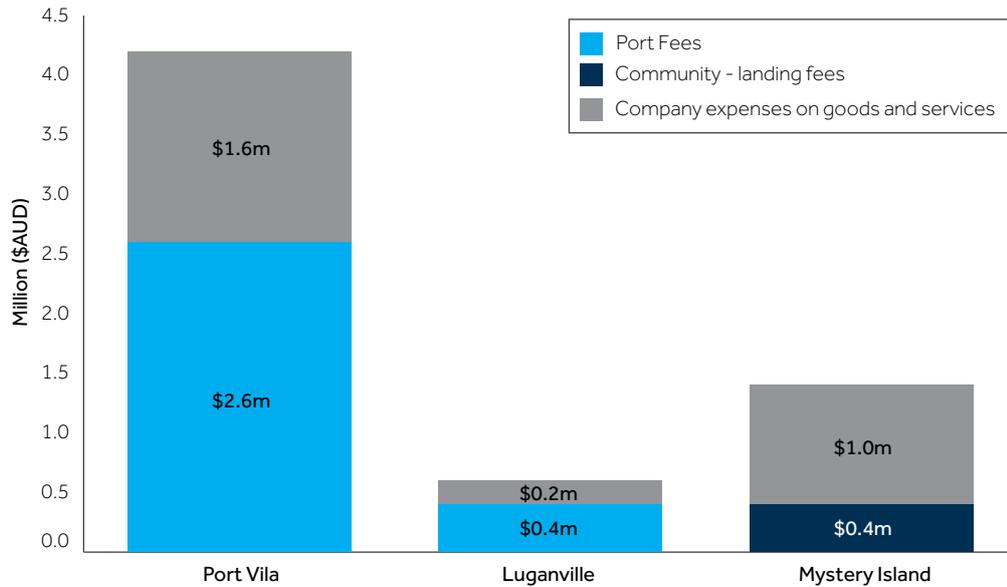
- **Food and beverage** dominate in all locations.
- **Transport** is a significant spend in Port Vila and Luganville.
- **Supermarket** / grocery shopping is also significant, whereas it is not prominent in passengers' purchases.

Crew members spend much less on **Duty Free and Clothing**.

Direct expenditure by cruise companies

The following expenses constitute direct expenditure by the cruise companies into the Vanuatu economy (estimates for 2013 calls).

FIGURE 25: ESTIMATED CRUISE COMPANY EXPENDITURE BY PORT OF CALL



The majority of cruise company expenses relate to port fees that flow to government. However, for Mystery Island, this expense flows directly to the local community. The money is managed by a cruise ship committee and is allocated to projects benefiting the whole community.

Company expenses on goods and services are comprised of port agent services and local procurement. Most of the cruise companies' procurement is centrally managed, with containers shipped to home ports all around the world. Only some of the brands have flexibility to source local products from the ports of call the ships visit, apart from purchasing emergency supplies when needed. In Vanuatu, a recent agreement has been made to supply bottled water to some of the ships, as well as some local coffee. Ships are also refilling with fresh water supplied by a local company. Additionally, crew transfers, port agent fees and corporate expenses benefit the hospitality and services sectors. These company expenses have been allocated based on the number of calls in each location; however, it is likely that most of the benefit flows back to Port Vila, where the major businesses are located.

Donations by passengers

P&O passengers donate \$1 to Save the Children for community initiatives in Vanuatu, a program in place since early 2013. The program is structured as opt-out, with passengers having to ask to have the contribution removed from their bill; they can also make additional contributions. These donations have not been included in the overall expenditure figures used in this report. In 2013, P&O Cruises raised over \$280,000 through the Save the Children fund. By mid-2014, over \$440,000 had been raised and three projects - two kindergartens and an aid post - have already been completed.

The latest project will see \$270,000 from the Partnership devoted to replacing a pre-1970s health facility on Aneityum. The new dispensary will include a consultancy room, treatment room, in-patient room, delivery room for maternity services, a waiting area as well as pharmaceutical and equipment storage.

Direct economic impact per call and per passenger

The following table shows the total direct expenditure impact of a ship call and a ship passenger, per port. Note that this differs from passenger spend as it represents the whole of the direct economic impacts divided by the number of calls and the number of passenger-days.

TABLE 7: DIRECT ECONOMIC IMPACT PER SHIP CALL AND PER PASSENGER CALL (2013)¹³

PORT	DIRECT EXPENDITURE PER SHIP - CALL	DIRECT EXPENDITURE PER PASSENGER - CALL
Port Vila	\$243,900	\$117
Luganville	\$133,600	\$64
Mystery Island	\$43,100	\$21

¹³ This is different to passenger expenditure as it comprises all expenditure (including crew and operator).

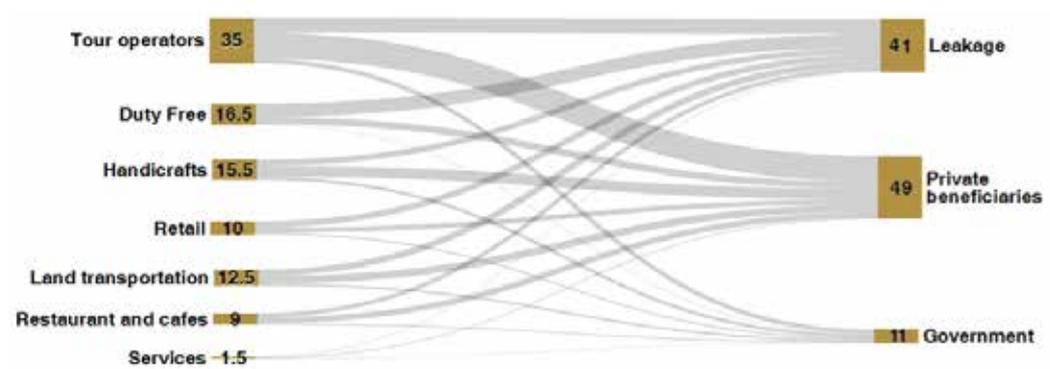
Indirect economic impact

Direct expenditure by cruise companies, their passengers and their crew, has an indirect economic impact through the businesses, individuals and government authorities that they interact with. As these businesses employ people and purchase goods and services, money is recirculated through the economy and the direct impact is 'multiplied'. Other businesses, individuals and government (through taxes) benefit from this.

This effect was estimated from a survey of key businesses which sought to establish their expenditure structure. This indirect impact was classified in three categories: leakage (i.e. imports); tax and benefits to government; and private benefits. Within this last category, a further type of leakage may occur, if foreign owned businesses send profits offshore. As this is a question that cannot be elicited through interviews, qualitative comments have been made where relevant.

A schematic version of the indirect expenditure stimulus flows is presented in the diagram below.

FIGURE 26: INDIRECT EXPENDITURE IMPACT FLOWS (%)



This means that for each dollar spent across the range of goods and services listed on the left hand side of the diagram, 59% creates flow-on impacts locally and 41% 'leaks' to international beneficiaries. Out of the 59% of local impact, 10% goes to government (taxes and contributions) and the rest (49%) to private beneficiaries (businesses and individuals). The stimulus impact to businesses is therefore 49%.

Compared to the 41% leakage reported here, the MCA survey found that 30% of gross revenue was used to purchase goods and services from overseas. This is likely due to differences in methodology. Other explanations could be due to the differences in the distribution of the whole of the tourism sector, as opposed to cruise ship tourism. For example, a larger proportion of air tourists visited the outer islands than cruise ship tourists. This tourism is likely to result in less international leakages, due to the type of services and products available for purchase on the outer islands.

Leakage in the Pacific islands can reach very high levels; according to Lal and Fortune (2000) some estimates show that this can reach up to 80% in isolated undeveloped areas. In Fiji, about 60% of tourists' expenditure is estimated to leak out of the country¹⁴, the 41% figure for Vanuatu, calculated in this study, is significantly lower than that experienced by some Pacific islands. It must be noted that this leakage only relates to specific tourism related activities, in particular services such as tours which do not rely much on imported products, and are less affected.

14 Levett and McNally, 2003

Differences between locations surveyed

An important distinction needs to be made between Port Vila and Luganville, and Mystery Island. There are no organised tours at present on Mystery Island, nor any permanent residents or businesses. However, on cruise ship days people come from the neighbouring island of Aneityum to sell goods and services to cruise ship visitors disembarking on Mystery Island. For this reason, the cost structure for the operations are much simpler than elsewhere, and a greater proportion of passenger expenditure therefore flows directly to the community. A management committee coordinates the Mystery Island activities and manages the anchorage fees paid by the cruise companies. The revenue derived from these activities mostly complements subsistence farming for people involved.

Because of this important difference and to be able to use Mystery Island as an example for other potential ports of call in Vanuatu, the indirect impact flows for Mystery Island are presented in a separate section to those for Port Vila and Luganville.

Indirect impact flows per industry (Port Vila and Luganville)

Tour operators

The tour operator businesses in Port Vila and Luganville¹⁵ range from providing fishing and snorkelling trips, to helicopter flights over the island (Port Vila only), to companies that manage the transfers of cruise ship tourists from the port to other tours, or that provide their own tours. Due to the differences in cost structures, this sector has been separated into two groups:

- **Activities** – tour operators that provide tours only, ranging from fishing, snorkelling to cultural and nature visits. They are more labour intensive.
- **Transfers** – tour operators that have licences to transfer tourists from the Port to tours. These operators often also provide their own tours of the island or directly to a natural attraction, and/or act as an intermediary for other tour operators. They are more capital intensive.

Tour expenditure in both locations includes tours purchased by cruise companies on behalf of passengers. The average salary for employees in this sector is estimated to be slightly higher than minimum wage at 35,000 vatu per month. Salaries can be significantly higher for some tour operators due to the skills required for the job, for example, Helicopter Vanuatu and Big Blue diving and snorkelling operation.

Table 8 outlines key findings of the indirect economic impact analysis.

TABLE 8: KEY FINDINGS OF ECONOMIC IMPACT ANALYSIS

	PORT VILA	LUGANVILLE
% of cruise ship tourist expenditure benefiting tour operators	38%	46%
Employment impact ¹⁶	299-898	44-133
Salary per month	35,000 vatu	
Indirect expenditure impact (ex. leakages)	\$AUD 6.7 MILLION	
BENEFICIARIES OF EXPENDITURE (% FLOW FROM EVERY DOLLAR SPENT)		
Local private	57%	
International	33%	
Vanuatu Government	10%	

¹⁵ No tour is available as yet in Mystery Island.

¹⁶ An alternative way to calculate employment impact of the sector results in employment estimated to be approximately 190 people in the Port Vila area. Based on the surveys completed by Net Balance, each tour operator business has an average of 10 employees. This compares to findings in the MCA survey, which found that the tour operator and inbound operator sector employed 206 FT staff and 92 PT staff in the approximately 20 businesses they surveyed (across the country).

Land transportation

This category refers to the land transportation by private taxis and mini-buses operating at the wharf and in town, and excludes tour operators already mentioned above. The cost structure of the different operators (owner-drivers or drivers sharing profit) have been found to be similar, hence no distinction has been made below. However, in terms of distribution effects, the impact of sharing a profit between owner and drivers may be socially significant. Table 9 outlines key findings from the economic analysis of cruise ship tourism expenditure.

TABLE 9: KEY FINDINGS OF ECONOMIC IMPACT ANALYSIS OF LAND TRANSPORT

	PORT VILA	LUGANVILLE
% of cruise ship tourist expenditure benefiting transport operators	13%	16%
Employment impact	179-538	14-43
Salary per month	30,000 vatu	
Indirect expenditure impact (ex. leakages)	\$AUD 1.9 MILLION	
BENEFICIARIES OF EXPENDITURE (% FLOW FROM EVERY DOLLAR SPENT)		
Local private	46%	
International	41%	
Vanuatu Government	13%	

This expenditure only applies to Port Vila and Luganville, as there is no requirement for land transportation on Mystery Island. In Port Vila, land transportation from the wharf is reported as an issue by many stakeholders, as taxi drivers compete, sometimes aggressively, for fares.

Employment impact

The employment impact is difficult to gauge, as taxi and minibus drivers are operating on different margins on cruise days and non-cruise days, when they are effectively providing a public transport service to the local population. It is therefore difficult to conclude whether the marginal impact of the cruise ship passengers is mostly to provide employment or increase profit.

Anecdotal evidence is that about 200 taxis routinely wait for passengers at the wharf in Port Vila. The land transport association (VELTA) indicated that they had 644 members in 2013, but the number of taxis and minibuses is likely to be significantly higher, as association membership is not mandatory at this stage. The association estimates that there are over 1,000 buses and 500 taxis in Port Vila.

Given the difficulties associated with estimating the wage cost for this sector, the FTE employment impact of cruise ship tourism expenditure has been calculated using an assumed monthly salary equivalent to the minimum salary. Using this figure, and the total profit estimated to be earned by the sector for the total spend from cruise ship tourism, the range of employment effect¹⁷ is estimated to be 179-538 for Port Vila and 14-43 for Luganville.

Duty free

Port Vila has several (7) duty free shops, and spending on duty free consistently comes first in the spending estimates as it is known as a good location in the region for such purchases. Duty free spending will be minimal in Luganville and Mystery Island, although the SPTO survey reported some duty free purchases on Mystery Island.

¹⁷ The range is calculated using an assumption of a FTE wage and 33% of FTE wage, to capture the potential for a large part of the workforce to not be working full time.

By definition, the indirect impact of duty free shopping comes from the operation of the shop, as products sold do not attract local taxes.

The margins vary a lot across products sold at the duty free outlets. Personal information from several operators indicated that margins on alcohol are extremely low and this is used as a marketing tool to attract tourists. Higher margins are made on other products, including some retail/ merchandising products, that are not duty free. Concern was also expressed by local shop owners at the cruise companies advertising that they will match any low price on duty free alcohol found in town.

TABLE 10: KEY FINDINGS OF ECONOMIC IMPACT ANALYSIS OF DUTY FREE

	PORT VILA	LUGANVILLE
% of cruise ship tourist expenditure benefiting tour operators	18%	2%
Employment impact	81-244	1-2
Salary per month	60,000 vatu	
Indirect expenditure impact (ex. leakages)	\$AUD 1.5 MILLION	
BENEFICIARIES OF EXPENDITURE (% FLOW FROM EVERY DOLLAR SPENT)		
Local private	32%	
International	65%	
Vanuatu Government	3%	

It is noted that the Luganville impact may be the result of reporting errors by passengers, as there is no real possibility of duty free in Luganville.

Restaurants and cafes

There are a broad range of outlets that sell food and beverages to cruise ship tourists. Anecdotal information collected during in-country surveys was that cruise tourists tend to purchase drinks and snacks, as opposed to meals. Table 11 outlines the key findings of the economic assessment of indirect impact of cruise tourist spending.

TABLE 11: KEY FINDINGS OF ECONOMIC IMPACT ANALYSIS OF RESTAURANTS AND CAFES

	PORT VILA	LUGANVILLE
% of cruise ship tourist expenditure	8%	9%
Employment impact	56-169	4-12
Salary per month	35,000 vatu	
Indirect expenditure impact (ex. leakages)	\$AUD 1.4 MILLION	
BENEFICIARIES OF EXPENDITURE (% FLOW FROM EVERY DOLLAR SPENT)		
Local private	51%	
International	38%	
Vanuatu Government	11%	

Local craft and souvenirs

Local craft and souvenirs account for approximately 15% of cruise tourist spending across 3 locations (including Mystery Island).

The relatively high proportion flowing offshore is due to the high proportion of imported goods that are sold in the local handicraft markets. The domestic distributional effects of this spending, however, are positive as the money goes directly to local stall holders who may have limited alternative sources of income or access to other employment. Despite this, a high proportion of this expenditure flows out of the local economy because of the high proportion of imports sold directly to tourists and also as a component of locally made handicrafts. Initiatives to increase local content are in train and examined in section 3 of this report. Table 12 outlines the key findings from the analysis of the indirect economic impacts from cruise ship tourism expenditure.

TABLE 12: KEY FINDINGS OF ECONOMIC IMPACT ANALYSIS OF LOCAL CRAFT AND SOUVENIRS

	PORT VILA	LUGANVILLE
% of cruise ship tourist expenditure	13%	16%
Employment impact	87-262	7-20
Salary per month	38,000 vatu	
Indirect expenditure impact (ex. leakages)	\$AUD 2.8 MILLION	

BENEFICIARIES OF EXPENDITURE (% FLOW FROM EVERY DOLLAR SPENT)

Local private	54%
International	32%
Vanuatu Government	14%

Retail

In the retail sector, most of the products are imported, either directly from China, Australia or New Zealand (for up-market brands). There are a few shops that sell local products (for example the Kava retail shop in Port Vila's main street), but the proportion of locally sourced products in the overall spend by passengers can be considered as very small.

The retail shops likely to be visited by cruise ship tourists vary greatly, from shops selling very cheap souvenirs to those selling international branded apparel. The expenditure structure has been assumed to be the same as the duty free shops. However, VAT has been modelled differently.

As is to be expected, the government receives a much higher percentage of the retail cruise tourism dollar than for duty free retailing, (12% compared to 3% for duty free). Most of the difference in proportion of expenditure being allocated to government is a transfer from international beneficiaries. Key findings are outline in Table 13.

TABLE 13: KEY FINDINGS OF ECONOMIC IMPACT ANALYSIS OF THE RETAIL SECTOR

	PORT VILA	LUGANVILLE
% of cruise ship tourist expenditure	10%	10%
Employment impact	102-307	6-19
Salary per month	35,000 vatu	
Indirect expenditure impact (ex. leakages)	\$AUD 1.3 MILLION	
BENEFICIARIES OF EXPENDITURE (% FLOW FROM EVERY DOLLAR SPENT)		
Local private	39%	
International	49%	
Vanuatu Government	12%	

Services

This corresponds to services such as spas, hairdressers and telecommunications, and is a minor expense in the cruise ship visitors' budget. Utility costs are most significant in the delivery of these services. All spas interviewed promoted the fact that they use local products. For other services, products have been assumed to be minimal. The sector is diverse and it was difficult to cover the full range of businesses that sit within it. However, it can be reasonably assumed that activity in the sector results in a high proportion of spending flowing to private local beneficiaries.

TABLE 14: KEY FINDINGS OF ECONOMIC IMPACT ANALYSIS OF THE SERVICES SECTOR

	PORT VILA	LUGANVILLE
% of cruise ship tourist expenditure	1%	1.5%
Employment impact	12-37	1-3
Salary per month	35,000 vatu	
Indirect expenditure impact (ex. leakages)	\$AUD 0.3 MILLION	
BENEFICIARIES OF EXPENDITURE (% FLOW FROM EVERY DOLLAR SPENT)		
Local private	68%	
International	26%	
Vanuatu Government	6%	

Note that this does not include services provided by Port agents nor the direct employment of ni-Vanuatu people on board some ships (which have been included in the overall employment impact, where an additional 140 FTEs have been added). These FTEs are however included in the overall employment figures presented below.

Indirect expenditure (Mystery Island)

All activities at this destination are assumed to be organised and operated by locals, except for the bar operated by the cruise company (which is not organised by all ships).

This means that relatively little indirect expenditure is generated through the purchase of goods and services within the economy, but as it allows people to take a large portion of the earnings as salaries and profits, it can be assumed that the majority of these proceeds are allocated to purchases that benefit the community (such as school fees, investment in domestic improvements, health facilities, etc.).

Overall, for each dollar spent on Mystery Island the following beneficiaries receive money:

- 30% to international beneficiaries (imports)
- 5% to government beneficiaries
- 65% to local beneficiaries.

Expenditure table

This table has been established based on interviews carried out by IFC on Mystery Island on a typical cruise visit day. Where possible, the best estimates collected from operators themselves were averaged and are expressed as a percentage.

TABLE 15: COST BREAKDOWN PER ACTIVITY (MYSTERY ISLAND)

EXPENDITURE CATEGORY	TOURS AND ACTIVITIES	PHOTOS & CULTURAL EXPERIENCE	FOOD AND BEVERAGE	HANDICRAFT	SERVICES
Staff costs	17%	11%	14%		85%
Cost of goods (*)			62%	55%	
Equipment & maintenance	7%	2%	2%		1%
Transportation costs	1%	1%	2%	1%	4%
Profit margin	75%	86%	20%	44%	10%

(*) Only this category of goods translates in leakages (import) and government benefit (VAT and import duty). All the other categories are considered local private benefits. See assumptions.

Employment impact

As employment is informal and complements other activities (mostly agricultural), the most representative employment figure is the number of work-days for the community attending to the ships visits multiplied by the number of ship visits to Mystery Island. The calculation is attached as a footnote, and suggests an overall employment impact of 135 full-time equivalent jobs or a range of between 404 (assuming one third of a full-time salary) and 135.

This is to be compared to the number of residents on Aneityum – 915, of which 600 are living in the immediate vicinity of Mystery Island (2009 Census).

Overall impact modelling

The overall direct spending by cruise tourists and cruise companies translates into:

- salaries (hence livelihood) and profits for business owners, and employment impacts,
- further spending in the local economy by business operators (intermediate consumption),
- government revenues (through taxes and contributions),
- 'leakages' when intermediate consumption is from imported sources, or profits are exported.

Overall estimated impact on employment

The employment effects of cruise ship tourism for all three locations are outlined per sector in the table below.

TABLE 16: ESTIMATED EMPLOYMENT IMPACTS FROM CRUISE SHIP TOURISM IN ALL THREE LOCATIONS

EXPENDITURE CATEGORY	RELATED EMPLOYMENT (ASSUMING FTE)	RELATED EMPLOYMENT (ASSUMING 33% OF FTE)	% TOTAL EMPLOYMENT
Tour operators	355	1,077	35%
Services	177	535	1%
Land transportation	194	587	13%
Local craft and souvenirs	180	544	16%
Retail	108	329	10%
Duty free	82	248	17%
Food and beverages	71	216	9%
Total	1,167	3,537	

This employment impact does not include employment resulting from government revenues derived from cruise ship visits. It includes an estimate of the employment of the company expenditure on port agent services and includes the ni-Vanuatu employees on board the ships.

Overall estimated indirect impacts

The table below outlines the estimated indirect economic impacts from cruise ship tourism for all three locations.

TABLE 17: INDIRECT ECONOMIC IMPACTS FROM CRUISE SHIP TOURISM IN ALL THREE LOCATIONS

EXPENDITURE CATEGORY	DIRECT EXPENSE (YEARLY \$AUD)	LEAKAGE	TAX	PRIVATE BENEFICIARIES
Tour operators	\$10.0 million	33%	10%	57%
Land transportation	\$3.2 million	41%	13%	46%
Duty free	\$4.2 million	65%	3%	33%
Food and beverages	\$2.3 million	38%	11%	51%
Local craft and souvenirs	\$4.1 million	32%	14%	54%
Retail	\$2.6 million	49%	12%	39%
Services	\$0.4 million	26%	6%	68%
Total	\$26.8 million	41%	10%	49%

TABLE 18: DIRECT EXPENDITURE AND ECONOMIC BENEFICIARIES OF CRUISE SHIP TOURISM BY PORT LOCATION

EXPENDITURE CATEGORY	DIRECT EXPENSE (YEARLY \$AUD)	LEAKAGE	GOVERNMENT	PRIVATE BENEFICIARIES
Port Vila	\$23.6 million	42%	10%	48%
Luganville	\$1.5 million	33%	12%	55%
Mystery Island	\$1.6 million	30%	5%	65%

Investment opportunities to increase the economic impact of cruise tourism in Vanuatu

Investment in infrastructure

1. Opening Tanna as a destination

Tanna is an attractive cruise destination for several reasons:

- It is located to the south of the archipelago and being closer to Australia / New Zealand / New Caledonia, would be a valuable and convenient stop in the itinerary.
- It has great natural beauty and, because of the active volcano, there is a relatively high 'destination awareness' amongst Australians and New Zealanders and a point of differentiation compared to other destinations; it also has cultural appeal; and is therefore relatively easy to market.

The drawback of the island is the lack of natural harbours capable of accommodating large ships;

- Sulphur Bay and Port Resolution could be too shallow to accept large cruise ships, according to the initial high level information available from the cruise companies, and this would need to be ascertained prior to undertaking any initial hydrographic work. Government indicated that they have Sulphur Bay on their list of locations for hydrographic survey, to satisfy the needs of cruise companies. It is recommended that this should not be undertaken prior to a broader assessment of the suitability of Sulphur Bay.
- While the north east coast (Waesis) is, relatively, better for anchoring and for the proximity to the volcano, road access from there to the volcano remains rough, and the distance to other attractions is greater than for an anchorage on the west coast.
- Lowanatom on the west coast is another option (according to the Carnival maritime team) It has a white sand beach, but does not have a safe harbour, and, given the current state of the roads, is thought to be about 1.5 to 2.5 hours drive away from the volcano.
- In any new location, a detailed investigation would need to be preceded by maritime weather monitoring, including assessment of swell, current and wind as a first step to assess the safety of the proposed location. Neither coast has been monitored for currents and sea conditions as yet and this preliminary work will need to be undertaken regardless of the location.

Roads on Tanna are not sealed and are sensitive to weather conditions.

- The Vanuatu Transport Sector Support Program (VTSSP) is assisting in the maintenance of roads on Tanna (and three other islands), with funding from the Australian and New Zealand governments. The main roads are assumed to be adequately maintained to allow the transportation of tourists in 12 seater buses. However, some secondary roads, not part of the VTSSP programs, are in poor condition, and depending on the location, would need to be rehabilitated to allow access to attractions.
- The south road on Tanna, for which funding has been recently committed (with a low interest rate loan from China's Exim Bank), will not give a significant advantage in terms of access to tourist attractions, as they are mostly located in the north (see maps in Appendix on the road and the attractions identified). The latest information is that this road will not be sealed, to save on costs.

Developing the location would therefore require investing in the following areas:

- Preliminary weather monitoring at the two locations
- A hydrography survey for the chosen location
- A destination impact study would need to be commissioned
- Landing facilities (assuming this is not Port Resolution, where adequate landing facilities exist), toilets and huts / shelters

As the potential of the east and west coast as anchorage points are as yet unknown, two options were defined – one close to the cultural attraction and the population clusters on the west coast, and the other one on the east coast, closer to the volcano. The differentiator between the two options is that in the latter, minimal movement of passengers has been assumed.

Option 1: Waesisi – eastern anchorage. Assumptions made:

- On the east coast, Waesisi was assumed to be the most likely anchorage. Based on map observation and conversations with a range of specialists, it was assumed that 2 km of roads would need to be rehabilitated at standard cost¹⁸, to facilitate access to the east coast road, which leads to the north of the volcano. An additional 3 km of road leading from the main road to the volcano has been assumed to be rehabilitated too, but no investment in access upgrade (and security measures) to the top of the volcano itself has been provided for. It is assumed that this would be a tour reserved for a small number of passengers in fit physical condition and accepting to waive the risks of undertaking the volcano ascension¹⁹.
- Cultural activities have been assumed to be brought to Waesisi (i.e. people would come to the location rather than have visitors moving), although there are also some points of attraction a short distance from Waesisi, where passengers could potentially be transferred to (see map in Appendix).

Option 2: Lowanatom – western anchorage. Assumptions made:

- Lowanatom is about 30 minutes to some of the main cultural attractions, by road (see map in Appendix). Investment in buses would be required to transport passengers to the activities. This investment would however also benefit the local population, as buses can be used for community transport when not transporting cruise passengers.
- Although a full assessment would be required, it has been assumed that enough attractions would be accessible by road to cater for cruise tourists needs in the short term. This may involve short trips on secondary roads in a poorer state than the main roads. Villages such as Yakel, while of potential interest, are likely to be too difficult to access.
- A provision of 50% of the routine maintenance budget of the main roads maintained under the VTSSP program has been assumed for additional maintenance needs and safety measures, required as a result of increased traffic.

Based on the assumptions made, the net economic benefit over 10 years is estimated at:

	OPTION 1 (WAESISI)	OPTION 2 (LOWANATOM)
Net economic benefit (NPV)	\$AUD 4.9 MILLION	\$AUD 5.9 MILLION
NPV of costs (public costs)	\$AUD 2.9 MILLION	\$AUD 5.9 MILLION
NPV of benefits (mostly private benefits)	\$AUD 7.8 MILLION	\$AUD 11.8 MILLION

The break-even period for the investment is 6 years for Waesisi and 7 years for Lowanatom.

¹⁸ As provided by the Vanuatu Transport Sector Support Program

¹⁹ It is unlikely that standard tour assurance could be obtained for such a tour, Adrian Mooney, pers. communication

2. Opening South West Bay, Malekula as a destination

Malekula is an attractive cruise destination as it is located half way up the archipelago, between Santo and Efate. This provides good opportunity for 'island hopping' and also offers some great cultural experiences, in particular the opportunity to experience the culture of the unique Small Nambas tribe.

Developing the location would therefore require investing in the following areas:

- Preliminary weather monitoring
- A hydrography survey for this location
- A destination impact study would need to be commissioned
- Landing facilities, toilets and huts / shelters

It is assumed that no road development would be required. There are a few small communities on SW Bay and the attraction would be the cultural experience and the environment, all of which are accessible without travel to the interior.

The black sand beach has been noted as a 'harder sell' for some cruise passengers.

Based on the assumptions made, the net economic benefit over 10 years could be estimated at:

	OPTION 1 – WOODEN JETTY	OPTION 2 – CONCRETE JETTY
Net economic benefit (NPV)	\$AUD 3.6 MILLION	\$AUD 3.2 MILLION
NPV of costs (public costs)	\$AUD 1.1 MILLION	\$AUD 1.6 MILLION
NPV of benefits (mostly private benefits)	\$AUD 4.7 MILLION	\$AUD 4.7 MILLION

The break-even period is 5 years for the concrete jetty.

3. Opening Ureparapara (Banks Islands) as a destination

Ureparapara is an unspoilt island destination which is an old volcanic cone that has been breached by the sea, and hence very picturesque. The community of about 500 people living on the island still follows a traditional way of life.

In terms of location, the Banks Islands are at the north of the archipelago on the way to Lord Howe Island and the Solomon Islands. This provides some opportunities for the longer cruise itineraries.

Developing the location would therefore require investing in the following areas:

- Preliminary weather monitoring
- Hydrography survey for this location
- A destination impact study would need to be commissioned
- Landing facilities, toilets and huts/shelters

It is assumed that no road development would be required – there does not appear to be any road on Ureparapara at the moment. The attraction would be the environment and the cultural experience, and people from the community from Leserepla could come to the beach to provide fresh produce, canoe tours, walking tours, cultural experiences and handicrafts. The community is about 3km away from the cove in the centre of the island where the ship would dock, subject to hydrography surveys.

Based on the assumptions made, the net economic benefit over 10 years is estimated at:

NPV	
Net economic benefit (NPV)	\$AUD 1 MILLION
NPV of costs (public costs)	\$AUD 1.1 MILLION
NPV of benefits (mostly private benefits)	\$AUD 2.1 MILLION

The break-even period is 6 years.

4. Mystery Island: inner and outer anchorage mapping

International safety standards now require that cruise companies use electronic charts when approaching coastal destinations. With over 60 calls a year, Mystery Island is a popular 'remote' destination. There are two anchorage possibilities; an 'outer' anchorage, that is easier for ships to approach but more exposed to high winds, making passenger disembarking by tender more difficult than the 'inner' anchorage, which is considerably more sheltered, and closer to shore.

It is understood that Mystery Island is on the government's supplementary program for electronic mapping²⁰, which should follow on shortly from the current survey program of four locations²¹. The funding for this program still needs to be secured²².

The lack of electronic maps jeopardises the development of Mystery Island as a destination over the medium term, as more stringent requirements are applied by cruise companies over time. Accessing the inner anchorage is considered more risky without electronic maps. If ships can only access the outer anchorage (more accessible without electronic maps), getting passengers ashore is more difficult in windy conditions, and this has led, in the past, to call cancellations, occurring more frequently than at other destinations. It is likely that electronic mapping of the inner anchorage will have the effect of reducing the number of cancellations due to adverse weather. Avoiding even a small number of cancellations (5 per year) shows a net benefit (see below). By contrast, if all calls were cancelled due to the absence of electronic mapping, the net benefit of avoiding this result would be very significant.

Based on the assumptions made, the net economic benefit over 10 years could be estimated at:

NPV	
Net economic benefit (NPV)	\$AUD 1.3 MILLION
NPV of costs (public costs)	\$AUD 0.1 MILLION
NPV of benefits (mostly private benefits)	\$AUD 1.4 MILLION

The minimum break-even period is 1 year, i.e. the benefits of 5 calls balances out the likely cost of the survey.

5. Luganville: wharf repair / improvement

Luganville and Port Vila provide Vanuatu's only wharves that allow cruise ships to dock alongside, rather than anchorages that require passengers to be ferried to shore in smaller vessels. This gives Luganville a competitive advantage in the region as alongside dockings greatly facilitate passenger transfer between ship and shore. This avoids calls being cancelled when the weather is inclement, and also reduces the strain on cruise ship crews.

20 Toney Tevi, Maritime Department, Ministry of Foreign Affairs, personal communication

21 Luganville, Champagne Beach, Wala, and Pentecost: these were identified by the country risk assessment undertaken by Land Information New Zealand and through consultation with the Vanuatu Government (assessing the costs and benefits of hydrographic survey and charting, a Vanuatu case study, SPC-NZ Aid Programme, 2014)

22 This was the situation at the time of our enquiry (June 2014)

The Luganville wharf is currently in a poor state of repair and has been judged dangerous by a significant amount of industry representatives, to the extent that it has been decided not to stop at Luganville until the wharf is repaired and/or upgraded.

An upgrade project for the wharf and the 'precinct' around it, complete with a passenger terminal for cruise ship visitors, has been discussed, but funding remains unsecured at the time of the drafting of this report.²³ The project includes an extension of the wharf, enabling a container ship to dock at the same time as a passenger ship, which would also benefit trade.

The full project is estimated at \$AUD 98 million or VUV 8.8 billion – with \$AUD 18 million estimated for repair of the wharf alone. By way of comparison, the costs for the repair of the Simonsen wharf (domestic wharf, Inter-Island project) is currently estimated at \$AUD 12-13 million, which renders \$AUD 18 million for the international wharf a reasonable estimate. *Our enquiries revealed that no independent feasibility study or engineering evaluation for the minimal repair of the wharf has yet been conducted.*

This provides two options to Luganville: simple repair of the current wharf, with gradual development of attractions over time to service cruise passengers and attract more calls, or a full upgrade along the lines of the project that has been discussed over the past months.

This report has costed the repair of the current wharf alone (estimated at \$AUD 18 million), as this meets basic requirements to open up Luganville to cruise shipping. This investment is essential to the economy of Luganville, and, as mentioned above, a repaired wharf that is safe for cruise and commercial vessels to berth would significantly increase the town's potential to develop its general tourism and broader trade activity, not only cruise tourism.

However, cruise itineraries are driven largely by passenger feedback and Luganville is consistently rated the least favourable destination in Vanuatu by cruise passengers in surveys. This is probably due to a range of factors, including the small number of activities available, and the very limited range of shops and cafes in town for those who do not partake in the activities that are on offer.

The risk of development of the wharf alone, from the cruising perspective, is that frequency to Luganville will continue to remain limited until the destination can improve the passenger experience. As such, a significant investment in a passenger terminal and other convenience facilities, without addressing the basic issues of increasing range of activities and shopping opportunities (differentiated from Port Vila), is unlikely to have the desired effect.

Improving the destination as a whole would go beyond infrastructure, and require a more complete package including investment in activities, amenities and tours.

Based on the assumptions made, the net economic benefit over 10 years is estimated at:

NPV	
Net economic cost (NPV)	\$AUD 1.1 MILLION
NPV of costs (public costs)	\$AUD 18 MILLION
NPV of benefits	\$AUD 19.1 MILLION

23 China's EXIM bank has shown interest in a project initially valued at \$AUD 98 million or VUV 8.8 billion.

Investment to improve market access

The following projects are targeting local capacity building and would benefit primarily ni-Vanuatu people. Beyond the net economic value calculated, they are likely to have a distributional impact skewed in favour of those most in need of assistance (including people with little access to training or employment opportunities). Clearly, the way these projects are structured and implemented will play an important role in delivering these distributional and longer term capacity building benefits, which cannot be captured in this initial assessment.

6. Employment for ni-Vanuatu people on board P&O ships

At present, there are 40 crew members employed on board each of the three P&O ships visiting Vanuatu, providing employment for a total of 120 locals. To encourage this practice, the Vanuatu government is granting P&O a linked discount on port fees in Port Vila and Luganville. There is a potential for increasing this number as new P&O ships are brought to the region.

However, training for new recruits is directly undertaken on the job by P&O, and many find the transition difficult, not being familiar with the on-board environment. This results in high turnover. A preparatory cultural induction seminar could ease this transition and ensure that recruits feel better prepared for their new working life.

There are also opportunities for those interested in pursuing a career on the ships to progress through the ranks and increase their salaries and job satisfaction; and for those interested in a career in hospitality to work in the sector onshore.

This initiative would see a coaching and training program developed for ni-Vanuatu people interested in pursuing employment opportunities within the cruise industry, or using it as a stepping stone to a career in tourism or hospitality (overall 150 people trained in year one, leading to 130 jobs in addition to the current 120 jobs offered to ni-Vanuatu people on board the ships). Thanks to ongoing training and appropriate industry placement, a proportion of the staff would have the opportunity to progress through the ranks and obtain better salaries.

The initiative could include:

- a one-week initial induction / familiarisation course with a curriculum developed in partnership with the cruise operators, for recruits to better prepare themselves for life at sea and the work environment of a cruise ship,
- alternate periods of formal training and work placement, both on board the ships and onshore,
- formal training tied to the curriculum for certificates in hospitality, with specific input from the cruise operators and Vanuatu hospitality industry (100, 80 and 60 trainees over three years at various levels of qualification),
- supplementary training for company supervisory staff, to improve their capacity to better manage, coach and nurture trainees.

Based on the assumptions made, the net economic benefit over 3+1 years (i.e. a training cycle + 1 year of additional benefit for those progressing to the highest qualification level) could be estimated at:

	NPV
Net economic cost (NPV)	\$AUD 1.3 MILLION
NPV of costs	\$AUD 3.7 MILLION
NPV of benefits	\$AUD 4.9 MILLION

7. TVET business and financial training for micro-entrepreneurs working with cruise tourists or wanting to get involved in cruise tourism

Financial and business literacy has been identified as a critical need across a number of sectors in Vanuatu, including in the tourism and hospitality sector, where people may wish to develop tourism oriented activities but lack the confidence and basic skills to build their own business. Increasing the number of such activities, in particular outside of Port Vila, could enable greater local value to be created from cruise tourism. This would be of benefit to businesses, cruise companies and tourists, as those destinations became a more attractive visitor proposition.

Increasing skill levels in existing businesses through business management and accounting training, would have a positive knock-on effect in terms of increased margins, profits and, potentially, capacity to invest and expand.

Australian Government funded Vanuatu Technical and Vocational Education and Training (TVET) Centres currently facilitate a range of business and financial training courses, in partnership with local training providers and industry coaches. This initiative would aim to increase the reach of the TVET Centres and tailor services to specifically target cruise tourism. Effective collaboration with the cruise operators would help ensure that relevant and appropriate modules were developed.

Based on the assumptions made, the net economic benefit over 2 years (period over which benefits are assumed to accrue), assuming 200 people are trained, could be estimated at:

NPV	
Net economic cost (NPV)	\$AUD 0.9 MILLION
NPV of costs	\$AUD 0.1 MILLION
NPV of benefits	\$AUD 1 MILLION

8. Increasing local purchasing by cruise companies

Procurement of food, beverage and consumables by cruise companies is typically managed globally, with containers being shipped all over the world to home ports. This is cost-effective for the industry, while supply quality and consistency are guaranteed through the industry's leverage with global suppliers.

The cruise industry is one of very few market aggregators in Pacific tourism. The industry controls an important share of demand in a sector which is otherwise chiefly made up of small operators and family-owned businesses. In this aggregator role, the industry can significantly increase market opportunities for businesses operating in Vanuatu and the rest of the Pacific. Market opportunities made available by the cruise industry have the potential to dwarf the supply chains that many of these firms currently access, leading to more sustainable business opportunities for Pacific companies that can make the leap. Pacific SMEs identify lack of market access as the number one barrier to growth and development of their business (rated as more critical even than finance) and there is a strong case for taking a detailed look at how to increase local purchasing by the cruise industry.

A 2012 FAO report points to opportunities to create positive linkages between tourism and agriculture in Pacific Island countries.²⁴ It cites processed agricultural products, including various root crop chips, sauces/ chutneys, jams, soaps, massage oils, vanilla beans, coffee, cocoa, kava, noni juice and various craft items produced in Tonga and Samoa. Some case studies in island countries show that small scale opportunities also exist with specific products and cruise ship companies, for example bananas in Dominica.²⁵ The Overseas Development Institute studied linkages between tourism and food procurement in Gambia (West Africa) and suggested that such linkages can lead to significant improvement for the poorest segment of the population²⁶.

24 <http://www.fao.org/docrep/015/an476e/an476e00.pdf>

25 http://www.caricom.org/jsp/community/agribusiness_forum/sector_success_stories.pdf (page 7)

26 <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/98.pdf> (page 25)

A number of challenges inhibit take-up, both on the demand and on the supply side. From the perspective of the industry, there are two major hurdles:

- (i) local supply encroaching on long-term, global contracts (including cost implications);
- (ii) the capacity of local producers to professionalise so as to supply products on time, in sufficient quantities, and at a uniform level of quality.

While it is clear that barriers to local sourcing are significant, they are not beyond those seen in other industries when SMEs wish to enter global supply chains. One important opportunity is the lack of significant technical barriers: smaller suppliers do not have to meet stringent design and manufacturing requirements in order to take advantage of a number of opportunities. The key identified barriers are contractual and cost-based on the demand side, and increased professionalism on the supply chain; these issues can feasibly be addressed in a staged manner, given cooperation of the cruise industry and focused funding support from donor agencies and governments.

P&O have in the past months introduced Vanuatu Water and Tanna Coffee on board their three ships that sail year-round from Australia. These products identify two different mechanisms for entering the cruise ship supply chain. Water is placed in each cabin and charged to the customer upon consumption while Tanna coffee is distributed through coffee bars that are not included in the package (additional cost to customers).

Further opportunities exist. Depending on the product and how it enters the distribution chain (e.g. primary supplier or additional choice/expense for passengers), the impact of sourcing local products can vary dramatically.

A number of immediate opportunities were identified in researching this report, which either expand the range of products sourced locally or look to increase sales volumes for those already available, including:

- coffee and bottled water (increase take up and marketing effort),
- local beer,
- beauty products (although these are sold through concessionaires, see above),
- fresh fruit and vegetables.

Of the items listed, all but fresh fruit and vegetables are essentially 'market ready.' These items could be targeted for Phase I of a staged pilot program, which can provide lessons for expansion of the range of products targeted by local procurement schemes of cruise companies.

However, to obtain the full benefits that have been costed through this study, and related distributional impacts on poorer segments of the population, a more detailed look at the fresh fruit and vegetable supply chain, as well as additional opportunities to supply the ships, would be required.

Given the size of demand of the cruise industry, capturing even a relatively small portion of the procurement of these products would be extremely beneficial to Vanuatu businesses, creating significant additional production and employment.

The items forming the basis for study were carefully selected but do not imply any commitments from the industry. It is, however, significant that the relatively conservative assumptions used for this report have resulted in local sourcing projecting the highest net benefit to Vanuatu of all investment opportunities costed.

This initiative would require significant engagement and effort from the cruise companies. Additional stakeholders, such as donor partners and governments, would need to partner with the industry to lower the risks of the initiative, especially in its early stages. To achieve the impact targets outlined in this report, the program would need to be strategic, rather than relying on ad-hoc initiatives with 'ready to market'

products. Funding would need to be allocated to planning, training management, and results monitoring. The partnership between the cruise industry and stakeholders would need to:

- identify suppliers for pilot opportunities, providing finance;
- work with the supplier to specify products and contracts;
- to lower initial industry risk, develop a method of staged entry for products that have rudimentary supply chains (i.e. additional product choice rather than primary supplier);
- support the development of adequate logistical arrangements / storage facilities to accommodate procurement from Port Vila;
- market local products sold on-board;
- once the concept is proven and products are able to enter the primary supply chain, adjust expectation of margins on substitutable mass-market products procured globally.

To take this forward, investment is required from the cruise companies, but with the following expected benefits:

- additional revenue for Vanuatu businesses and related job creation, by means of the cruise tourism supply chain;
- an enhanced 'Pacific' experience for cruise passengers, with related marketing opportunities for differentiation;
- an improved Corporate Social Responsibility profile, and enhanced license to operate.

Based on the assumptions made, the net economic benefit over 5 years (period over which benefits are assumed to accrue) could be estimated at:

	NPV
Net economic cost (NPV)	\$AUD 8.6 MILLION
NPV of costs (excluding costs to P&O)	\$AUD 0.9 MILLION
NPV of benefits	\$AUD 9.5 MILLION

9. Handicrafts opportunities

The handicraft sector in Vanuatu, essentially informal, is providing employment and income to a segment of the population with typically low access to other means of income. The market stalls sellers are mostly 'mothers' who either just resell (mostly) imported or local products or add value by transforming them (e.g. sewed garments). The key benefit here is a distributional impact with essential social flow-on effects, as the modest income derived from these activities is typically allocated to family-oriented expenses, such as household expenses, home improvements and children's school fees.

However, there are a number of issues that, if appropriately addressed, can assist in increasing the benefits to the sectors, including:

- the high number of operators compared to the size of the market,
- the high proportion of imported products (either minimally or not at all modified),
- the relatively poor quality of the products and absence of differentiation, especially by comparison to other countries visited by the cruise ships,
- the presentation of the products on the stalls,
- the perception by passengers that local handicraft items present quarantine risks.

A New Zealand MFAT funded pilot program, called the 'Tourism Ambassador Program', is currently being implemented to address some of these issues across the handicraft sector in Port Vila (mostly), as well as in other sectors. Carnival Australia and New Zealand MFAT have also collaborated to develop a program,

the South Pacific Regional Handicraft Project, to address some of these barriers. This program has not yet been implemented in Vanuatu. There is a need for all cruise companies to be involved in such an initiative.

The initiative, presented below, essentially builds on the 'Ambassador program' and seeks to complement it with components addressing barriers on the 'demand side' (i.e. passengers' perceptions and education). Further scoping would be required to ensure that there is no overlap with other planned initiatives. Where current initiatives address the issues identified adequately, this has been mentioned below. However, it is likely that an iterative and adaptive process will need to be put in place to ensure that the momentum of improvement is sustained.

This notional program of potential initiatives has been defined as a package of complementary actions, either 'passenger facing' or 'operator oriented'.

PASSENGER FACING ACTIONS	LINKS WITH EXISTING INITIATIVES / PROJECTS
Undertaking a marketing research study amongst passengers to determine price points, purchasing appetite and barriers to inform the market offering.	N/A
Creating easy to read information pamphlets with quarantine information for passengers ashore.	A tourist / commercial map of Port Vila centre with key businesses and points of interest is produced by Pandanus and given to the cruise ship passengers. Quarantine information needs to be given to passengers to show the items that can be brought back to Australia.
Promoting 'authentic' / Vanuatu made handicraft on-board the ships (TV, information sessions).	This is addressed by the South Pacific Regional Handicraft Project, which is running in Tonga but has not yet received funding in Vanuatu.
Providing better passenger information on biosecurity on board the ships (going beyond the display cabinets).	Partially addressed by the Pacific Horticultural and Agricultural Market Access Project (PHAMA). Ongoing communication materials will need to be produced (integrated in videos mentioned at the precedent point).
Education of customs officers back in Australia to reduce risk of having local handicraft rejected at customs.	Addressed by the PHAMA project. However, scope is likely to be insufficient in the long term.

HANDICRAFT OPERATOR ORIENTED ACTIONS	LINKS WITH EXISTING INITIATIVES / PROJECTS
Manufacturing of quality handicraft: assistance with the ordering / import of machinery to assist in the production of better quality handicraft	N/A
Supply chain reliability and differentiation: Identification of supply bottlenecks Identification of unique products throughout the country Identification of aggregators or wholesalers and assist in creating an efficient supply chain for products in demand	The Ambassador program is delivering this training to a select group of sellers through the existing pilot. There is potential for this to be replicated and scaled up should the pilot programme be continued.
Marketing training and assistance (building on the passenger marketing research): Trends Product differentiators (range or details), see also 'supply chain' Point of sale presentation Customer service skills (as per the Ambassador program)	The Ambassador program is delivering this training to a select group of sellers.

Based on the assumptions made, the net economic benefit over 5 years (period after which a reinvestment is likely to be necessary) is:

	NPV
Net economic cost (NPV)	\$AUD 0.7 MILLION
NPV of costs	\$AUD 0.4 MILLION
NPV of benefits	\$AUD 1.1 MILLION

10. Home-basing a cruise ship in the Pacific

Destinations attracting large numbers of cruise tourists and with suitable airport infrastructure, such as the Caribbean, typically have ships 'home-based' in one of their major regional ports. Passengers are flown to the destination to board the ship and start their cruise.

This presents a range of benefits for all stakeholders, including:

- minimizing the number of days spent sailing without calling at a port, making it more attractive for passengers,
- making it easier for cruise companies to schedule their itineraries and segments, reducing some of their costs (e.g. fuel costs) and allowing them to market different 'products' to different segments of the market,
- reducing congestion in other home ports,
- increasing the economic activity around cruise ship tourism at the ports of call, including airport activity and pre or post-cruise stays at the 'turn-around' ports, and stevedoring activities in the home port.

In a rapidly developing market such as the South Pacific, it therefore makes sense to consider the possibility of developing such an option.

Presenting this example helps launch the discussion on potential benefits, and could demonstrate the case for a more detailed feasibility study. While the description below is based on itinerary assumptions developed by the cruise industry, it does not imply commitment from the cruise companies to pursue such an option at this stage.

The basic elements of the option could be summarised as:

- Basing a ship requires good 'airlift' at the home port, as well as sufficient accommodation capacity. In the region, this could be Noumea, New Caledonia or Lautoka (Fiji).
- An 'open jaw' itinerary would be devised that would increase the number of stops in Vanuatu, as it would rely on ports with berthing facilities, of which Port Vila is one. The concept is that some people could embark / disembark at these ports (partial passenger exchange). Other ports could include Noumea, Nadi / Lautoka (Fiji), Nuku a'lofa (Tonga), and Apia (Samoa).
- Additional destinations in the itinerary would be visited, but no embarking / disembarking of new passengers would be allowed. In Vanuatu, this could be Mystery Island, Wala, or Pentecost in terms of existing destinations, and possibly the new destinations considered in the rest of this report (in particular SW Bay in Malekula and Ureparapara). Outside of Vanuatu, this would include Vava'u / Ha'apai (Tonga), and Savaii (Samoa).

Based on the assumptions made, the net economic benefit over 2 years is estimated at \$AUD 6 million.

Appendix 1: Methodology

Passenger and Crew survey methodology

Approach

The main objective of the passenger and crew survey is to obtain data to estimate the direct economic impact of cruise ships.

Similar surveys have been successfully undertaken in the past in the Caribbean (BREA) and in Australia (commissioned by CLIA – Cruise Lines International Association), and were used as point of reference.

Important features of the survey are to identify:

- how money is spent, i.e. which sectors benefit (tours, souvenirs, food), so that this information can be used in the indirect economic impact calculations
- what barriers or limiting factors to spending exist, as this will inform task 3 of this assignment.

After discussing the practical organisation of the survey with the cruise operators, it was decided that the most effective way of administering the surveys is by:

- following the same protocol as the BREA survey administered in Australia and having the survey (passenger and crew) managed by the hotel operation staff on board the ship, then sent back to Net Balance by the port agent
- using paper form surveys
- distributing survey forms in all cabins at the targeted ports of call (one survey per cabin) - Practical constraints of having the survey administered by the hotel staff means that a random distribution of surveys would be very difficult to organise.
- surveying only one port of call in Vanuatu per cruise.

The survey questions were adapted from the BREA survey and tested on a small sample of non-cruise people and of cruise passengers to make sure that questions were understandable. The overall structure and content remained quite close to the BREA survey, to ensure comparability.

Sampling

Key features and constraints

- Three destinations, Port Vila, Luganville and Mystery Island were pre-selected out of 6 ports of call in Vanuatu.
- Due to the time constraints of the study, the surveying period was restricted to March and April 2014. This does not capture the seasonality over a full year of cruises but includes some school holidays, which, from the cruise operators' experience and previous studies, could have an influence on passenger spending patterns.
- Ships have been classified in two groups: 'contemporary' and 'premium', depending on the brand. Despite these categories and the range of cabins within each category, cruise prices range along a wide continuum depending on many factors such as time of the year and time of booking (i.e. a same cabin can be sold at very different prices depending on when it is booked).
- It has been suggested that another relevant driver of passenger spend is the duration of the cruise; this factor is a given for each cruise and its relevance will be tested through the analysis.

- The need to preserve passenger confidentiality (and consistently to the BREA survey) led to the removal of the request for surveyed passengers to put their cabin number on the survey forms. As a consequence, no incentive could be offered to passenger (through a prize draw) to try and increase the response rate. Additionally, it will not be possible to stratify responses by cabin type and to assess any non-response bias by cabin type.

Sampling population

Based on the modified ship schedule and bearing in mind the decision to survey only one port of call per cruise, the following segmentation was established:

TYPE	LUGANVILLE	MYSTERY ISLAND	PORT VILA	TOTAL
Contemporary	1	5	6	12
Premium	3	4	3	10
Grand Total	4	9	9	22

- Given the limited sub-sample sizes, it was decided to sample all the 22 ships calling in these ports of call over the two months considered.
- Only one ship stops in Luganville over the period in the 'contemporary' category. Expanding the dates does not help so the analysis will have to be cognisant of the possible impact of this small sub-sample. This will obviously limit ability to further segment the population and to differentiate between school holidays and non-school holidays periods. Should a significant difference be found between the (only) 'contemporary' and 'premium' ships' passenger spend in Luganville, then further analysis options will be investigated.

In the absence of incentive and based on the first ship surveyed, a 20%-30% response rate is expected for passengers' surveys, translating to about 300 surveys per ship (each ship having about 2000 passengers on board in around 1000 cabins). Ability to detect differences between ships drops with the response rate, hence the importance to try and maximise the number of surveys returned by passengers and crew. This will allow better conclusions about impact of weather, school holidays and other potential key drivers. In Luganville in particular, given the small number of ships calling at that location, this ability may be quite limited.

Complementary information and analysis

Information to be obtained for each port of call

To be able to validly analyse the survey results, information from the cruise companies was obtained, for each port of call surveyed:

- the port of origin and length of the cruise
- the number of passengers and crew on board (capacity and actual)
- the number of passengers and crew who went onshore on that day
- the purchase of on shore excursions on behalf of passengers

Analysis

The analysis of the first few ships visiting Vanuatu was carried out initially to test any issue in the survey itself and any issue in the data processing. The surveys from subsequent ships were processed in large 'batches' for efficiency (both for scanning surveys and for the information to be obtained from the cruise companies).

SPSS was used to carry out statistical analysis. The analysis provided per group of passengers for each destination and for each category of ship:

- the average expenditure
- the expenditure per type of goods and services purchased on shore (tours, food and beverages, souvenirs, etc.) both averaged across the population and across sub-populations of passengers having spent money for that category of good and services
- a categorization of passengers spending profiles, if appropriate, depending on drivers such as time spent onshore, pre-purchases of tours, etc.
- more qualitative data on the limitations and barriers to spending.

A similar analysis was carried out for crew members.

Assumptions

- The unit of analysis for the passenger survey is the cabin or family unit rather than individual – although the economic analysis will generate analysis for individuals.
- Each of the three ports are very different and will therefore be surveyed as separate components.
- Apart from school holidays and weather each ship will be broadly representative of all ships visiting each port.

Implementation

As Net Balance did not control the distribution and collection of surveys, reliance was placed on the cruise companies' staff.

The direct spent on behalf of passengers (pre-booked tours) and the taxes and port fees paid by the cruise operators were reported by the cruise companies themselves.

Economic impacts estimation

Direct economic impact

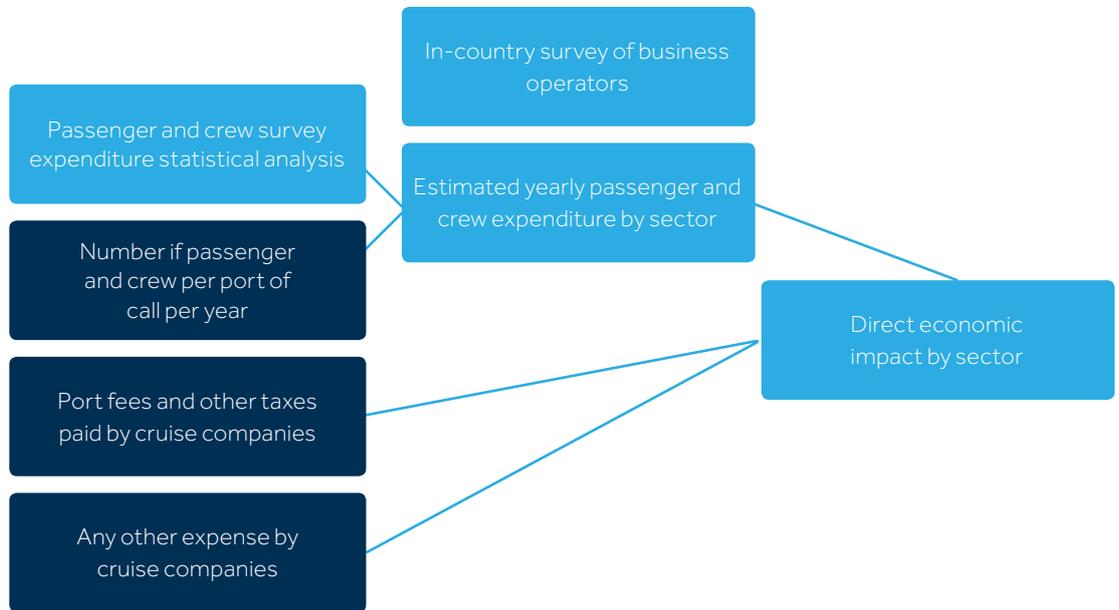
The direct economic impacts are estimated based on:

- direct spend by passengers (obtained through the survey),
- direct spend by crew members (obtained through the survey),
- direct spend by cruise companies on tours on behalf of passengers,
- other expenses by cruise companies.

This information was triangulated through the surveying of local businesses. The survey of local businesses and operators will not only allow us to compare the information on the direct spend and the breakdown of this expenditure by sector, it will also give us the possibility to collect information on the indirect impacts and employment impacts (see below).

The diagram below summarises the flows of information required to attain these estimates.

FIGURE 27 : DIRECT IMPACTS ANALYTICAL FRAMEWORK



Indirect economic impact

Approach

Indirect economic impacts occur as businesses and individuals benefiting from the direct spend in turn purchase goods and services, either to be able to deliver the goods and services forming the direct impact, or as part of their more general activities.

This presents the following challenges:

- Without information on 'intermediate consumption' for each sector and appropriate 'input-output' matrices of the economy (VNSO has not published such data), the 'multiplier' effect of tourism expenditure cannot be directly calculated.
- Calculating indirect impacts in a small, dependent economy such as Vanuatu raises the question of leakage, as an increase in consumption could result in corresponding increases in imports and / or other types of 'leakages' (for example if business owners reside outside of the country and extract their profits).

To respond to these challenges, a straightforward method to source the necessary information was established to estimate indirect impact from economic agents. This method relies on:

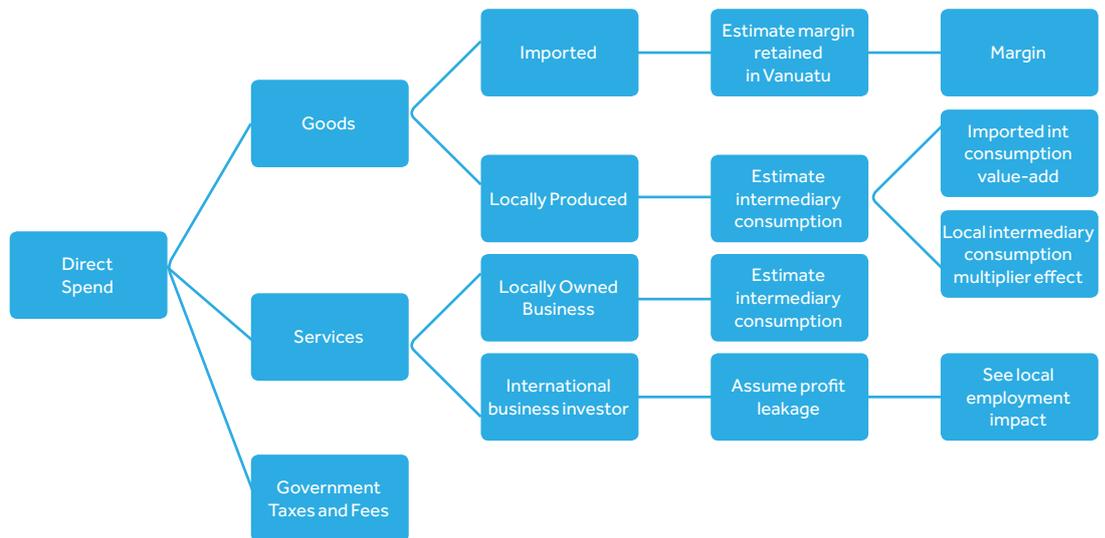
- Using all available economic information: by sector, in particular, production, employment and imports.
- Sourcing intermediate consumption estimates for key goods and services directly from businesses and informers in Vanuatu.
- Making informed assumptions and carrying out sensitivity analyses to add robustness to the analysis.

Specifically, this required the following steps:

1. Build a flow diagram by types of goods and services, including adequate assumptions
2. Conduct a materiality assessment to focus on key impacts
3. Analyse imports and leakages specific to each impacted sector
4. Ascertain the tax effect of increased income
5. Estimate resulting indirect impact
6. Conduct sensitivity analysis and provide a range of multipliers, as appropriate.

An analytical framework such as the example below will be used and refined by iterations:

FIGURE 28 : INDIRECT IMPACTS ANALYTICAL FRAMEWORK



This framework will be applied to the broad categories of expenditure identified, provided they are found to be material.

As an example, tour operators fall within the 'services' categories. Assuming they are owned by locals, it will be assumed that 100% of the money spent (by either the cruise companies or passengers directly) benefits the local economy. While this is not captured in the diagram above, to avoid undue complexity, we will then work with a representative sample of the tour operator industry in Vanuatu to estimate their own expenditure structure including:

- Salaries
- Consumables (e.g. petrol)
- Purchase of services (e.g. cleaning)
- Investment amortization
- Profit retained by business owner

The purchase of consumables and services will allow estimates of the multiplier effect and the salary expenditure will link to the employment estimates. Salaries and profits could also lead to induced effects, however those are outside the scope of this assignment. Tax impacts will be estimated as part of this exercise, as it should be considered as a transfer of benefit from one economic agent (private sector) to the other (government).

Data collection

Desktop

Although limited, useful information is expected to be obtained from the Vanuatu Statistical Office and government organisations.

Focus groups and interviews

During field visits in Vanuatu, meetings were organised with representatives of the tourism industry, in particular tour operators, primarily to obtain information on the structure of their revenues and costs related to cruise tourism. The information was necessarily estimated, as operators do not disclose precise financial information. These discussions also sought to identify the supply chain impacts of the products sold or services provided, in particular, salaries, imported goods purchased, consumables, indicative margins and investment amortisation.

Additional in-country data collection

To complement information obtained from the sources above, wherever necessary, local operators will be recruited to obtain information on 'intermediate consumption' and employment that can be linked to cruise tourism. This will allow calculation of indirect impacts by applying the framework described in the 'approach' sub-section above.

Depending on the sophistication of the business operators on the ground, the questions put to them will aim to estimate either the yearly income from cruise tourism (for businesses with good income tracking such as tour operators) or the income from one typical visit (for small occasional street sellers).

Employment impacts

Tourism is likely the greatest provider of employment in Vanuatu (up to 50% according to some estimates). Estimating employment impacts in such an economy can be fraught, as rural populations in particular typically pursue a wide range of activities, including subsistence agriculture that are closely linked to their culture and lifestyle, and may not seek full-time employment.

The same logic will be pursued as for indirect impacts to estimate the employment impact of cruise tourism. When collecting information from each significant sector impacted by cruise tourism (see above), information will be collected on employment (number of hours / number of people involved). This will provide an estimate of the overall level of activity generated (number of hours) and of the number of people benefitting, whether tourism is their main activity or not. Assuming the information is available from government agencies, the average salary will be used by sector to triangulate this information.

Appendix 2: Direct impact analysis

Calculations of impact per call, per voyage and per passenger-day

Various metrics were used through the report to calculate the standard impact of cruise ships on Vanuatu, including:

- the impact per call per port
- the weighted average impact per call
- the impact per voyage (as ships call to one or more destination per cruise or voyage).

As information was obtained for RCI and Carnival groups on one hand and for the whole of the industry on the other, estimates of expenditure were only collected for a sample of RCI and Carnival ships, so the various study parameters had to be carefully managed.

An important distinction is the difference between the impact per passenger-day (which was initially calculated) and the impact per passenger-voyage, which should logically be provided along the impact per voyage:

- The impact per passenger-day is the overall impact divided by the number of passenger-days in Vanuatu and is problematic given the difference in impact between ports of call.
- The impact per passenger-voyage can be estimated by dividing the impact per voyage by the average number of passengers per ship. It thus maintains consistency in the calculation, but remains tied in the mix of ports of call in the year of reference.

The table below shows how the impacts per voyage were calculated.

TABLE 19: IMPACT PER VOYAGE (\$AUD)

PERIMETER	DIRECT EXPENDITURE	NUMBER OF VOYAGES	IMPACT PER VOYAGE	IMPACT PER PASSENGER-VOYAGE
Survey perimeter	\$33M	134	Excludes Wala, Pentecost, Champagne beach (underestimate) \$246,000	\$118
Whole of industry	\$34.6M	Unknown	N/A	
RCI + Carnival all ports	\$34.5M	134	\$257,500,000, rounded up to \$260,000	\$124, rounded up to \$125

These numbers can be compared to the impacts per port of call, as per the table below.

TABLE 20: IMPACT PER CALL OR PER PASSENGER-DAY (\$AUD)

PORT	DIRECT EXPENDITURE PER CALL	DIRECT EXPENDITURE PER PASSENGER-DAY	DIRECT + INDIRECT EXPENDITURE PER CALL	DIRECT + INDIRECT EXPENDITURE PER PASSENGER-DAY
Port Vila	243,900	117	\$372,000	\$179
Luganville	133,600	64	\$207,000	\$99
Mystery Island	43,100	21	\$69,000	\$33
Weighted average	164,000	79	\$252,000	\$121

Survey analysis

Surveys collected and significance

Over the March to May 2014 period, passengers and crew surveys were conducted for 22 ships across the three selected destinations. Only one destination per cruise itinerary was targeted, to avoid passengers having to answer multiple survey questionnaires.²⁷ Table 21 and Table 22 show the number of ships surveyed and the number of surveys collected per port of call. On average, each survey reported passenger spend for 2.2 people, representing **8,839** passengers.

TABLE 21: SURVEYED SHIPS PER PORT OF CALL

CATEGORY	LUGANVILLE	MYSTERY ISLAND	PORT VILA	TOTAL
Contemporary	2	2	10	14
Premium	3	2 (*)	3	8
Total	5	4	13	22

(*) a third ship was surveyed, but only crew surveys were returned.

TABLE 22: NUMBER OF SURVEYS COLLECTED PER PORT OF CALL

PORT(S) OF CALL	STAFF SURVEYS	PASSENGER SURVEYS	TOTAL PASSENGERS SURVEYED	PASSENGERS PER SURVEY
Port Vila	649	2,551	5,715	2.2
Luganville	136	809	1,714	2.1
Mystery Island	141	679	1,410	2.1
Total	926	4,050	8,839	2.2

It should be noted that a greater number of surveys have been collected, but had to be excluded due to quality issues. Also, a number of surveys from staff who did not go onshore were excluded to reduce the processing burden, as most of them would have been on duty and did not have the possibility to go onshore.

²⁷ Passengers however sometimes returned questionnaires for other port of calls than the one intended. Provided there was no ambiguity about the port of call and it was one of the three ports targeted, these surveys were used in the analysis.

For this reason, staff response rate could not be calculated. However, it varied significantly depending on the ship, which is likely a reflection on the instructions that may have been given to the staff.

The number of ships surveyed across the three destinations provides a reasonable sample across the Premium and Contemporary categories of ships. All Carnival and Royal Caribbean ships cruising to Vanuatu over the survey period were targeted and circumstances (such as aborted calls) meant that only two surveys were conducted for Mystery Island and Luganville for Contemporary ships.

The passenger response rate for each ship varied significantly. The rate of useable responses is lower than the response rate reported here, as some partially filled survey sheets were effectively unusable. Useable response rate was between 5% and 37% depending on the destination, with an average of 21%.

Overall the survey sample obtained for each destination was sufficient, with a confidence interval of 1 at a 95% confidence level.

For crew members, the response rate varied even more depending on the ship (4% to 91%, average 29%). Few responses were obtained in the Contemporary category in Luganville and Mystery Island, destinations where staff are less likely to go onshore. The sample size (35 and 21 respectively) does not allow for comparison with the Premium category. This is due to few crew member disembarking. Therefore, for crew members the Premium and Contemporary categories have been merged for analysis.

Spend on behalf of passengers

Cruise companies offer passengers the possibility to book accredited onshore tours and activities in advance (either when booking their cruise or on board the ship). This information was obtained from RCI and Carnival directly, for the ships surveyed and for the whole of 2013, as this was a more complete source than the passengers' surveys²⁸. This represents a significant spending on behalf of passengers with the tour operators (and intermediaries) in Vanuatu, once the booking fee by the cruise company has been deducted. This only relates to Port Vila and Luganville, as no tour booking is as yet available for Mystery Island.

Table 23 presents this spend on behalf of passengers for the whole of 2013 for the Carnival and RCI groups. This was reported as part of the passenger spend impacts in the body of the report.

Table 23: Spend with tour operators on behalf of passengers (2013)

PORT OF CALL	NUMBER OF CALLS	TOTAL RCI AND CARNIVAL GROUPS (\$AUD)	AVERAGE TOUR SPEND PER SHIP (\$AUD)	AVERAGE PER PASSENGER GOING ASHORE (\$AUD)	AVERAGE PER PASSENGER BOOKING A TOUR (\$AUD)
Port Vila	114	5.5 million	48,000	25.42	51.89
Luganville	16	0.5 million	29,000	13.76	41.46

Direct spend by cruise companies

Cruise companies spend significant amounts on port fees and landing fees to communities and also purchase services (such as port agent services) in country, as well as some procurement items.

Port fees or equivalent contributions

In Port Vila and Luganville, cruise companies are paying port fees to dock at the wharf. This is direct revenue for the Port Authority (governmental authority). There are also payments made to community groups. In Mystery Island, the most important portion of the sums paid out by the cruise companies are

28 As this was also collected through passengers' surveys, this expenditure was removed from the survey data to avoid double counting.

the 'landing' fees paid directly to the community who owns the land. The sums gathered are administered by a committee that employs a few people and invests the proceeds in community projects (see indirect impact).

To encourage employment on board the ships, the government is discounting port fees for those ships that have a minimum number of ni-Vanuatu employees on board when calling into a Vanuatu port (Luganville and Port Vila). At this stage, only 3 P&O ships have benefitted from this measure.

Extrapolation of spend data to a whole year of operation

The yearly direct economic impact of cruise ships in Luganville, Mystery Island and Port Vila has been estimated using the average spend by passengers for each port of call and extrapolating it to a whole year. 2013 was chosen as the year of reference, as it was possible to obtain from the cruise companies the number of passengers who actually went on-shore in each location for each port of call, and were therefore in a position to spend money. This allowed for a more precise estimate than assuming that the same proportion of passengers had gone ashore than was observed during in the sample of ships surveyed.

The direct expenditure was added to this direct economic spend by (or on behalf of) passengers.

Data collection

To be able to appropriately extrapolate the direct economic impact of the spend, the following parameters are required:

- number of people on board the ship;
- number of passengers going onshore on the day of the survey;
- number of crew members going onshore on the day of the survey;
- mean spend for people who went onshore.

This information could not be obtained for all ships.

The spend on behalf of passengers (pre-booked onshore tours) has been excluded from the following means calculated, as they are considered separately (better accuracy, as reported by cruise companies).

Confidence intervals

The statistical analysis (Kruskal-Wallis test) showed that the difference between the Contemporary and Premium categories was statistically different for Port Vila and Luganville, but not for Mystery Island. It should be noted that the sample of surveys for Mystery Island was smaller. Also the opportunities for spending money at this location are more limited.

Table 24 presents the confidence intervals (2 standard error of means) around the mean estimates, which will be used to analyse uncertainty. By way of simplification, however, most of this report refers to the statistical means.

**TABLE 24: DIRECT SPEND CONFIDENCE INTERVALS
(EXCLUDING PRE-BOOKED TOURS)**

PORT OF CALL	SHIP CLASS	MEAN	N	STD. ERROR OF MEAN	LOWER BOUND	UPPER BOUND
Luganville	Premium	28.35	923	1.21545	25.92	30.78
	Contemporary	35.20	768	1.35337	32.49	37.91
	Total	31.46	1691	0.90793		
Port Vila	Premium	64.36	2316	2.03048	60.30	68.42
	Contemporary	75.17	3328	1.76629	71.64	78.70
	Total	70.73	5644	1.33553		
Mystery Island	Premium	10.61	783	0.6041	9.41	11.82
	Contemporary	12.36	568	0.59985	11.16	13.56
	Total	11.35	1351	0.43198		

Appendix 3: Cost structures and assumptions

This appendix includes the cost breakdown for each sector and where the money flows based on the each cost category, i.e. international leakage, revenue flowing to the government due to taxes and import duties and excise, and private local beneficiaries. These assumptions and cost structures have been applied to Port Vila and Luganville cruise ship tourism spending.

Tour operators

Figure below outlines the cost breakdown for activity based tour operators and the end beneficiaries of cruise ship tourism spending. Figure outlines the same analysis for tour operators whose main business is coordinating transfers from the ports²⁹.

FIGURE 29: INDIRECT ECONOMIC IMPACT ANALYSIS FOR ACTIVITY BASED TOUR OPERATORS

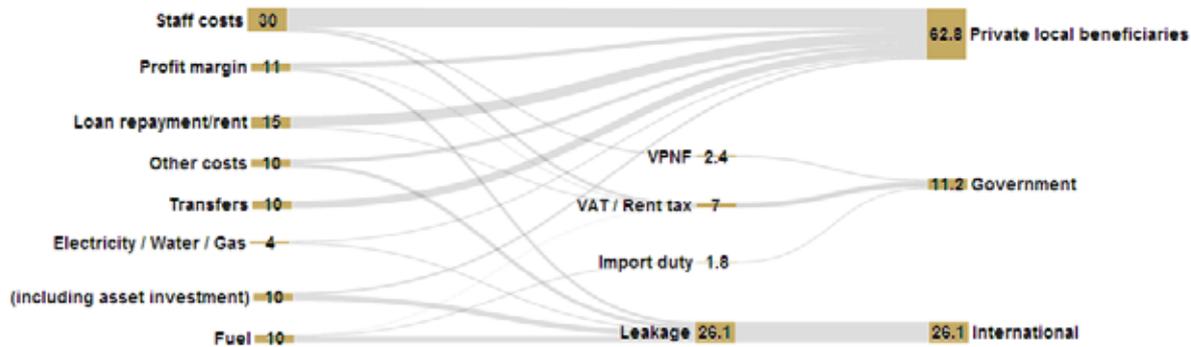
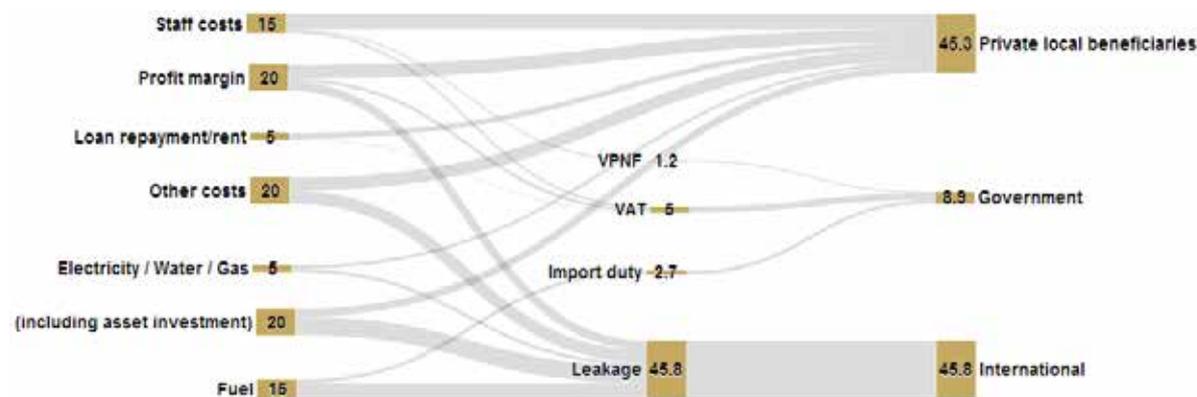


FIGURE 30: INDIRECT ECONOMIC IMPACT ANALYSIS FOR TOUR OPERATORS - TRANSFER



29 Note that the indirect expenditure flows have been merged for tour operators activities and transfers in the rest of the report.

The key sources for assumptions for figures above are outlined in the Table 25 below.

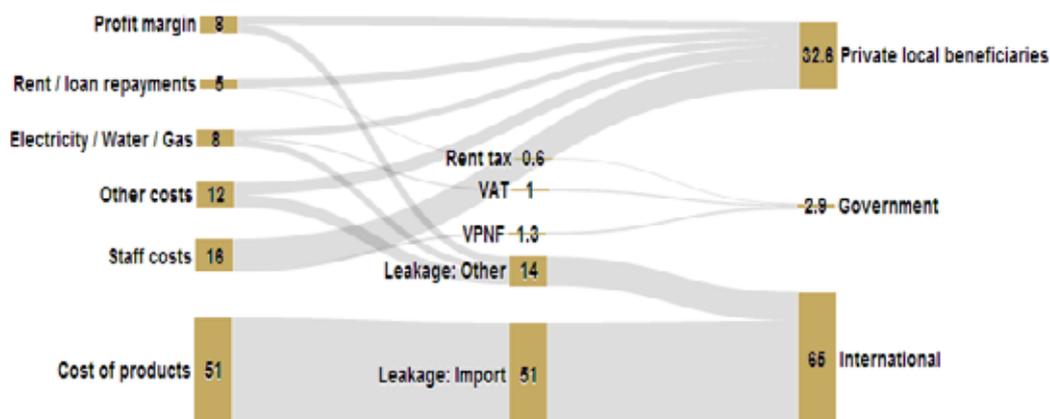
TABLE 25: SOURCES FOR TOUR OPERATORS ASSUMPTIONS

COMPONENT	SOURCE
Expenses	<p>The cost structure is based on information collected through the Net Balance interviews with tour operators while in country and via email.</p> <p>As a comparison the MCA study found:</p> <ul style="list-style-type: none"> • staff costs accounted for approximately 27.2% • profit 17.7% of gross revenue • a larger proportion of intermediate consumption is imported (49%) • fuel costs 25% of revenue (TRIP Consultants, 2008).
VAT	VAT has been applied to staff costs and profit, as the VAT paid for all other intermediate consumption is refunded to the business operator. All businesses have been assumed to be VAT registered.
Fuel imports ⁹	It is assumed that 100% of fuel was imported. Removing the import duties on that fuel, international leakage totals 82.2%.
Fuel import duties	<p>Import duties are estimated to be 17.8%. This has been calculated using information from Republic of Vanuatu Harmonised customers import/export duty tariff system.¹⁰ The fuel import and excise duties are based on duties for Distillated fuel, which attracts an import duty of 26 vatu/l and excise of 5 vatu/l. These figures were divided into the fuel prices.</p> <p>Fuel prices will vary depending on the international market. Observed June 2014 prices were used, averaging diesel and unleaded fuel pump prices, i.e. 175 Vatu / litre (all taxes included) (personal communication with Sara King, IFC).</p>
Profit leakage	<p>According to the interviews of tour operators completed by Net Balance, approximately 80% of the businesses are owned by expatriates. It is assumed that expatriate-owned businesses send 50% of their profit offshore. Given the confidential nature of this information, this assumption cannot be substantiated.</p> <p>As profit is after VAT, approximately 35% of profit from tour operators is sent offshore.</p>
Employment	Employment has been calculated using the total proportion of cruise ship expenditure flowing to wages. To capture the potential for part-time employment to account for a large proportion of the workforce, a range has been calculated based on the assumption of 33% of FTE monthly wage.

Land transportation

Land transportation includes taxis and bus services that meet cruise ships. This does not include transfers, which are included in the tour operators sector.

FIGURE 31: INDIRECT ECONOMIC IMPACT ANALYSIS FOR LAND TRANSPORTATION



The key sources for assumptions from Figure are outlined in the table below.

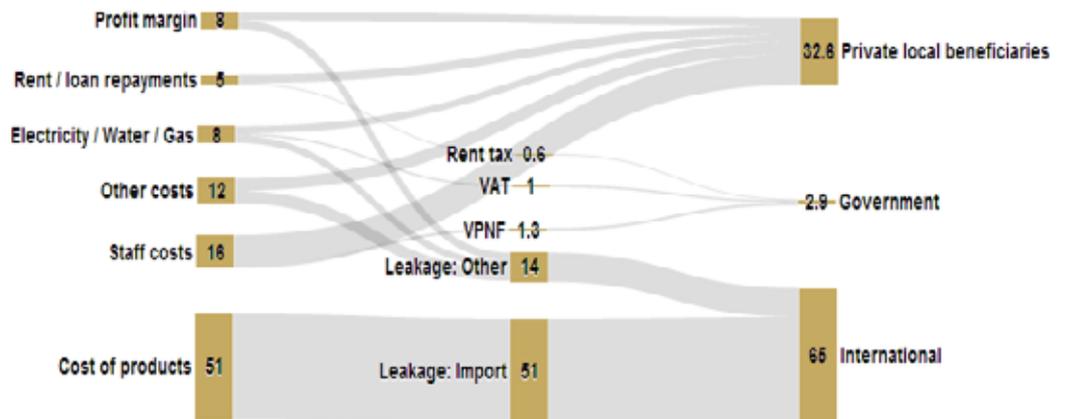
TABLE 26: SOURCES FOR LAND TRANSPORTATION SECTOR ASSUMPTIONS

COMPONENT	SOURCE
Cost structure	Information gathered during completed in-country survey.
Loan repayment	Most vehicles are purchased through loans and therefore this component largely captures vehicle financing costs. All vehicles are imported, hence a significant proportion of the financing costs effectively represents an import leakage. As interest costs are high in Vanuatu, it has been assumed that 15% would be retained in-country and 85% would correspond to the asset payment and would therefore flow to international beneficiaries.
Vehicle maintenance costs	These costs were assumed to include services provided locally. While a portion of these costs would go to imported spare parts, this leakage was not considered as material.
VAT	It has been considered that very few of the operators would pay VAT, either because they do not reach the 4 million Vatu threshold or because they fail to monitor the crossing of this threshold. VAT has therefore been calculated on the expenditure components. Therefore it is assumed that the drivers/owners are not reimbursed the VAT they pay on their intermediate consumption.
Profit leakage	Land transportation is a 'reserved activity' for ni-Vanuatu people hence it has been considered that profit leakage would be negligible.
Employment	Employment has been calculated using the total proportion of cruise ship expenditure flowing to profit of owners. Then minimum FTE wage has been assumed to be the average salary of owners in the sector, to calculate number of drivers and employers generated by spending by cruise ship tourists. To capture the potential for part-time employment to account for a large proportion of the workforce, a range has been calculated based on the assumption of 33% of FTE monthly wage.

Duty free

Duty free shops represent a large proportion of cruise ship tourism expenditure. The cost structure and analysis of indirect economic beneficiaries is outlined below.

FIGURE 32: INDIRECT ECONOMIC IMPACT ANALYSIS FOR DUTY FREE RETAIL SHOPS



The key sources for assumptions for Figure 13 are outlined in the table below.

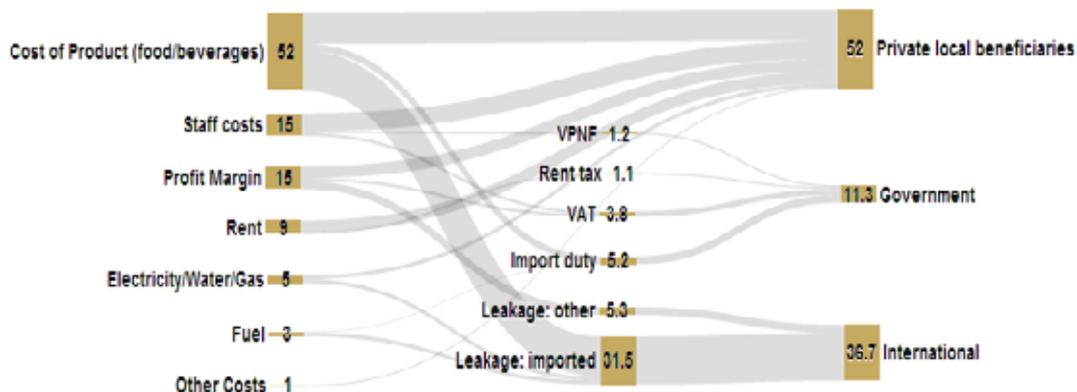
TABLE 27: SOURCES FOR DUTY FREE RETAIL ASSUMPTIONS

COMPONENT	SOURCE
Cost structure	Based on information collected through Net Balance's business survey and interviews.
VAT and other taxes	While the goods sold are tax free, the following taxes or on-costs have been considered: VNPF contributions on salaries, tax rent and VAT on utilities.
Rent	It is assumed that the majority of duty free shop owners rent their shop premises. Rent is assumed to wholly remain with private beneficiaries in Vanuatu.
Profit leakage	Although the question of profit 'leakage' was too sensitive to bring up during interview, most of the businesses are owned by expatriates. Therefore it is assumed that these businesses send 50% of their profit offshore.
Employment	Employment has been calculated using the total proportion of cruise ship expenditure flowing to wages. To capture the potential for part-time employment to account for a large proportion of the workforce, a range has been calculated based on the assumption of 33% of FTE monthly wage.

Restaurants and café sector

The diagram below outlines, the breakdown of costs for each group of businesses, the percentage of imports for each expense category, the relevant government taxes and contributions that apply to the expenses (i.e. VNPF for staff costs).

FIGURE 33: INDIRECT ECONOMIC IMPACT ANALYSIS FOR RESTAURANT AND CAFES



The key sources for assumptions for Figure 14 are outlined in the table below.

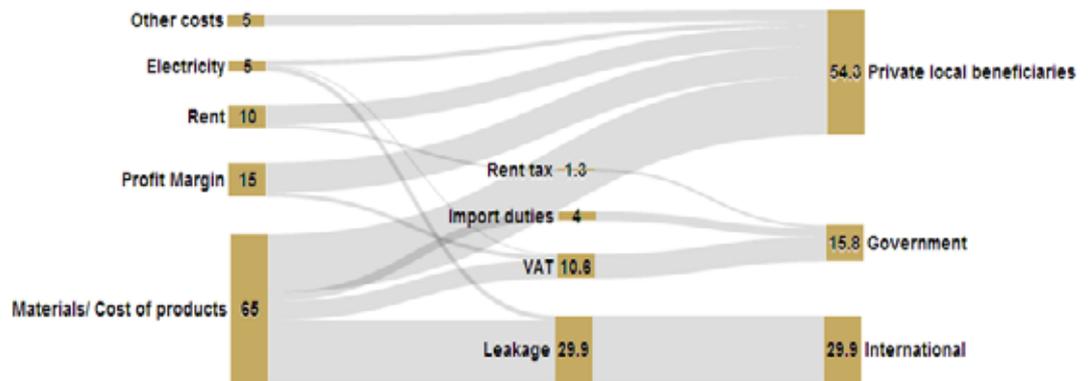
TABLE 28: SOURCES FOR RESTAURANTS AND CAFES ASSUMPTIONS

COMPONENT	SOURCE
Cost structure	The cost structure is based on information collected through the Net Balance interviews with tour operators while in country and via email.
Cost of product (food and non-alcoholic beverages)	It is assumed that 60% of food and beverages is imported (AgriSurvey 2014). Import duties were assumed to be 15%, a conservative assumption based on the lowest rate of import duties for food products. 11
Government taxes (excluding import duties and excise)	VAT has been applied to staff costs and profit, as the VAT paid for all other intermediate consumption is refunded to the business operator. There is also a rent tax that has also be calculated and attributed to government benefit from cruise tourism.
Profit leakage	Assumes approximately 80% of the restaurants and cafes are owned by expatriates. Therefore it is assumed that these businesses send 50% of their profit offshore. As profit is after VAT, approximately 35% of profit from tour operators is sent offshore. Given the confidential nature of this information, this assumption cannot be substantiated.
Employment	Employment has been calculated using the total proportion of cruise ship expenditure flowing to wages. To capture the potential for part-time employment to account for a large proportion of the workforce, a range has been calculated based on the assumption of 33% of FTE monthly wage.

Local craft and souvenirs

Figure 15 below outlines the breakdown of costs for each group of businesses, the percentage of imports for each expense category, the relevant government taxes that apply to the expenses (i.e. VNPF for staff costs)³⁰.

FIGURE 34: INDIRECT ECONOMIC IMPACT ANALYSIS FOR LOCAL CRAFT AND SOUVENIRS



The assumptions for the above cost structure and distribution of indirect expenditure arising due to spending by cruise tourists are outlined below in Table 29.

TABLE 29: SOURCES FOR LOCAL CRAFT AND SOUVENIRS ASSUMPTIONS

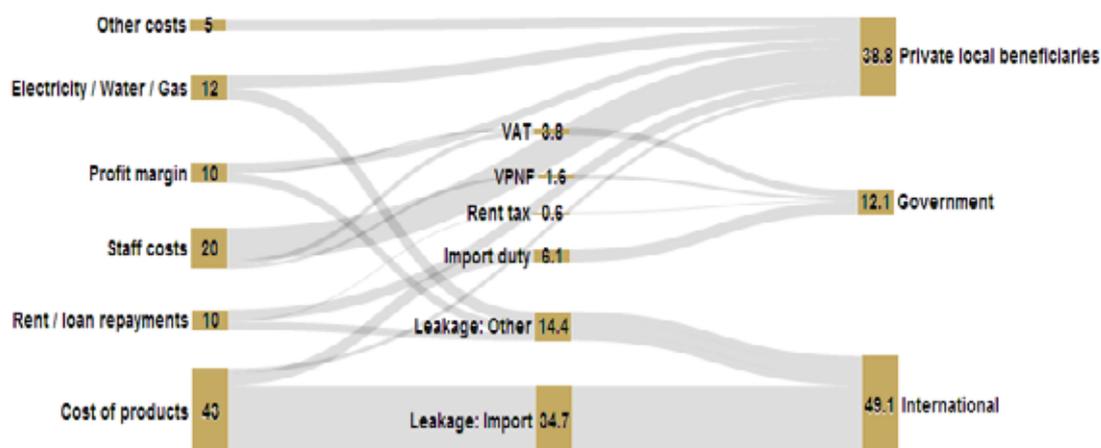
COMPONENT	SOURCE
Expenses	The cost structure is based on information collected through the Net Balance workshops and the Port Vila main wharf Mama’s market survey report (Vanuatu Tourism, 2014).
Imports	The split of imported and domestic products is sourced from information from the Port Vila main wharf market survey and Net Balance workshops. There is a higher proportion of local products at the Port Vila market and these often attract higher prices. Import duties were assumed to be 10% based on the general level of import duties on various products sold at the markets, including the importation of raw materials to make shirts. ¹²
Government taxes (excluding import duties and excise)	VAT has been applied to all costs as it is assumed that handicraft sellers do earn over 4 million vatu per annum required to become a VAT paying enterprise. Therefore they cannot claim back the VAT on their intermediate consumption. There is also a rent tax that has also be calculated and attributed to government benefit from cruise tourism.
Profit leakage	No profit leakage has been assumed.
Employment	The average salary for market holders is estimated using a Vanwods research report from 2007. Employment has been calculated using the total proportion of cruise ship expenditure flowing to profit of owners. To capture the potential for part-time employment to account for a large proportion of the workforce, a range has been calculated based on the assumption of 33% of FTE monthly wage.

30 Note that the cost structure is slightly different for Mystery Island, leading to slightly different overall results.

Retail

The expenditure structure has been assumed to be the same as the duty free shops. However, VAT has been modelled differently.

FIGURE 35: INDIRECT ECONOMIC IMPACT ANALYSIS FOR RETAIL SECTOR



The key sources for assumptions made for Figure 16 are outlined in the table below.

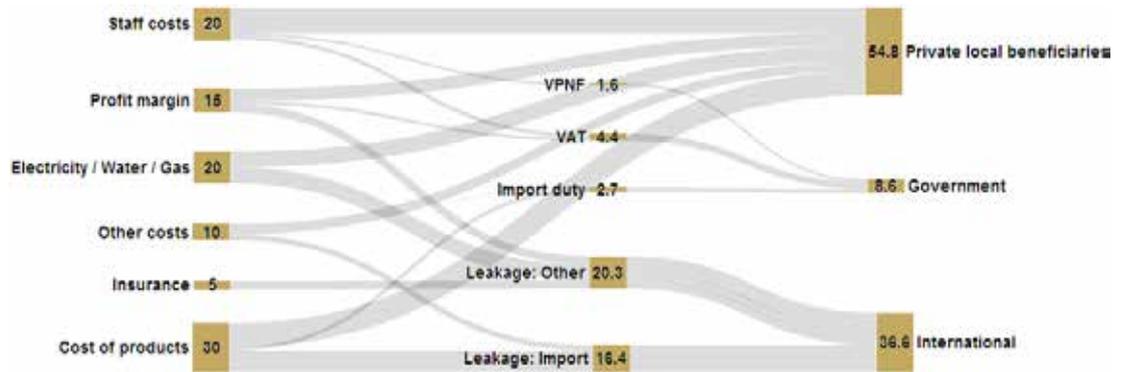
TABLE 30: SOURCES FOR RETAIL SECTOR ASSUMPTIONS

COMPONENT	SOURCE
VAT and other taxes	VAT has been applied to staff costs and profit, as the VAT paid for all other intermediate consumption is refunded to the business operator.
Profit leakage	Shop ownership varies a lot across the various businesses. Most shops are not owned by Ni-Vanuatu people; however, most are owned by people who have been part of the community for a long time. A profit 'leakage' of 50% has been applied, although this cannot be backed by data.
Rent or loan repayments	It is assumed that 50% of retail premises are rented and the other 50% are mortgaged. Of the 50% that are mortgaged, it is assumed that 85% of mortgage repayment is sent offshore to repay the capital borrowed (i.e. overall 42.5% of the rent/loan is assumed to leak out of the Vanuatu economy). For the 50% rented, the 12.5% rent tax has been applied.
Employment	The average salary estimate is based on results from the in-country surveys. To capture the potential for part-time employment to account for a large proportion of the workforce, a range has been calculated based on the assumption of 33% of FTE monthly wage.
Imports – cost of product	It is assumed that 95% of the products purchased for selling in retail stores is imported.
Import duties – cost of product	Import duties have been assumed to be 15%. This an underestimate of many of the items that may be purchased in retail shops by cruise tourists. Import duties for watches are 30% and jewellery are 25%, shirts 12%.

Services

Services encompasses a wide range of businesses including spas, massage, and hairdressing, along with telecommunications. Figure 17 outlines the cost structure and beneficiary flows for each key stakeholder group.

FIGURE 36: INDIRECT ECONOMIC IMPACT ANALYSIS FOR SERVICE SECTOR



The key sources for assumptions for Figure 17 are outlined in the table below.

TABLE 31: SOURCES FOR SERVICES SECTOR ASSUMPTIONS

COMPONENT	SOURCE
Cost structure	Net Balance conducted in-country interviews and surveys. The MCA survey found that other service businesses spent approximately 50.1% on intermediate consumption compared with 65% estimated from Net Balance data collection.
Imports - insurance	Insurance products are assumed to be 100% imported, with no import duties applied.
VAT	VAT has been applied to staff costs and profit, as the VAT paid for all other intermediate consumption is refunded to the business operator.
Profit leakage	Business ownership varies across this category. Some businesses are owned by expatriates. It is assumed that 80% of services are owned by expatriates and they send 50% of profit offshore. This cannot be backed by data due to the confidential nature of such information.
Imports – other costs	50% of other costs purchases are assumed to be imported. This is based on survey responses gathered by Net Balance.
Import duties – other costs	Import duties of 10% have been conservatively assumed given that import duties of items such as essential oils, shampoos, and soap attract import duties of 25% per kilogram and any sort of chemicals attract 10% per kilogram.
Employment	The average salary estimate is based on results from the in-country surveys. To capture the potential for part-time employment to account for a large proportion of the workforce, a range has been calculated based on the assumption of 33% of FTE monthly wage.

Mystery Island

The following assumptions have been defined for Mystery Island, where economic activity is more informal than in Port Vila and Luganville.

Assumptions

COMPONENT	SOURCE
Cost of goods	<p>Consistently with what is observed in Port Vila and Luganville, it was considered that 90% of the handicraft was imported.</p> <p>The percentage of food and beverage imported was also aligned to the average from the Port Vila survey: 62% imported and 38% local.</p>
VAT and other taxes	<p>It was assumed that all of the activity was part of the informal economy, that none was attracting VAT, nor that any insurance costs were incurred. It was also assumed that no VNPF contribution was paid on salaries paid out to people employed on a casual basis.</p> <p>VAT however applies on imported and purchased goods.</p>

Appendix 4: Assumptions for Cost Benefit Analysis

1. Opening Tanna as a destination

Additional assumptions

- Due to its attractiveness, the destination could become comparable to Mystery Island. A potential of 50 calls per year has been assumed, with a ramping up of 12 calls in the first year to 25 by the third year and 50 calls thereafter.
- Due to the difficulties outlined, the upfront investment required would be unlikely to start paying off for at least two years.
- The benefits only start accruing in year 3, considering the planning and exploration work to be done.
- Net Present Value of the investment is calculated over 10 years, with a 7% discount rate.

Costs

TYPE OF COST	VALUATION SUB-OPTION 1	VALUATION SUB-OPTION 2
Preliminary weather / sea conditions monitoring (2 locations)	\$150,000 times 2	\$150,000 times 2
Hydrography survey for this location	\$125,000	\$125,000
Destination impact study	\$50,000	\$50,000
Landing facilities plus beach shelters / huts	\$1,000,000 (by reference to a strong jetty, able to handle cyclonic weather conditions) + \$20,000 (560,000 vatu / hut) 5% maintenance per year	\$1,000,000 + \$20,000 5% maintenance per year

TYPE OF COST	VALUATION SUB-OPTION 1	VALUATION SUB-OPTION 2
Roads rehabilitation / creation	<p>Assumes 5km of road rehabilitation (on the east coast)</p> <p>Road Rehabilitation/upgrading – 15 to 20 million vatu per kilometre (depending on the starting condition). Averaged at 17.5 million vatu.</p> <p>Source: Philip Warren, VTSSPS, pers. Comm.</p>	<p>Routine preventative maintenance on a road in 'maintainable' condition (work that is done continuously year in year out by community contracts and island based contractors) – 400,000 to 600,000 vatu per kilometre per year.</p> <p>It was assumed that slightly increased maintenance of the roads currently maintained under the VTSSP program would be required.</p> <p>Source: Philip Warren, VTSSP, pers. Comm.</p> <p>Net Balance assumption: 50% additional maintenance cost on the 50km of roads maintained under the VTSSP program (see additional details in Appendix)</p>
Buses to transport 700 people	N/A – using existing 4WD fleet to transport limited number of people to the volcano	60 vehicles required, assuming 12 seaters, investment potentially scaled up as time goes by.

Benefits

TYPE OF BENEFIT	VALUATION SUB-OPTION 1	VALUATION SUB-OPTION 2
12 calls in the first year in operation (assumed to be year 3)	<p>Similar impact per passenger as Mystery Island (minimal tour organisation in the first year)</p> <p>Also includes landing fees (equivalent to Mystery Island)</p>	<p>Similar impact per passenger as Mystery Island (minimal tour organisation in the first year)</p> <p>Also includes landing fees (equivalent to Mystery Island)</p>
18 calls in the second year	Similar impact per passenger as Mystery Island.	Similar impact per passenger as Mystery Island, but with additional tour expenditure (similar to Luganville).
25 calls in the third year	Similar impact per passenger as Mystery Island.	Similar impact per passenger as Mystery Island, but with additional tour expenditure (similar to Luganville).
50 calls thereafter	Similar impact per passenger as Mystery Island.	Similar impact per passenger as Mystery Island, but with additional tour expenditure (similar to Luganville).

TYPE OF BENEFIT	VALUATION SUB-OPTION 1	VALUATION SUB-OPTION 2
Roads and wharf infrastructure benefits for the overall community (including other tourists)		This could not be estimated in \$ value, but would be valuable for the development of tourism on Tanna.

2. Opening SW Bay Malekula as a destination

Additional assumptions

- The destination could attract 12 calls in the first year, then 25 calls in the third year (assuming some boutique ships will stop there too)
- The Net Present Value of the investment is calculated over 10 years, with a 7% discount rate
- Benefits would only eventuate in year 3, once the destination has been developed

Costs

TYPE OF COST	VALUATION
Preliminary weather monitoring (1 location)	\$150,000
Hydrography survey for this location	\$125,000
Destination impact study	\$50,000
Landing facilities (assuming none exist)	Option 1: \$600,000 (lower cost than in Tanna, as assumed to be less exposed to weather events) + \$20,000 (huts – estimates) and 5% for subsequent maintenance (yearly) Option 2: \$1,000,000 (as for Tanna) + same onshore set up

Benefits

TYPE OF BENEFIT	VALUATION
12 calls in the first year in operation (assumed to be year 3)	Similar impact per passenger as Mystery Island (minimal tours available), plus landing fees
18 calls in the second year	Similar impact per passenger as Mystery Island
25 calls in the third year and thereafter, including 5 smaller, boutique operators	Similar impact per passenger as Mystery Island, including half the number of passengers for boutique tours

3. Opening Ureparapara (Banks Islands) as a destination

Additional assumptions

- The destination could attract 10 calls a year, and remain one of the more boutique destinations.
- The Net Present Value of the investment is calculated over 10 years, with a 7% discount rate

Costs

TYPE OF COST	VALUATION
Preliminary weather monitoring (1 location) May not be necessary, as the anchorage is sheltered	\$150,000
Hydrography survey for this location	\$100,000 (cost assumed to be slightly lower as some information has already been collected)
Destination impact study	\$50,000
Landing facilities	\$600,000 + \$20,000 (lower cost than in Tanna, as lower number of calls may not justify stronger jetty), 5% maintenance per year

Benefits

TYPE OF BENEFIT	VALUATION
10 calls from the first year of operation	Similar impact per passenger as Mystery Island (assuming same type of activities can be organised)

4. Mystery Island: inner and outer anchorage mapping**Costs**

TYPE OF COST	VALUATION
Hydrography survey for this location	\$125,000 (assuming done in conjunction with some other locations)

Benefits

TYPE OF BENEFIT	VALUATION
5 call cancellations avoided (in 2013 at least 7 calls had to be cancelled, primarily due to high winds). With better mapping, it is expected that some of these cancellations would not be required.	Per call impact for Mystery Island

5. Luganville: wharf repair / improvement**Additional assumptions**

- Hydrography survey for the Luganville harbour is committed and in train, and is not included in the costing.
- Cruise ship frequency will decrease if the wharf is deemed unsafe.

Costs

TYPE OF COST	VALUATION
Wharf repair (option 1)	\$18M (USD17M, as per costing for the Exim Bank project, 'old wharf repair' item on the detailed costing list, SCG document, obtained from Terry Ngwele)

Benefits

TYPE OF BENEFIT	VALUATION
Avoided ship frequency decrease. Estimated to be 5 ships less in the first year and up to 25 ships less (i.e. no visit) in year 5 if the wharf is not repaired. This is only based on anecdotal evidence, as a lot of factors influence ship call frequency	Per call direct economic impact
Benefits to trade	These were not costed

6. Employment for ni-Vanuatu people on board P&O ships**Additional assumptions**

- The initiative has been costed at a high level for an annual intake of 150 trainees, assuming entry level training.
- P&O would increase the intake of ni-Vanuatu staff beyond 40 per ship, if better training and induction led to higher levels of interest and engagement by the recruits. The new recruits would be working on 5 different ships, triggering a government reduction in port fees for these ships, providing 130 additional job opportunities (in addition to the current 120 jobs).
- Additional training has been assumed to be available for P&O ni-Vanuatu staff, over several years, from certificate I (100 trainees) to certificate III (60 trainees) in hospitality, to assist with their progression.
- The benefits / costs are assumed to occur over 3 years, plus one year to take into account the benefit of the promotion of people having completed a level III certificate, which is regarded as an appropriate timeframe for people to progress through the training.

Costs

TYPE OF COST	VALUATION
Training costs – induction	<p>\$12,000 for a one week induction for 20 people. This cost is likely to decrease with economies of scale, hence a \$80,000 cost has been assumed for 150 recruits (assuming that 130 trainees will not get into employment at the end of the training).</p> <p>Yearly costs of \$20,000 have been assumed for initial training in subsequent years.</p> <p>Source: TVET</p>

TYPE OF COST	VALUATION
Training costs – hospitality certificates	<p>Course costs depending on the level</p> <p>SIT40313 Certificate IV in Hospitality, 20 weeks \$11,000 per week, \$220,000 overall for 20 students</p> <p>SIT30713 Certificate III in Hospitality: 15 weeks \$12,000 per week, \$180,000 overall for 20 students</p> <p>SIT20213 Certificate II in Hospitality, 12 weeks, \$12,000 per week, \$144,000 overall for 20 students</p> <p>SIT10213 Certificate I in Hospitality : 4 weeks, \$11,000 per week, \$44,000 overall for 20 students</p> <p>It has been assumed that the number of students seeking further education would be:</p> <ul style="list-style-type: none"> - 100 for Certificate I (in year 1) - 80 for Certificate II (in year 2) - 60 for Certificate II (in year 3)
Training costs – trainers	Equivalent to Cert IV: assume 20 people trained per year
Program management costs, including placement and management	15% management cost
Cost to government	Estimated at \$500,000 per annum

Benefits

TYPE OF BENEFIT	VALUATION
<p>Salaries for 130 new recruits, over 3 years. Note that the salary of the current 120 employees has not been counted in the BCA as it is considered part of the baseline.</p> <p>This value also captures reduced cost to P&O</p>	\$800 x 12 = yearly salary at entry level (excluding participation in the bonus pool) per recruit
Promotions and salary increase for those progressing through the ranks (assumes 100% success rate)	<p>Follows the Certificate training levels:</p> <p>Cert. I: +\$400 x 12 per trainee</p> <p>Cert. II: +\$400 x 12 per trainee</p> <p>Cert. III: +\$400 x 12 per trainee</p>
Career long benefit of training, translating into better job opportunities	Although anecdotal evidence points that these benefits are real, this has not been valued, in the absence of vertical studies following trainees over the long term
Benefits to local tourism businesses from having access to better trained staff	

7. TVET facilitated business and financial training for micro-entrepreneurs working with cruise tourists or wanting to get involved in cruise

Additional assumptions

- The training has been costed for 20 people, on the understanding that this can be scaled up depending on the demand.
- The training has been assumed to be a two weeks training course, in groups of 10 people.
- Training costs vary depending on the location, content, starting level of trainees and service providers. Actual costs would need to be ascertained by training professionals.
- TVET evaluation of the outcomes of the program will not be available before the end of 2014, hence the assumptions around additional employment generated are hypothetical at this stage.

Costs

TYPE OF COST	VALUATION
Training cost for 20 people	<p>Depending on the needs and the training provider, training costs between \$100 and \$600 a day for the trainer.</p> <p>10 days x 2 groups x \$350/day = \$7000</p> <p>Administration costs have been assumed to be 20%.</p>

Benefits

TYPE OF BENEFIT	VALUATION
Activity creation leading to employment and profit generation	Assume 5 people create their activity, creating employment for 1 person, at minimum salary for the first year, then doubling in year 2
Business development for existing businesses, leading to employment and profit generation	Assume 5 people are able to develop their margins and increase their activity, employing 1 more person at minimum salary (over 2 years)

8. Increasing local purchasing by cruise companies

Additional assumptions

Due to commercial confidentiality of the current data and margins, the following data mostly relies on assumptions made based on information publicly available. There is no commitment from either the suppliers or the cruise companies to the prices or costs indicated.

Costs

TYPE OF COST	VALUATION
Most costs would be mostly born by the cruise companies (marketing, etc.)	This has not been valued, consistently with the rest of the BCA.
Coffee grinders for new ships	\$1,500 per machine, 2 new ships, assumed not to require replacement over 5 years
Water	No new investment required
Beer	Production can be ramped up by 1,000,000 bottle a year without additional investment. Difference in margins for the cruise companies assumed to be borne by the cruise company.
Beauty products	It has been assumed that the production could be ramped up at no cost to satisfy demand.
Fruit and vegetable supply chain	Professionalising the industry would require significant effort, including resolving land tenure issues. Also a sizeable investment to ensure business competency around e.g. quality and security of volume supply. Project management of up to \$1M is likely to be required over several years (4 years) to work on such a project.

Benefits

TYPE OF BENEFIT	VALUATION
Coffee - Provision of 5t of coffee per year over all P&O ships (1 t per ship, approximately half of the coffee shops' consumption), starting with existing 3 ships (year 1) and 2 new ships in year 2	Price: assuming \$20/kg coffee
Water - 1.4 million of bottles used on board the 3 P&O ships, assumed to be 75cl (25.5 oz.) bottles, i.e. 1.05 million litres. It is believed that 14,000l of water are currently supplied to P&O (P&O to check). Assume 105,000 litres could be provided (10% of consumption) for 3 ships in year 1, then an additional 70,000 litres in year 2 to the two additional P&O ships.	Price: assuming \$0.5/litre water (see note below: assumed to be higher price than American wholesale price, as doesn't require transport, etc.).
Beer - Tusker and Numbawan are the two local beers that could be sold on board the ships to passengers. Consumption on board each ship is 1.8million bottles a year. If 10% was local beer, this would amount to 180,000 bottles per ship per year. Assume 3 ships in year 1, then two additional P&O ship in year 2.	Assumed to be sold at the same retail price as in Vanuatu (about \$5 a bottle), which would leave a reasonable margin to the cruise company if purchased at wholesale price of \$2/bottle (see note below)
Beauty products - Assume a capacity to sell 20 items per P&O ship cruising to Vanuatu (3 ships currently, 5 in year 2, assumes 25 voyages a year each)	\$20 retail price per item - see reference below (\$10 assumed wholesale price)

TYPE OF BENEFIT	VALUATION
<p>Fruits and vegetables - Important volume of fruit and vegetable consumed on board (1,200t and 1,700t respectively on 3 P&O ships, which will soon be 5 ships). To justify the investment in developing the supply chain, a turnover with cruise companies of about \$0.5M per year would be required.</p>	<p>As margins vary significantly depending on seasonality and the type of fruit and vegetable, it is not possible to assess at this high level what proportion of supply of fruit and vegetable would be required, but assuming a \$1 per kg across the board, \$0.5M per year would translate into 500t which seems relatively modest by comparison to the overall procurement of fruit and vegetables. It has been assumed that this would ramp up over the 4 years of the investment.</p>
<p>Coffee - Provision of 5t of coffee per year over all P&O ships (1 t per ship, approximately half of the coffee shops' consumption), starting with existing 3 ships (year 1) and 2 new ships in year 2</p>	<p>Price: assuming \$20/kg coffee</p>

9. Handicrafts opportunities

Additional assumptions

- The sector comprises about 400 market stall holders in Port Vila alone and over 100 in Luganville. The impact throughout the country is probably double, when accounting for artisans producing some of the handicraft. The latest census shows that 800 women said handicrafts were their primary occupation and another 688 said their occupation was a market seller
- 90% of products sold at the wharf are currently imported, with an objective of offering 50% of local products for the participants in the Ambassador program.
- The impact of better quality products and increased local content is meant to lead to an increase in volume of handicraft sold and a higher value-add, benefiting both market stall holders and handicraft manufacturers.
- The benefits have been deemed to ramp up progressively over 5 years. A NPV has been calculated over 5 years, using a 7% discount rate.

Costs

TYPE OF COST	VALUATION
Marketing passenger research (in Australia)	\$40,000, Net Balance assumption / costing
Pamphlets with easy to use quarantine explanations to help marketing of local handicraft	\$15,000 for 200,000 copies, as per printing quotation received
Import of machinery assistance	Government of Vanuatu responsibility: \$10,000 assumed cost
Marketing training for the handicraft operators	The South Pacific Regional Handicraft Project costed similar workshops: one workshop costs approx. \$4,000. So assuming 3 workshops per year to increase its coverage would be at a cost of \$12,000 per year for 3 years, plus 25% of this cost in the next two years.

TYPE OF COST	VALUATION
Supply chain reliability and differentiation	Extrapolation of the Ambassador program to the whole of sector Ambassador program: 1,5M Vatu times 5 Follow-up: 50% cost for 2 years, then 25% over two more years
Produce education material for the ship information systems (production cost only, content to be sourced from the PHAMA project)	\$30,000, based on information received from Adela Aru, Ambassador program
Biosecurity education for passengers	Content to be sourced from the PHAMA project, cost of production assumed included
Biosecurity education of customs officer – part of the PHAMA Project	PHAMA program costs \$37,000. Net Balance assumptions that these costs will occur again as follow up will be required.
Project management cost	15% of program cost.

Benefits

TYPE OF BENEFIT	VALUATION
Increased value add and / or increase volume of merchandised sold Anecdotal evidence from the Tonga pilot program showed an increase of 20% in sales (\$1150 to \$1400) per month.	Assumed increase in sales for handicraft and souvenirs ramps up over 3 years by 5% a year (up to 15%) as more people are trained in the sectors. Average spend by passengers going ashore from the survey was \$7.5 for Port Vila, \$3.8 for Luganville and \$2.3 for Mystery Island. Combined with the number of visits, this translates into \$2.1M a year. This was the basis for calculation of benefits.

10. Home-basing a cruise ship in the Pacific

Additional assumptions

Additional assumptions have been made in assessing the option (discussed with cruise companies, and based on experience in other destinations):

- The marketing potential for such an itinerary would be tested through a progressive ramp-up, starting with a 3 months deployment in the first year, then 6 months in the second year, and so on. It would take some time to develop into a full year deployment of a ship in the Pacific on this basis. The following assumptions have therefore been made:
- First year: 6 stops in Vila over a 3 months period and 6 in a remote location (such as Mystery Island), in addition to other stops outside of Vanuatu
- Second year and subsequent years: 12 stops in Port Vila over a 6 months period and 12 in a remote location.
- All stops are considered as *additional* to the current schedule, in the context of an increase in ships relocated to the region and expanding market; there is nevertheless likely to be some transfer of bookings from the current offering to the new offering, and this is taken into account.

- Ships for this type of activity would be mid-size, i.e. 1300-1500 passengers, with 200 passengers in and out at each 'passenger exchange' destination (i.e. Port Vila). This could be increased to up to 400, if the local infrastructure could support this. However, for the purpose of this analysis, 200 has been retained as a conservative number achievable in Port Vila.
- An average of 3 days stay either before or after the trip for each passenger, in medium to top of the range accommodation on Efate. Assessed on current provision and planned construction, accommodation, transfer and tour operators on Efate could accommodate the increased volume of activity.
- Fly in / out from Australia or New Zealand: there will be no restriction to flying from other destinations, however, for the purpose of assessing benefits to local airlines, flights have been considered as originating from these two destinations.
- No upgrade of the Port Vila International airport has been assumed to be required at this stage, with reliance on commercial flights only (no charter) from existing companies or potential new routes. Additional investment may prove necessary, depending on the role Vanuatu expected to play (major hub or secondary port).
- No flying to other islands (although this is likely to apply for some of the tourists) during the additional stay, although destinations such as the Tanna volcano could benefit, as well as some short stay destinations (e.g. bungalows on Malekula).
- While it is possible that the occupancy rate for the ship would be reduced overall by the arrangement, this has not been considered or incorporated as part of this exercise.

Costs

Assumed to be none required in country, although the increased demand could lead to an adjustment of the offering in activities and potentially accommodation, both of which may require investments.

For the purposes of this exercise, the cruise companies' costs in deploying new ships to the region have not been considered as part of the analysis.

Benefits

TYPE OF BENEFIT	VALUATION
6 additional calls at Port Vila in year 1 12 additional calls at Port Vila in subsequent years	Average spend per passenger for 1200 passengers (1400 – 2000)
6 additional call at Mystery Island / Banks / etc. in Year 1 12 additional calls at in subsequent years	Average spend per passenger for 1400 passengers
200 'passenger exchanges' x 3 nights' accommodation and daily expenditure, 6 times in year 1 and 12 times subsequently	$200 \times 6 \times \$500 \times 3 / 2.2$ \$500 is the assumed spend for a party of 2.2 (average number of travelling 'party') per day, all inclusive $200 \times 6 \times \$500 \times 3 / 2.2$
200 fly-in and 200 fly-out, 6 times in year 1 and 12 times subsequently	Assuming 50% revenue to Air Vanuatu, 50% to another company $\$300 \times 200 \times 2 \times 50\%$
400 airport transfers, 6 times a year in year 1 and 12 times subsequently	Assuming group rates, $\$50 \times 400 \times 6$

Appendix 5: Long list of initiatives to enhance cruise ship economic impacts from consultation with stakeholders

THEME	IDEA	RATIONALE / ORIGIN	EXPECTED IMPACT	KEY BENEFICIARIES	ONGOING INITIATIVE	IMPLEMENTATION TIMEFRAME / DEPENDENCIES	INVOLVEMENT/ FINANCING	LOCATIONS CONCERNED
Infrastructure	Hydrography survey(s) – to undertake the hydrographical surveys in Vanuatu, also supported in this project by a surveyor from the UK Hydrography office, which is the Principal Charting Authority for Vanuatu.	Necessary to meet international safety rules / private sector workshop	Volume	Inter-island shipping and Cruise industry	Partly funded	In train - 2014-2017 according to the VISIP Must have to ensure ships continue coming or can access new destinations	NZ MFAT is funding the Secretariat of the Pacific Community's Applied Geoscience and Technology Division (SOPAC) to convert the existing maps into electronic versions. They are also funding essential survey work that has not been done to date. There remains a funding gap for the rest of the electronic surveying. NZ is also investing \$5 million in a five-year programme - the Pacific Regional Navigation Initiative – by Land information New Zealand and the Secretariat for the Pacific Community to carry out hydrographic survey and charting work in the region that will work to create partnerships to address the financing gaps in the region.	The NZMFAT funding is covering Luganville, Champagne Bay on Espiritu Santo, and the islands of Wala, Malekula, and Homo Bay (Pangi), Pentecost in the first phase. The second phase is Port Vila; however, there is no funding currently available for this. The rest of Vanuatu water also needs to be surveyed electronically.
A) Efate	New international multi-purpose wharf and container yard at the Lapetasi Wharf (Int Cargo and Cruise Ships)	Ability to accommodate bigger ships in better conditions and also accommodate international cargo ships at the same time as cruise ships	Volume	International Cargo and Cruise industry	Partly funded and design completed and calls for pre-qualifications for technical and financial bids	Five year project (2015 - 2020)	JICA	Port Vila
	South Pari Wharf (Domestic Wharf)	This project will relocate the domestic cargo wharf to a new location to allow for the Lapetasi Wharf development	Volume	Domestic Cargo and Cruise industry (indirectly, through better organisation)	Yes	Five year project (mid 2015 - mid 2020)	ADB and NZ MFAT	Port Vila

ASSESSMENT OF THE ECONOMIC IMPACT OF CRUISE SHIPS TO VANUATU

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THEME	IDEA	RATIONALE / ORIGIN	EXPECTED IMPACT	KEY BENEFICIARIES	ONGOING INITIATIVE	IMPLEMENTATION TIMEFRAME / DEPENDENCIES	INVOLVEMENT/ FINANCING	LOCATIONS CONCERNED
	Port Vila Urban Development Project	Improve tidiness and cleanliness (sewerage, roads, drainage) and well as road safety with street lighting and pedestrian signs etc	Value (assuming an increase in foot traffic in the town centre, more access to shops)	Upgraded wharf road, as well as town centre businesses and traders - 22 km of roads in total	Yes	Call for tenders for project in Oct, 2014. 5 year project. The second phase of the project is considering a similar development in Luganville in 2017.	ADB, DFAT	Port Vila All location for infrastructure
	Beautification of International Wharf and Vila town centre and sea-front, improve access for people with disabilities, traffic, etc. Includes maintenance and cleanliness (market, etc) Provide toilets and other critical infrastructure in all ports of call	Improve tourists experience of the town centre/ private sector workshop + tour operator interviews	Value (assuming an increase in foot traffic in the town centre, more access to shops)	Int Lapetasi Wharf and wharf road, as well as town centre businesses and traders	Yes	2016 (VSTAP) Five year project	Government, Port Vila Municipal Council, NZ MFAT (portion of required funding)	Port Vila
B) Santo	Luganville wharf upgrade	Ability to accommodate bigger ships in better conditions	Value (Luganville town foot traffic, redistribution of current Champagne Beach traffic)	Luganville town businesses and traders	Under consideration	2015 according to the VSTAP	China EXIM bank discussing financing with government - Govt has signed an MOU with Shanghai Construction Company, but the project is under evaluation and has not been approved.	Luganville
	Luganville wharf-based covered market for traders	Australia-Carnival Partnership for Vanuatu	Value	Luganville traders and artisans	No		DFAT, UN women have launched a "Markets for Change" project that aims to increase economic opportunity for women market vendors in Vanuatu, including in Luganville	Luganville
	Beautification of town centre Luganville	Improve tourists experience of the town centre/ interviews	Value (assuming an increase in foot traffic in town)	Luganville town businesses and traders	Under consideration	2017 (ADB second phase)	Government, Luganville municipality, donors TBD, ADB is considering this and has included it in country strategy	Luganville

THEME	IDEA	RATIONALE / ORIGIN	EXPECTED IMPACT	KEY BENEFICIARIES	ONGOING INITIATIVE	IMPLEMENTATION TIMEFRAME / DEPENDENCIES	INVOLVEMENT/ FINANCING	LOCATIONS CONCERNED
	Santo Roads	More comfortable access to more distant attractions and allow diversification of offering and better quality transport / private sector workshop / business interviews	Value	Santo tour operators and local communities	Under consideration	No time frame yet	EXIM bank has provided financing estimate to Van Govt.	Santo West
C) Outer Islands	Roads improvement / sealing Tanna and Malekula North	More comfortable access to more distant attractions and allow diversification of offering and better quality transport / private sector workshop / business interviews	Value (redistribution)	Cruise lines, new destinations	Yes, government approved	No time frame yet	Government has approved concessional financing with China EXIM to carry out the road upgrade. China Civil Engineering Construction has the contract for Tanna and China Railway 5 Company has the contract for Malekula North	Coast Road Tanna, Malekula North
	Roads improvement / sealing Malekula South	More comfortable access to more distant attractions and allow diversification of offering and better quality transport / private sector workshop / business interviews	Value (redistribution)	Cruise lines, new destinations	Under consideration	No time frame yet	EXIM bank has provided a financing estimate. An MOU has been signed with China Railway 1 Company.	Malekula South
	New destination road and port infrastructure. SW Bay in Malekula; Tanna (dependent on safe anchorage sites) and Banks (Ureparapara)	Australia-Carnival Partnership for Vanuatu	Value (redistribution), potentially small volume attracted by new sites	Cruise lines, new destinations	No		Cruise lines, government, donors	
D) Pacific	Cruise ship for the Pacific (fly-cruise package ex Australia)	Discussion with CAU and DFAT. Potential to significantly increase value of cruise for Pacific islands	Volume and value, including supply chains	Cruise lines, new destinations (tourism revenue, employment)	No	Feasibility study required 2014; implementation from 2016?	Cruise lines, government, donors	TBC. Vanuatu, Fiji, Tonga, Samoa

ASSESSMENT OF THE ECONOMIC IMPACT OF CRUISE SHIPS TO VANUATU

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THEME	IDEA	RATIONALE / ORIGIN	EXPECTED IMPACT	KEY BENEFICIARIES	ONGOING INITIATIVE	IMPLEMENTATION TIMEFRAME / DEPENDENCIES	INVOLVEMENT/ FINANCING	LOCATIONS CONCERNED
Transport	Governance and policing of land transport (wharf taxi association, tariffs)	Help solve wharf transport issue / private sector workshop	Value, tourists stay in town longer, explore more	Taxi drivers, shops and attractions catering to cruise	Yes	Land Transport Amendment, Road Act and the Traffic Act scheduled for August	Government, LTA	Port Vila
	Shuttles / water taxis into town, to separate passengers wanting longer distance transport from those only wanting to go to town at the wharf	Enhance tourist experience, allow easy access to town centre/ private sector workshop + tour operator interviews	Value redistribution	Local businesses	No		Government, LTA, traders, Private / public donors	Port Vila
	Continue taxi driver education on a large scale (City Ambassador program)	Help solve wharf transport issue, enhance tourists experience	Value	Taxi drivers, cruise lines	Yes	Pilot program - Ambassador Program - in 2014	Government, LTA, traders, NZ MFAT	Port Vila
Tour organisation	Tour operators certification / address barriers to offering services to cruise companies and improve industry capacity to participate / build capacity (financial and management literacy, access to finance)	Increase access for tour operators to the cruise tourist market and professionalism/ private sector workshop + public sector workshop + tour operator interviews	Value redistribution	Tour operators	No		Cruise companies, operators	All locations, particularly Port Vila and Luganville
	Increase bus capacity in Luganville to transport passengers to alternative destinations	Private Sector	Value	Tour operators, local businesses (receiving tours, tourists)	No		Operators	Luganville
	Mystery Island nature and eco tours	Private Sector	Value	Tour operators, local businesses (receiving tours, tourists)	Scoping is being carried out			Mystery Island
	Tour organisation: finish in town to encourage patronage of the shops, create hubs of activities, organise more combined tours	Increase impact on retail in town centre/ private sector workshop / business interviews	Value	Town centre businesses and traders	No		Cruise companies, operators, businesses	Port Vila, potentially Luganville

Appendix 6: Tanna maps

Roads rehabilitated and maintained as part of the VTSSP program

The following information has been kindly provided by Philip Warren, from the VTSSP in Vanuatu.

VTSSP program

The Vanuatu Transport Sector Support Program (VTSSP) has been working on improving the state of rural roads in Vanuatu for nearly a decade over several phases of work. The program aims to increase institutional and technical capacity within the government as well as providing funding and technical assistance. As much as possible, maintenance works are allocated to the community or local contractors to increase the level of self-dependence and ensure that the work benefits the local economy.

Funding up to \$5M / year is allocated to civil works for roads, in the whole country, thus matching the funds allocated by the Vanuatu government.

The objective is to put in place a Transport Maintenance Fund that would allow government and donors, including from the private sector (such as cruise companies), to contribute to a unique fund dedicated to the periodic and routine maintenance of roads. The administration of the fund would be set up to ensure that optimal local benefit is achieved by contracting locally.

VTSSP program work and costs

The VTSSP has been looking after the roads in the north of the island (see map below).

As indicated on the maps, the smaller 'feeder' roads are not part of the program and can be in poor condition. Similarly, the track across the ash plains to the volcano is not maintained as part of the program and, depending on the weather and other circumstances, can be impracticable. This may create difficulties in accessing points of interest / activities shown in the map of activities. For example the village of Yokel, of high cultural interest, is not on the main roads that are being maintained and rehabilitated.

VSSTP advised that the possible increased traffic from a larger number of vehicles on the road to move tourists could lead to slightly increased frequency of routine maintenance. Dust control and road safety issues may arise in villages and populated areas as the traffic increases, which may require specific management.

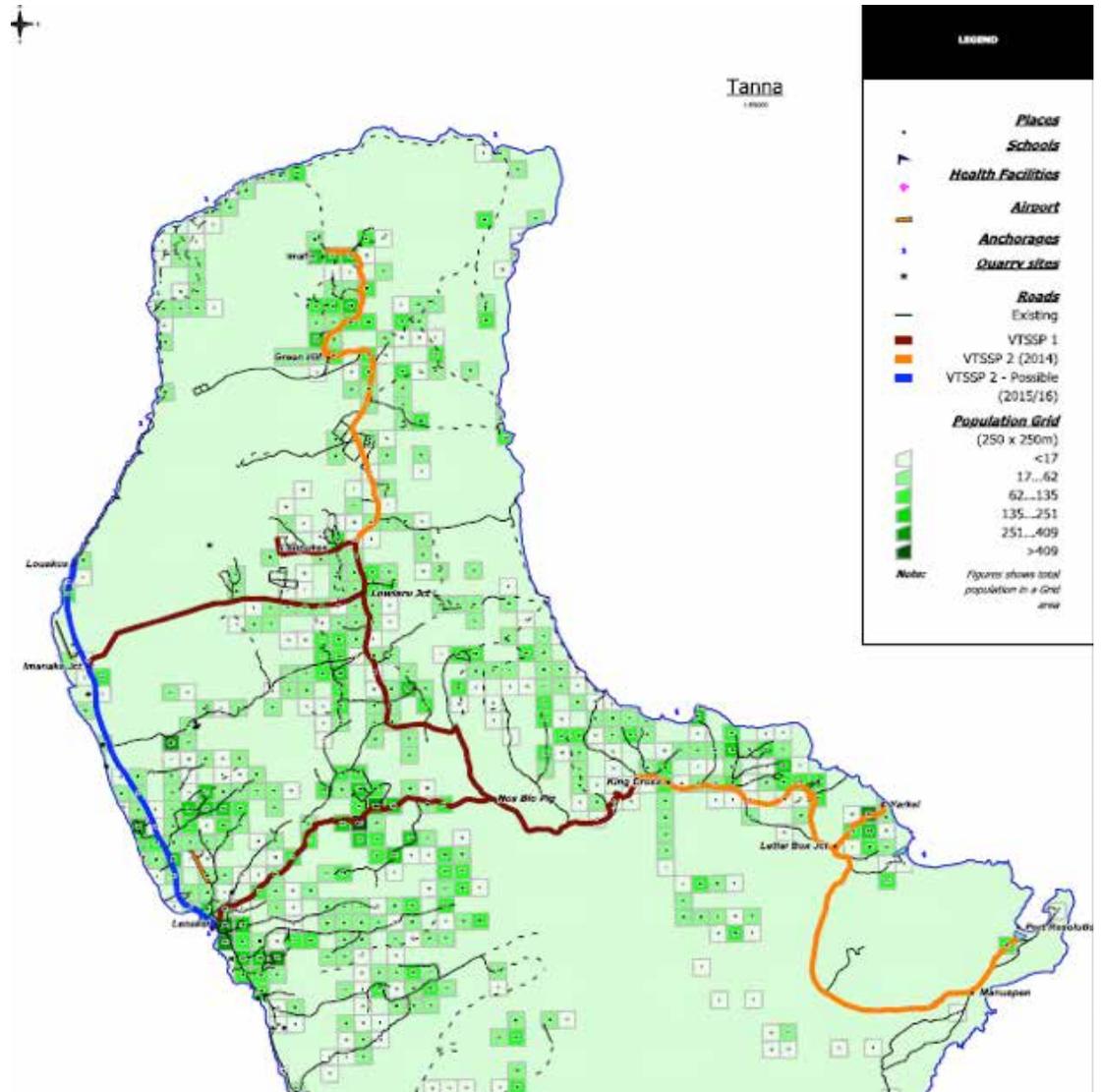
None of the roads on Tanna are sealed, but they are deemed in reasonable condition, as the traffic is generally not heavy. The main issue for roads condition is drainage, as water accumulating on roads causes them to deteriorate rapidly. This creates a need for more frequent heavy grading.

A typical maintenance regime requires:

- Yearly preventative maintenance of roads costing 400,000 to 600,000 Vatu per km per year, through maintenance contracts
- Road reprofiling (heavy grading) every 7 to 10 years at a cost of around 10M Vatu per km.

Full road rehabilitation costs 15 to 20M Vatu per km.

FIGURE 37: TANNA ROADS REHABILITATED AS PART OF THE VTSSP PROGRAM



Source: VSSTP

Access to Tanna attractions and activities

The map below has been based on information obtained from different local and web-based sources (thanks to the White Grass Ocean Resort for providing their activity compendium).

FIGURE 38: MAP OF TOURIST ACTIVITIES ON TANNA



Attractions and activities on Tanna

West Side

- Snorkel at Blue Hole 1
- See the wild horses of Whiteplains
- Trek to Lenuanatuai Waterfall (trip advisor)
- Visit the Kustom village of Yukel, where you can see people living in a traditional Kustom village, watching their custom dancing, walk to a local waterfall, and purchase local handicrafts. Tafutuna Cultural Experience
- Lowinio Man Nature Speaking Tour – learn about Vanuatu/Tanna Culture. Full day tour.
- Visit a John Frum village – a living example of a cargo cult.

East Side

- Look down into an active volcano at Mt Yasur
- Snorkel in the Blue Hole #2 outside Whitegrass resort
- Louniel Surf Beach and Waterfall Safari (currently organised by Whitegrass)
- Visit a Tom Frum village – a living example of a cargo cult.

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Please note that all results have been reported as recorded. Any percentages that do not add up to exactly one hundred percent are the result of rounding errors.

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