



OCEANIC VOYAGES

Aviation in the Pacific

Asian Development Bank



Pacific Studies Series

OCEANIC VOYAGES

Aviation in the Pacific

Asian Development Bank

© 2007 Asian Development Bank
All rights reserved. Published 2007.
Printed in the Philippines.

Cataloging-In-Publication Data
Publication Stock No.

Asian Development Bank.

A study on the aviation sector of Pacific developing member countries

1. Pacific developing member countries
2. Aviation sector
3. Case studies

The views expressed in this material are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

Use of the term “country” does not imply any judgment by the authors or ADB as to the legal or other status of any territorial entity.

Contents

ACRONYMS AND ABBREVIATIONS	vii
PREFACE	ix
FOREWORD	x
EXECUTIVE SUMMARY	xiii
INTRODUCTION	1
THE PACIFIC OPERATING ENVIRONMENT	3
Overview of the Pacific Market	3
Pressures for Air Service Reform	20
Influence of the External Operating Environment	36
Slow Movement Toward Liberalization	45
CHALLENGES AND RESPONSES IN SELECTED FORUM ISLAND COUNTRIES.....	52
Lessons from the Case Studies	53
MOVING TO A MORE SUSTAINABLE AIR SERVICES STRUCTURE	57
The Policy Approach: Laying the Foundation for a Sustainable Solution.....	57
Strategy Options to Achieve Reform.....	64
CONCLUSIONS AND RECOMMENDATIONS	85
Reassessing the Options for Aviation.....	86
Experience in the Pacific.....	87

The Policy Approach.....	89
Recommendations.....	90

APPENDIXES

1. The Fiji Islands Case Study.....	93
2. Solomon Islands Case Study	105
3. Case Study of Tonga, Samoa, and Niue	114
4. Vanuatu Case Study	133
5. Profile of Air Services in the Pacific.....	142
6. Supplementary Data	150
7. Pacific Island Forum Principles on Regional Transport Services.....	153
8. Freedoms of the Air	155
9. Profiles of the Major Airlines in the Pacific.....	159

LIST OF TABLES

1: Development Models for the Four Route Types	xix
2: Pacific Region Population Estimates and Growth Trends	4
3: Pacific Region 2004 GDP and GDP Growth Rates– Actual to 2005, Forecasts for 2006 and 2007.....	5
4: Share of Total Country Exports Main Trading Partners of Major FIC Exporters	6
5: Share of Total Country Imports Main Trading Partners of Major FIC Importers	7
6: Visitor Expenditures in Selected Pacific Countries.....	9
7: Visitor Value of Tourism in Selected Pacific Economies.....	9
8: Tourism Arrivals in the Pacific Region	11
9: Visitor Arrivals to Pacific Countries by Major Source Markets, 2005.....	13
10: Summary of Air Service Provision in the South Pacific, including the French Territories	15
11: Ownership and Fleets of Airlines of the South Pacific.....	16
12: Comparison of Employees and Aircraft by Airline.....	27
13: Comparison of Economy Fare Pricing on Pacific Routes Involving Lower Cost Airlines.....	29

14: Aggregate Australia and New Zealand Volumes of Air Freight Imports from and Exports to Pacific Islands, 2005..	33
15: Freight Rates for the South Pacific Islands, 2006	35
16: Forum Island Country and French Carriers and Code-Share Partners	48
17: Assessment of Development Strategies in Case Studies	55
18: Development Models for the Four Route Types	69
A1.1: Fiji Islands, International Trade, 2004.....	95
A2.1: Solomon Islands International Trade, 2004.....	106
A3.1: Trade Data by Value and Percentage for Samoa, Tonga, and Niue, 2004.....	122
A4.1: Trading Partners of Vanuatu, 2004	136
A5.1: International Air Services to/from Pacific Islands (including French Protectorates) by Aircraft Type, Weekly Frequency, Weekly Seats, and Cargo Capacity.....	142
A.5.2: Domestic Air Services in South Pacific (including French Protectorates) by Aircraft Type, Weekly Frequency, Seats, and Cargo Capacity	147
A6.1: Published Capacity of Boeing Aircraft.....	150
A6.2: Published Capacity of Airbus Aircraft	151
A6.3: Profile of Airports in the Pacific.....	152

LIST OF FIGURES

1: Overview of Route Structure and Airline Situation in 2004	23
2: Overview of Route Structure and Airline Situation in 2006	23
3: Percentage Change in Service Frequency and Capacity in the Pacific Region between 2004 and 2006.....	24
4: Low-Cost Airline Routes in the South Pacific	28
5: Jet Fuel and World Oil Prices, 2003–2006.....	37
6: Global Freight Growth Overtakes Passenger Growth.....	38
7: Historic Trends and Forecast Earnings and Margins for International Airlines.....	38
8: The Air France–KLM Model.....	41
9: Lufthansa–Swiss Merger.....	42
10: The Virgin Group Structure.....	43
11: Structure of AirAsia Grouping	44

12: Strategy Options for Levels 1 and 2 Routes.....	70
13: Strategic Options for Level 3 Routes.....	77
14: Strategic Options for Level 4 Routes.....	82
A1.1: Visitor Arrivals in the Fiji Islands, 1996–2005.....	95
A1.2: Air Pacific Services — Passengers Carried and Annual Percent Change	96
A1.3: Passenger Traffic and Capacity in Australia–Fiji Islands Market since Entry of Pacific Blue, 2004–2006	97
A1.4: Australia–Fiji Islands Market by Airline, Calendar Years 1998–2005.....	98
A2.1: Visitor Arrivals in Solomon Islands	107
A3.1: Tourism Receipts for Samoa, 2004/05 vs. 2005/06.....	116
A3.2: Number and Growth in Visitors Arrivals to Samoa, 12 Months–June 2006	117
A3.3: Tonga Visitor Arrivals and Tourism Receipts, 2000–2006.....	118
A3.4: Passenger Traffic on Sydney–Apia Route, 2005/06 versus Previous Corresponding Month	120
A3.5: Passenger Traffic between Australia and Tonga, 2005/06 versus Previous Corresponding Month.....	121
A3.6: Share Structure of Polynesian Blue	128
A4.1: Airline Shares of Australia–Vanuatu Market Before and After Pacific Blue Entry—September 2004–June 2006 ..	135
A4.2: Risk-Sharing Model	140

Acronyms and Abbreviations

AAPA	—	Association of Asia Pacific Airlines
ADB	—	Asian Development Bank
AFL	—	Airports Fiji Ltd.
ASEAN	—	Association of Southeast Asian Nations
AusAID	—	Australian Agency for International Development
BTRE	—	Bureau of Transport and Regional Economics (Australia)
CAGR	—	compound annual growth rate
CASA	—	Civil Aviation Safety Authority (Australia)
CBSI	—	Central Bank of Solomon Islands
EU	—	European Union
FIC	—	Forum Island Country
FSM	—	Federated States of Micronesia
FVB	—	Fiji Visitors' Bureau
GDP	—	gross domestic product
IATA	—	International Air Transport Association
ICAO	—	International Civil Aviation Organization
IMF	—	International Monetary Fund
KPI	—	Key Performance Indicator
LCA	—	low-cost airline
NFC	—	national flag carrier
NZAID	—	New Zealand Agency for International Development
OAG	—	official airlines guide
PASO	—	Pacific Aviation Safety Office
PATA	—	Pacific Asia Travel Association
PIASA	—	Pacific Island Air Service Agreement
RAMSI	—	Regional Assistance Mission for Solomon Islands
RMI	—	Republic of the Marshall Islands

RTA	—	Royal Tongan Airlines
SPC	—	Secretariat of the Pacific Community
SPTO	—	South Pacific Tourism Organisation
TACT	—	The Air Cargo Tariff
US	—	United States
UK	—	United Kingdom
VA	—	visitor arrival
VFR	—	visiting friend and relative
WTTC	—	World Travel and Tourism Council

NOTE:

In this report, “\$” refers to US dollars and “A\$” refers to Australian dollars.

Preface

This report was prepared as part of the output of the Asian Development Bank (ADB) regional technical assistance project (TA 6166 REG): Pacific Regional Transport Analysis. The goal of the project is to enhance economic development in Pacific developing member countries of ADB by improving the efficiency and effectiveness of Pacific transport services. To achieve this, the report is expected to contribute to the reform of public sector operations and policies in the transport sector, and to increased private sector participation in transport service provision. Such reform and participation will reduce the costs of trade and commerce and consumer goods, increase employment, and reduce poverty.

The report is published in three volumes. Volume 1 is the *Oceanic Voyages: Executive Summary*, which presents a summary of the findings and recommendations included in Volumes 2 and 3. Volume 2 presents *Oceanic Voyages: Aviation in the Pacific Region*, the full report of the results of detailed study and analysis of the Pacific aviation sector, including case studies of selected Pacific developing member countries of ADB. Volume 3 presents *Oceanic Voyages: Shipping in the Pacific Region*, the full report of the results of detailed study and analysis of the Pacific shipping sector, including case studies of selected Pacific developing member countries of ADB. Each sector volume examines international and regional trends, and regional characteristics and components, influencing sector development. Strategy and policy options available to Pacific island governments to facilitate change are assessed. Specific recommendations are provided for appropriate policies and strategies for the improvement of sector efficiency and effectiveness.

Robert Guild directed the analyses and managed the regional technical assistance project on behalf of ADB. The Centre for Asia Pacific Aviation prepared the base reports for Volume 2. Meyrick and Associates prepared the base reports for Volume 3.

Foreword

Historically, the people of the Pacific islands were legendary voyagers. They had to be – living in archipelagic environments separated by vast expanses of ocean required them to be expert navigators and sailors to undertake trade, exploration, and social contacts. Long before modern charts, instruments, or vessels made long distance travel commonplace, Pacific people regularly traveled between thousands of islands and across millions of square kilometers of open water. From the margins of Asia to the coasts of South America their remarkable journeys defined a diverse Pacific region.

Oceanic voyages undertaken by international aviation and shipping services are even more important in the Pacific region today. The vast majority of trade is carried by international shipping with countries outside of the region. Some cargo is bound for Australia and New Zealand, and significant proportions are destined for Asia, Europe, and North America, while very little is between Pacific island countries themselves. Outbound access to international markets for agricultural and marine products opens up opportunities for rural producers to expand their businesses and provide local jobs.

In the other direction, improved inbound access provided by international aviation from every other region in the world to an increasing number of islands is opening new opportunities. Tourism contributes substantially to income and employment in many Pacific countries, usually in areas outside of the main urban centers, and enables air freight services for valuable but perishable commodities that would otherwise not be marketable.

Ensuring efficient transport services is therefore essential to the continued development of Pacific island countries. A region founded by voyagers is now more than ever dependent on international connectivity.

Some features of the Pacific region make provision of international services a challenge, however. Pacific island countries are typically small and isolated. Their economies are narrow in scope and thus reliant on a limited number of products and markets that are subject to wide seasonal variation.

Imports and exports are grossly imbalanced in many cases. Often the result is under-utilized capacity, low service frequencies, and high costs.

These challenges have sometimes led governments to intervene, with mixed results. Their interventions have generally taken two forms. Some have gone into direct service provision through investments in airlines and shipping companies, and some have attempted to manage market access to protect operators. The evidence is that neither approach has been very successful, but the experience gained has revealed other ways to facilitate services that do work.

Costly public-sector investments have been made in national flag carriers in a number of countries. A few have survived and evolved into successful commercial enterprises, but more often than not these investments have required large ongoing subsidies and even led to failures at considerable cost to fragile economies that can least afford them.

Governments also restrict access to routes in an effort to improve the sustainability of a limited number of operators, most often those owned by the government or its nationals. The result has been fewer services provided in a region that demands more of them, and weaker operators that are less able to compete effectively as services and markets are integrated.

There have also been some notable successes that offer key lessons for future development. Air Pacific and the Pacific Forum Line were founded as cooperative regional services in the 1970s as governments saw opportunities to pool resources and develop larger-scale operations. Both companies struggled initially, as narrow national interests clashed with market realities, before reforming along commercial lines and becoming market leaders. In Fiji and Vanuatu, more open access to air routes has led to dramatically increased services and decreased fares. In Samoa, an aviation joint venture has converted a loss making state-owned enterprise into a successful example of public-private partnership.

These successes, documented through detailed case studies, demonstrate the necessity and value of operating on commercial principles, attracting international and private-sector capital investment, assigning risk where it can best be managed, and liberalizing market access. In every case, the benefits have been clear.

Experience also suggests opportunities for national and regional action to improve transport services. An integrated regional market for transport services would improve the sustainability of operators. Regulatory environments with fewer restrictions based on national routes or ownership rules would facilitate a greater range of services at more competitive prices.

Where some routes are too thin to operate commercially, interventions can be designed to offer support for social services while maintaining private sector efficiency. Finally, sector development is most efficient when roles for policy, regulation, and provision are separated and assigned to the appropriate public and private sector actors.

Given the importance of international transport services to the region, and the large benefits derived when those services work well, such opportunities should be developed as fully and quickly as possible. Pacific island country governments have the ability to create effective operating environments. When they do so, experience shows that operators will respond with efficient service provision.

These volumes, which describe the experience of the past and offer recommendations for the future, give reason for confidence that the future of the Pacific region will remain intertwined with the efforts of its voyagers.

Philip C. Erquiaga
Director General
Pacific Department

Executive Summary

Achieving viable and lasting structures that will provide air services for passengers and freight has proven to be an elusive goal for many small island countries and territories in the Pacific region. More often than not, failure has come at considerable cost to the fragile economies of island states that can least afford it. Part of the purpose of this study is to help avoid repetition of mistakes, and to formulate cost-effective and sustainable solutions for future aviation development.

This report presents the results of a detailed analysis of the Pacific aviation market. Regional and international trends influencing the development of Pacific aviation are examined. Strategy and policy options available to island governments to facilitate change are assessed, and recommendations as to appropriate strategies for the oversight and provision of air services on the different types of routes in the Pacific are provided. Policies that will promote and encourage desired outcomes are also recommended. The recommended reforms to island aviation systems are designed to encourage greater efficiency and better pricing structures in air services for Pacific communities, tourism, exports, and imports; to improve conditions for private investment and employment generation; and to contribute to the reduction of poverty.

Overview of the Pacific Market Environment

The Pacific market is characterized by small and widely dispersed populations spread across many islands. The provision of air services is consequently fragmented, often involving long routes with thin traffic and freight levels. As a result, airlines face considerable constraints in profitably managing returns through a viable passenger and cargo mix, and achieving sufficiently high levels of aircraft utilization and revenue load factors.

The more commercial Pacific air routes are generally tourism-related. Tourism is an important contributor to the economic health and growth of these islands. Growth in tourism, in turn, is contingent to a significant degree on the availability of dependable and frequent air services at competitive prices.

The introduction, beginning in 2004, of low-cost airlines (LCAs) such as Pacific Blue, Polynesian Blue, and Freedom Air into seven Pacific routes from Australia and New Zealand produced dramatic passenger growth and substantial economic benefits. It also resulted in considerable competitive pressure on fare levels to the benefit of consumers. The Fiji Islands, Samoa, Tonga, and Vanuatu were the markets targeted by LCAs. Passenger traffic and visitor arrivals in all four target countries increased substantially. Although the entry of LCAs and reduced fares created pressure on their returns, the overall impact on incumbent national airlines was relatively limited. National airlines in the targeted markets responded with reduced fares that were close, or equivalent, to the 30–40% fare reductions offered by LCAs, thus maintaining their traffic loads.

Coinciding with this increase in competition on some routes, air service provision and stability in the Pacific generally improved. A number of problem areas—notably Tonga, Samoa, and Niue—were resolved. Other areas, particularly the Central Pacific and Solomon Islands, Vanuatu, and Nauru, remain uncertain.

While passenger traffic to some destinations has grown robustly, relatively high charges, low volumes, and increased use of narrow-bodied aircraft with limited freight capacity hamper the transport of air freight in the Pacific. Steep refueling costs on the islands and inadequate airport and freight handling facilities also negatively impact air freight services. Sharply increasing operating costs, particularly high aircraft fuel prices, remain an impediment to future growth of Pacific aviation in general.

Liberalization: the Cornerstone of a Realistic Policy Approach

The policy challenge for Pacific island governments is to facilitate rather than impede the process of commercialization of air services. This will entail providing focused but light-handed regulation to enhance the operating freedoms of carriers, and thereby opportunities for the resolution of service

deficiencies. Governments should identify and prioritize their reform objectives to:

- ensure long-term, stable, and robust provision of air services at reasonable prices and frequencies;
- develop the tourism sector (where this is practicable), including expatriate travel; and
- provide adequate freight capacity to meet import and export needs.

Globally, there have been moves to liberalize markets, relax ownership and control regulations, and bridge national boundaries, particularly in Europe, Africa, and Asia. Airline privatization and market liberalization have been key factors in providing the impetus for these changes. Such developments have had little impact so far in the Pacific, where aviation liberalization has progressed slowly. Many islands still maintain relatively restrictive market practices despite their greatly diminished capacity to protect their markets from new competitive inroads, especially on routes linking to the major markets of Australia and New Zealand. In markets where change is occurring (such as those with LCA entry), protective measures are likely to be counterproductive, limiting the benefits that would otherwise accrue to a country. Greater emphasis on the broader economic benefits flowing from liberalization, particularly for tourism and regional development, may yet see a realignment of aviation policies (as has occurred recently in parts of Asia).

The establishment of the proposed single-air services market in the Pacific through the Pacific Islands Air Services Agreement (PIASA) is nearing realization. Implementation of PIASA would promote positive evolution of markets by liberalizing and increasing certainty of access. A recent study funded by the Australian Agency for International Development (AusAID) for the Pacific Islands Forum dispelled concerns about the negative effects of PIASA on national flag carriers (NFCs), especially by the Fiji Islands.¹ That study concluded that PIASA would significantly benefit all Forum Island Countries (FICs).

The potential for progress toward a more expansive partnership model involving multiple island governments was advanced by the establishment

¹ The Pacific Islands Forum is an intergovernmental organization that aims to enhance cooperation between the independent countries of the Pacific and represent their interests.

of a harmonized regulatory system with the formation in 2003 of the Pacific Aviation Safety Office (PASO). Partnerships between airlines are desirable, particularly those between large and small airlines and between small airlines. Privatizing the flag carrier is not a prerequisite to achieving a partnership arrangement with a foreign airline. It does, however, contribute to the potential for partnership success by helping to ensure that corporate governance will be more predictable and removed from political intervention--both critical to commercial operations. In reality, however, few national airlines in the Pacific may qualify for privatization because of the poor state of their balance sheets and their weak financial performance.

Code sharing² between airlines is well established in the Pacific and may be viewed as a “soft option” for countries wanting to progressively open their markets. Other forms of cooperation also occur through interlining³ between international and domestic markets.

The Republic of Nauru’s proposal to establish a joint venture with up to five other island states will rise or fall on the support of prospective government partners and the performance of the Our Airline operation. Nauru Air Corporation, the government entity previously holding Air Nauru (now Our Airline), would become the flag carrier and utilize the rights of each participating country. This is viewed by Nauru as a solution to ensure the sustainable, long-term provision of air services in the Central Pacific market, which has limited commercial value. The proposal, still being developed, will depend on the assessment by potential partners of Our Airline’s ability to profitably service these Central Pacific routes and generate a satisfactory return for shareholders.

The Polynesian Blue model in Samoa appears to represent a viable, indeed preferable, alternative to island governments owning and operating their own national airlines. In partnership with a larger airline group (Virgin Blue), it effectively transferred the operational risk and responsibility for management and resourcing to the private sector, with the prospect of establishing commercially based services capable of generating positive earnings for a sustained period.

² The practice where a flight operated by an airline is jointly marketed as a flight for one or more other airlines. Most major airlines have code-sharing partnerships with other airlines, and code sharing is a key feature of airline alliances. The term “code” refers to the identifier used in flight schedules. Under a code-sharing agreement, participating airlines can present a common flight number.

³ When passengers, baggage, and freight are transferred from one carrier to another using only one ticket or one check-in procedure from point of departure to destination.

The checkered history of national airlines throughout the Pacific underlines the importance of gaining the support of airlines with strong capital structures and expansive fleet resources to underpin local services. This clearly suggests that any solution to the pervasive problems besetting air services in the Pacific must involve partnership of some kind with a larger airline grouping. Experience has shown that this generally leads to better and more consistent service provision at more affordable prices, and with optimum benefits for consumers.

Strategy Options for Governments

It is essential that strategies adopted by Pacific island governments reflect market and route-specific requirements, whether routes are commercial or non-commercial, and growth prospects and potential for future development.

These issues dictate the most appropriate model to effect improvements in air service sustainability. The primary role of government is to facilitate outcomes that are either commercially driven or have a commercially based structure. This can be achieved through:

- **Direct or indirect subsidies**, comprising payments to contracted providers to compensate for operating losses on routes that cannot sustain commercial returns.
- **Underwriting arrangements**, whereby governments agree to cover losses incurred if performance targets are not met and passenger loads fall below breakeven levels.
- **Public-private partnerships**, entailing governments taking equity in joint ventures and/or entering into commercial partnerships with private operators.
- **Public-public partnerships**, involving joint provision of services by one airline through agreement between two or more island governments.
- **Tendering of domestic or interisland services**, a transparent process for governments to secure a contracted provider through selective or open-tender arrangements.
- **Privatization of national airlines**. Similar to tendering, enabling governments to develop and manage a bid process with the objective of providing entry of an operator as cornerstone shareholder, and the possibility of recapitalizing their national airlines.

- **Liberalization.** The adoption by governments of a more liberal operating environment can provide an opportunity for service reform. Governments could enter into “open-skies” arrangements, or allow cabotage (see Appendix 8) on a managed basis (i.e., permit entry to domestic markets by external operators). Relaxing restrictions on available third, fourth, and possibly, fifth freedom rights (see Appendix 8) through bilateral agreements could also encourage service development directly or through code sharing.

A number of other initiatives examined in this report offer alternative options for service provision. These include the “virtual-airline” structure previously utilized by Solomon Airlines, where direct exposure to international markets is limited by chartering aircraft operated by other airlines. Another form of this structure is being used by Air Kiribati, which is using a dedicated sales operation to purchase seats in other airlines serving Kiribati. A group of investors from the private sector in Vanuatu, mostly tourism interests, is exploring a different approach. This group is moving to reestablish the Port Vila–Melbourne service by setting up a new company to forward-sell seats on the service.

Application of Options to the Different Types of Routes in the Pacific

In the table below, the various options available to governments are applied to the four different types of routes in the Pacific. Route-type description and characteristics are provided in the table.

Many strategies for Level 1 routes are also appropriate for Level 2 and even some Level 3 routes. Options are not necessarily mutually exclusive and can be applied by governments in combination to exact a greater benefit (for example, the inclusion of a subsidy or underwriting arrangement makes a tender more attractive). The Polynesian Blue joint venture resolved problems on Level 3 routes while enabling the restructuring of Polynesian Airlines on Level 1 and Level 2 routes. Similarly, commercial partnerships and privatization are possible for operators on any of the four route types. However, commercial links of some kind are really the only feasible solution for Level 4 routes.

Table 1: Development Models for the Four Route Types

Route Type	Description	Characteristics	Options
Level 1	Domestic, smaller regional	Mostly non-commercial	<ul style="list-style-type: none"> • Subsidized arrangements, underwriting (e.g., Niue model); • Risk-sharing structure (as in Vanuatu), may be public-private partnership; • Subregional model (public-public partnership, e.g., Our Airline); • Tendering of services; • Privatization; and • Commercial Partnership.
Level 2	Regional (smaller non-jet routes)	Generally low traffic, little commercial value	
Level 3	Regional point-to-point jet routes	Commercial routes, generally from Australia and New Zealand	<ul style="list-style-type: none"> • Tendering of services; • “Virtual-airline” model; • Joint venture — public-private (e.g., Polynesian Blue) or private-private partnership; • Commercial partnership; and • Risk-sharing structure.
Level 4		Commercial, wide-bodied jet links to international markets	<ul style="list-style-type: none"> • Commercial partnership (equity unlikely); could involve French carriers

Source: Centre for Asia Pacific Aviation. 2006.

Conclusions and Recommendations

The four case studies focus on different approaches to problems of service sustainability that are common to many, if not most, Pacific island nations. The case studies examine how governments and/or national airlines responded to developments and issues that threatened their air services. The key lessons from the case studies include:

- The Fiji Islands experience demonstrates the benefits of a commercial approach to aviation provision. The growth of air traffic has increased the potential of the Fiji Islands as a Pacific hub, and brought greater tourism wealth to the island economy.
- The entry of new LCAs to Fiji, Vanuatu, and Samoa has stimulated the growth of tourism to those countries that have granted access.
- Attempts by many governments to maintain control of NFCs have not been sustainable because of limited financial capacity, lack of scale to maintain safety and economic regulatory systems, and limited market synergies created by protectionism.
- Samoa's experience with the formation of Polynesian Blue demonstrates a viable, and perhaps, preferred alternative to government ownership and control through a public–private joint venture with appropriate divisions of risks and returns.
- Vanuatu's exploration of private sector participation suggests that governments need not be directly involved in “solutions” for air service provision for supply to expand.

Aviation in the Pacific is directly influenced by the geographic, economic, and demographic characteristics of the island nations, and by their relationships with Australia and New Zealand. The aviation market for most Pacific routes is seasonal and highly sensitive to changes in pricing and travel patterns. Underlying demand is relatively low for routes outside the larger islands, and many domestic and regional routes between island states are distinctly non-commercial. Generally, routes linking into and out of the major markets of Australia, New Zealand, the Fiji Islands, and beyond are economic in their own right, support competition, and are subject to the usual pressures of supply and demand.

Government objectives concerning employment and tourism growth have often translated into the perceived need for government ownership of a national airline. Such ownership, however, has usually

produced unstable and expensive air services, and resulted in inadequate investment in aviation infrastructure, particularly regulatory support and airports.

The Policy Approach

In an environment where capital is scarce, strategic planning is imperative to ensure the most effective application of capital. Airline services pose a particular challenge in this regard. Providing airline services involves a substantial financial commitment. Regular air passenger services that are not heavily utilized, or where fares do not cover costs, constitute a large and persistent drain on cash reserves.

Airline services are part of basic infrastructure for communities and are essential for tourism development. In addition to providing indispensable services, airlines are like other commercial enterprises; and they aim to provide an acceptable return on capital. In order that airline operators can fulfill public service and commercial roles that—particularly in the Pacific—often conflict, governments should develop policies for aviation that adhere to the following principles:

- Remove or minimize direct government involvement in the ownership and operation of air services. Ownership of airlines and/or aircraft by government should only be considered as a last resort. Scarce capital should be used for aviation infrastructure and safety regulation.
- Seek and encourage private sector participation in providing air services where practicable, through joint ventures, tendering, or other ways.
- Promote efficient maintenance and further development of airline services on a commercial basis. If that is not possible, promote services within a commercially based, transparent structure.
- Separate commercial and regulatory activities. Governments should participate with airlines and other governments in sharing skills and resources in providing safety and other regulatory services. PASO is a prime example of value created by sharing skills and resources.
- Establish a regulatory environment conducive to the development and growth of air services and does not impede the achievement of solutions for providing air services. Liberalization of air service agreements should be pursued, unless inconsistent with the objectives of air service reform or restructuring.

- Ensure aviation infrastructure, including airports and regulatory systems, is capable of supporting service improvement and development.
- Encourage continued assistance by the larger established airlines in commercial partnerships and support services, including development of aviation infrastructure and training.
- Develop and adopt tourism-specific strategies to drive growth and development. This recognizes that for many countries in the Pacific, tourism holds significant potential as an engine for economic growth and opportunity.

Level 1 and Level 2 Routes

For many of these routes, governments face the need to facilitate services in an environment where commercial airlines would not normally provide them. Under these circumstances, we recommend that governments explore targeted approaches that can stimulate interest by commercial airlines and simulate commercial supply.

For example, where subsidies are required to attract airlines, routes can be tendered so that bidding airlines are encouraged to supply the services to the required standard at minimum cost, with an incentive to reduce the level of subsidy over time.

Recommendations for Level 1 and Level 2 Routes

1. Privatize national carriers where practicable. This should involve, preferably, a competitive bidding process and an established operator securing a cornerstone shareholding.
2. If this is not workable, governments should seek tenders for domestic service provision incorporating contract performance targets and a subsidy component. Local carriers could be given the opportunity to participate in the tender, ensuring a competitive process. Alternatively, if this is not possible because of the depleted state of the local carrier, the successful tenderer may either absorb its operations or close down.
3. Governments should seek to provide a regulatory environment conducive to the establishment of more sustainable domestic services. This may entail maintaining restrictions on market access as a means of providing greater control over the process of installing another operator (and ensuring certainty of return for any contracted provider). Alternatively, cabotage rights may be provided which offer domestic access to foreign

operators. The latter, for example, may enable external operators already serving the country to extend services to economical domestic routes. It also may encourage the development of new regional services that, without domestic access, would not be viable. In deciding which policy option is more applicable, the following should be considered: (a) the future of the national carrier—whether it should close or continue on some routes; (b) impact on subsidy arrangements; (c) likelihood of entry by external operators; and (d) whether, if entry does occur, adequate coverage will be provided.

4. Liberalize regional markets to the greatest extent possible to optimize opportunities for prospective privatized operators.
-

Level 3 and Level 4 Routes

The economics of the airline industry dictate that long, thin routes of the type commonly found in the Pacific can be reasonably profitable for a single airline provider, but present difficulties for competition between two or more airlines. Because governments control access rights to these routes, they have greater leverage in dealing with the airlines than they do for Level 1 and Level 2 routes—assuming these Level 3 and Level 4 routes have some commercial value.

Recommendations for Level 3 and Level 4 Routes

1. Governments should explore the full range of options available for providing air service discussed in this report. These include commercial arrangements between carriers, tendering of services, “virtual-airline” operations, “milk-run” structures, joint ventures, and other partnership opportunities.
2. Where possible, governments should seek the involvement of larger airlines in air service provision through one, or a combination of a
 - request for tenders or request for proposals process,
 - joint venture or public–private partnership,
 - commercial arrangement (e.g., code sharing), and/or
 - route-specific arrangement for provision, incorporating performance underwriting.

A partnership option with a local carrier is only feasible if the local carrier has the potential to complement the service provision of the larger airline—for example, if the local carrier provides domestic services that can interlink with the other airline. If this is not the case, governments should consider closure of the local operator.

3. In the case of commercial routes offering the prospect of competitive entry, governments should negotiate either “open-skies” or expanded-access agreements. PIASA is designed to do this on a multilateral basis. In preparation, governments should implement the principles on a bilateral basis to prepare for regional liberalization.
 4. In the case of non-commercial routes, where a route-specific arrangement is in place, governments should manage access through bilateral agreements to ensure that contractual requirements are satisfied.
 5. Level 3 and Level 4 commercial routes generally require a high degree of deregulation to encourage development by commercial operators, including liberal market access and code sharing. As such, governments should adopt liberal approaches to rights provision on these routes.
-

Introduction

Achieving viable and lasting structures for providing air services for passengers and freight has proven to be an elusive goal for many island countries and territories in the Pacific region.¹ The reasons are diverse, but foremost among them are lack of capital resources, the challenging economics of serving long, thin markets, and (often) pursuit of overly ambitious expansion.

More often than not, failure has come at considerable cost to the fragile economies of island countries that can least afford it. Historically, the price of government ownership of national airlines in the Pacific has been diversion of very limited taxpayer resources from priority areas of great need to use in propping up ailing or inefficient aviation operations. Indeed, experience in the Pacific has shown that state ownership of airlines provides no certainty of service supply. Instead, government ownership has often entrenched inefficiencies and absorbed large amounts of capital. Of 16 countries and territories examined in this report, nine are dependent on external operators for international services, and at least two of those providing their own international services faced uncertain futures at the time of this report. Part of the purpose of this report is to help avoid repetition of the mistakes of the past, and to suggest cost-effective, sustainable solutions to aviation development for Pacific island countries.

This report examines the Pacific aviation market, including case studies of the experience of six Pacific island nations in addressing aviation service provision. Also examined are regional and international trends influencing the development of aviation. Strategy and policy options available to island governments to facilitate change are assessed,

¹ For this report, the Pacific region is defined as the island states and territories of the Pacific from the Northern Marianas and Republic of the Marshall Islands in the north, down to French Polynesia in the southeast, and New Caledonia in the southwest. Papua New Guinea is included, but Hawaii is excluded.

and recommendations are provided as to appropriate strategies for the oversight and provision of air services on the different types of routes in the Pacific. Policies that will promote and encourage desired outcomes are also recommended. The reforms of island aviation systems recommended are designed to encourage greater efficiency and better pricing structures for communities, tourism, exports, and imports, to improve conditions for private investment and employment generation, and to contribute to the reduction of poverty.

This report is presented in four parts, with important complementary information provided in the appendixes:

- The Pacific Operating Environment examines the region's economic, tourism, and trade environment. The structure, constraints, and development of Pacific air services are examined, as are external market factors influencing that development.
- Challenges and Responses in Selected Forum Island Countries summarizes lessons learned in aviation development by the Fiji Islands, Solomon Islands, Vanuatu, Samoa, Tonga, and Niue, as determined in the case studies of these countries. The case studies may be seen in Appendixes 1–4.
- Moving to a More Sustainable Air Service Structure analyzes government policy requirements and strategy options for the supply of air services in the Pacific.
- Conclusions and Recommendations presents recommendations for government policy and operational approaches designed to produce more sustainable air services.

The Pacific Operating Environment

Overview of the Pacific Market

Aggregate population of the Pacific region increased by approximately 1.7 million people over the past 10 years. Currently, member countries of the Pacific Island Forum² (shown in italics in Table 2) have a collective population of almost 8 million.

Over the next decade, population growth in the Forum Island Countries (FICs) is expected to be highest in Vanuatu (2.7%), Solomon Islands (2.3%), and Kiribati (2.3%). Moderately high fertility rates and declining mortality account for higher population growth rates, particularly in Vanuatu, Solomon Islands, and Papua New Guinea (PNG). Migration is the primary reason for low growth rates in some FICs, including the Fiji Islands, and for population declines forecast for Tonga, Cook Islands, and Niue. The population of the Pacific region is expected to double in 28 years if population continues to grow at recent rates.³

Overall economic growth in the Pacific slipped from 3.1% in 2004 to 2.7% in 2005, due largely to the slowdown in the Fiji Islands. PNG is the largest economy in the region, accounting for around 40% of combined gross domestic product (GDP) of FICs. Growth there has been relatively stable since 2003. The Fiji Islands is the second largest FIC economy, accounting for over one-quarter of aggregate regional output.

² The Pacific Islands Forum is an intergovernmental organization that aims to enhance cooperation between the independent countries of the Pacific Ocean and represent their interests. It was founded in 1971 as the South Pacific Forum. The name was changed in 2000.

³ Demography/Population program of the Secretariat of the Pacific Community.

Table 2: Pacific Region Population Estimates and Growth Trends

Country	2004 Mid-year population estimate	Share of total (%)	Annual intercensal growth rate (%)	Projected annual growth rate 2004–2015 (%)
<i>Papua New Guinea</i>	5,800,000	66.0	2.7	2.2
<i>Fiji Islands</i>	840,000	9.6	0.8	0.7
<i>Solomon Islands</i>	521,000	5.9	2.8	2.3
French Polynesia ^a	250,500	2.8	1.8	1.8
New Caledonia ^a	237,300	2.7	2.6	1.9
<i>Vanuatu</i>	213,300	2.4	2.8	2.7
<i>Samoa</i>	180,900	2.1	0.9	0.9
Guam	166,100	1.9	1.5	1.4
<i>Federated States of Micronesia</i>	108,000	1.2	0.2	1.2
<i>Tonga</i>	101,800	1.2	0.3	(0.3)
<i>Kiribati</i>	89,700	1.0	1.7	2.3
Northern Mariana Islands	78,000	0.9	3.3	3.1
American Samoa	62,600	0.7	2.0	2.0
<i>Republic of the Marshall Islands</i>	61,200	0.7	1.4	1.6
<i>Palau</i>	20,600	0.2	2.1	2.0
<i>Cook Islands</i>	20,300	0.2	(3.7)	(1.3)
Wallis and Futuna	14,900	0.2	0.8	0.5
<i>Tuvalu</i>	11,200	0.1	0.5	0.4
<i>Nauru</i>	10,100	0.1	0.3	1.0
<i>Niue</i>	1,600	0.0	(3.9)	(3.8)
Tokelau ^a	1,500	0.0	0.4	0.0
Pitcairn	52	0.0	–	–
Total	8,790,652	100.0	–	–

– = data unavailable, () = negative, % = percent, SPC = Secretariat of the Pacific Community.

Note: Member countries of Pacific Islands Forum in italics.

^a Observer Countries of the Pacific Islands Forum.

Sources: Asian Development Bank, 2005; SPC, 2005; Growth rates: SPC population estimates/projections.

The significance of the external sector in the economies of FICs varies significantly. The value of exports compared to the value of GDP ranges from 43% for Solomon Islands (largely timber and fish), 38% for PNG, and about 26% for the Fiji Islands, Nauru, and Samoa. The percentage is 4–12% for remaining FICs, except for Niue and Tuvalu, where it is less than 1%. PNG and the Fiji Islands are the principal FIC exporters. The principal trading partners for the main exporting FICs are Australia, People's Republic of China (PRC), Japan, Thailand, and United States (US), while the main regional trading partners are Samoa and the Fiji Islands.

Table 3: Pacific Region 2004 GDP and GDP Growth Rates – Actual to 2005, Forecasts for 2006 and 2007

	2004 GDP (\$ millions)	Growth rate of GDP (% per year)						
		2001	2002	2003	2004	2005	2006	2007
The Pacific	–	1.9	0.4	2.2	3.1	2.7	2.9	3.0
<i>Cook Islands</i>	174	4.9	2.6	8.0	4.2	3.0	3.5	3.5
<i>Fiji Islands</i>	2,656	2.7	4.3	3.0	4.1	1.7	2.0	2.4
<i>Kiribati</i>	64	4.4	2.3	(4.0)	3.3	0.3	0.8	0.7
<i>RMI</i>	131	5.5	4.0	1.8	0.4	3.5	4.0	3.5
<i>FSM</i>	228	0.3	1.1	5.1	(3.8)	1.0	1.0	1.0
<i>Niue</i>	10	–	–	–	–	–	–	–
<i>Palau</i>	120	3.8	(4.7)	(0.1)	4.9	5.5	5.7	5.7
<i>PNG</i>	3,554	(0.1)	(1.0)	2.9	2.9	3.0	3.2	3.0
<i>Samoa</i>	316	6.1	1.3	3.3	3.7	5.5	2.2	5.0
<i>Solomon Islands</i>	258	(4.4)	(0.7)	3.6	4.5	4.4	5.0	5.0
<i>Timor-Leste</i>	328	16.5	(6.7)	(6.2)	1.8	2.5	5.0	4.0

Table 3: Pacific Region 2004 GDP and GDP Growth Rates – Actual to 2005, Forecasts for 2006 and 2007 (continued)

	2004 GDP (\$ millions)	Growth rate of GDP (% per year)						
		2001	2002	2003	2004	2005	2006	2007
<i>Tonga</i>	195	2.6	3.0	3.2	1.6	2.5	1.6	2.5
<i>Tuvalu</i>	15	13.2	5.5	4.0	4.0	2.0	3.0	3.0
<i>Vanuatu</i>	311	(2.1)	(2.8)	(4.7)	4.2	3.1	3.4	3.4

– = data unavailable, () = negative, \$ = US dollar, % = percent, ADB = Asian Development Bank, FSM = Federated States of Micronesia, GDP = gross domestic product, IMF = International Monetary Fund, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands, SPC = Secretariat of the Pacific Community.

Note: Member countries of Pacific Islands Forum in italics. Data for Nauru not available.

Sources: GDP data: ADB, 2005; IMF, 2005; and SPC, 2005. GDP growth rates: ADB, 2006.

**Table 4: Share of Total Country Exports
Main Trading Partners of Major FIC Exporters
(%)**

Main importing countries	Exporting countries					
	Fiji Islands	PNG	Samoa	Solomon Islands	Tonga	Vanuatu
Australia	19.2	27.7	60.7	2.2	1.5	1.2
People's Republic of China	–	5.8	–	28.2	–	–
Fiji Islands	–	–	0.5	–	2.4	–
Germany	–	5.0	1.4	–	0.6	2.1
India	–	–	–	1.3	4.1	0.7
Indonesia	–	2.9	17.1	–	–	5.3
Japan	4.1	5.7	1.0	9.7	51.4	7.4
Republic of Korea	–	1.4	–	15.7	–	–
Malaysia	–	–	–	–	–	18.1
New Zealand	3.7	–	1.6	–	3.9	–

**Table 4: Share of Total Country Exports
Main Trading Partners of Major FIC Exporters (%)**
(continued)

Main importing countries	Exporting countries					
	Fiji Islands	PNG	Samoa	Solomon Islands	Tonga	Vanuatu
Philippines	–	1.5	–	5.1	–	–
Samoa	6.2	–	–	–	–	–
Thailand	–	–	0.8	15.7	–	46.3
United Kingdom	12.8	2.5	–	–	0.1	–
United States	23.6	1.2	4.9	–	24.9	0.9
Others	30.3	46.2	12.1	21.9	11.1	18.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

– = zero or data unavailable, % = percent, FIC = Forum Island Country, PNG = Papua New Guinea.

Source: Asian Development Bank, 2005.

As would be expected, FICs are significant importers. The major trading partners for the largest importing FICs are Australia, Singapore, New Zealand, US, and Japan. The Fiji Islands is the major regional trading partner.

**Table 5: Share of Total Country Imports Main Trading Partners
of Major FIC Importers**

Main exporting countries	Importing countries					
	Fiji Islands	PNG	Samoa	Solomon Islands	Tonga	Vanuatu
Australia	27.7	45.2	9.6	25.3	10.3	15.5
People's Republic of China	2.8	4.2	1.9	–	2.2	3.5
Fiji Islands	–	–	17.9	3.8	21.1	4.6
Indonesia	1.8	2.9	3.3	–	1.2	–
Japan	4.2	4.2	8.1	3.9	2.5	10.7

Table 5: Share of Total Country Imports Main Trading Partners of Major FIC Importers (continued)

Main exporting countries	Importing countries					
	Fiji Islands	PNG	Samoa	Solomon Islands	Tonga	Vanuatu
New Zealand	17.8	7.5	23.1	5.3	46.7	6.0
PNG	–	–	–	3.7	–	–
Singapore	24.8	21.1	9.1	23.8	–	8.0
Thailand	2.9	1.6	–	–	0.8	–
United States	2.3	2.8	5.3	1.9	6.7	–
Others	15.7	10.5	21.7	32.3	8.4	51.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

– = zero or data unavailable, % = percent, FIC = Forum Island Country, PNG = Papua New Guinea.

Source: Asian Development Bank, 2005.

Tourism

Tourism is important to the Pacific region as a whole. Table 6 shows the level of expenditures by visitors in selected Pacific countries for 1990, 1995, 2000, and 2005, with forecasts for 2010 and 2015. Compound annual growth rates (CAGRs) for 1990–2005, and CAGR forecasts for 2005–2015 are also shown.

During the 15-year period to 2005, the annual growth of spending by visitors ranged from 2.1% in PNG to 7.4% for Kiribati. Visitor expenditures in the country with the largest number of visitors, the Fiji Islands, are estimated to have grown by 3.8% per annum. Growth rates are expected to increase substantially during the 2005–2015 period. Visitor expenditures, however, tell only part of the story. Tourism contributions to employment and to the economy as a whole indicate the overall significance of tourism. Table 7 shows the value of travel and tourism to six Pacific economies in terms of direct and indirect impacts.

Tourism contributes up to 40% of employment in Vanuatu and nearly 30% in the Fiji Islands. Comparable data are not available for Samoa. However, based on Samoan Central Bank data, tourism contributes an estimated 16–18% of Samoan GDP.

**Table 6: Visitor Expenditures in Selected Pacific Countries
(2000 constant \$ million)**

	1990	1995	2000	2005	2010 forecast	2015 forecast	CAGR 1990– 2005 (%)	CAGR 2005– 2015 (%)
Fiji Islands	268.69	289.57	244.37	467.50	657.15	871.96	3.8	6.4
Vanuatu	40.05	42.46	68.84	86.13	121.13	161.75	5.2	6.5
PNG	60.84	62.70	67.15	82.72	121.07	166.80	2.1	7.3
Tonga	9.91	10.16	8.80	15.38	22.09	29.96	3.0	6.9
Samoa	–	–	–	48.94	–	–	–	–
Solomon Islands	6.20	16.82	8.50	11.22	16.48	22.78	4.0	7.3
Kiribati	2.15	1.09	2.81	6.29	9.15	12.55	7.4	7.1

– = data unavailable, % = percent, CAGR = compound annual growth rates, PNG = Papua New Guinea, WTTC = World Travel and Tourism Council.

Source: WTTC in association with Accenture, 2006. Samoa estimate is based on data from the Samoan Central Bank.

Table 7: Visitor Value of Tourism in Selected Pacific Economies

Travel and tourism industry aggregates	1990	1995	2000	2005
	% of national accounts			
Fiji Islands				
<i>Travel and tourism industry aggregates (direct impact only)</i>				
Employment	9.35	10.12	8.35	12.52
GDP	9.68	10.48	8.65	12.97
<i>Travel and tourism economy aggregates (direct and indirect impact)</i>				
Employment	27.72	25.63	20.53	29.05
GDP	30.43	27.67	22.08	31.03
Kiribati				
<i>Travel and tourism industry aggregates (direct impact only)</i>				

Table 7: Visitor Value of Tourism in Selected Pacific Economies
(continued)

Travel and tourism industry aggregates	1990	1995	2000	2005
	% of national accounts			
Employment	2.36	0.93	1.68	4.56
GDP	2.89	1.14	2.06	5.58
<i>Travel and tourism economy aggregates (direct and Indirect Impact)</i>				
Employment	5.31	2.32	4.88	9.81
Papua New Guinea				
<i>Travel and tourism industry aggregates (direct impact only)</i>				
Employment	1.41	1.69	1.83	2.16
GDP	1.72	2.06	2.24	2.63
<i>Travel and tourism economy aggregates (direct and Indirect Impact)</i>				
Employment	4.79	6.25	6.94	7.14
GDP	5.80	7.58	8.41	8.66
Solomon Islands				
<i>Travel and tourism industry aggregates (direct impact only)</i>				
Employment	1.61	2.03	1.02	2.13
GDP	1.98	2.50	1.25	2.62
<i>Travel and tourism economy aggregates (direct and Indirect Impact)</i>				
Employment	6.15	6.89	3.84	6.65
GDP	7.48	8.39	4.67	8.11
Tonga				
<i>Travel and tourism industry aggregates (direct impact only)</i>				
Employment	3.84	4.48	4.02	5.63
GDP	4.36	5.09	4.57	6.39
<i>Travel and tourism economy aggregates (direct and Indirect Impact)</i>				
Employment	13.27	12.55	12.02	14.76
GDP	15.49	14.53	13.95	17.05

Table 7: Visitor Value of Tourism in Selected Pacific Economies
(continued)

Travel and tourism industry aggregates	1990	1995	2000	2005
	% of national accounts			
Vanuatu				
<i>Travel and tourism industry aggregates (direct impact only)</i>				
Employment	11.30	9.85	14.89	17.60
GDP	12.25	10.68	16.15	19.08
<i>Travel and tourism economy aggregates (direct and Indirect Impact)</i>				
Employment	32.74	27.80	36.92	41.10
GDP	36.87	31.25	41.10	45.52

Note: 2000 and 2005 were estimated.

% = percent, GDP = gross domestic product, WTTC = World Travel and Tourism Council.

Source: WTTC in association with Accenture, 2006.

Table 8: Tourism Arrivals in the Pacific Region

Destination country	1995 (‘000)	2004 (‘000)	2005 (‘000)	Share 2005 (%)
American Samoa	–	17.8	27.4	1.7
Cook Islands	48.5	83.3	87.7	5.6
Fiji Islands	318.5	^a 507.0	^a 532.0	33.9
French Polynesia	172.1	211.9	208.1	13.3
Kiribati	3.2	2.9	2.8	0.2
RMI ^b	6.8	7.0	7.5	0.5
FSM	17.6	19.3	19.0	1.2
New Caledonia	86.3	99.5	100.7	6.4
Niue	2.2	2.6	2.8	0.2
Palau	53.2	94.9	86.1	5.5
PNG	42.9	59.0	62.1	4.0
Samoa	68.4	98.2	101.8	6.5
Solomon Islands	11.2	^a 6.0	^a 12.2	0.8
Tahiti	178.2	211.9	208.1	13.3

Table 8: Tourism Arrivals in the Pacific Region
(continued)

Destination country	1995 (‘000)	2004 (‘000)	2005 (‘000)	Share 2005 (%)
Tonga	29.5	41.2	41.9	2.7
Tuvalu	0.9	1.3	1.2	0.1
Vanuatu	43.7	60.6	69.1	4.4
Subtotal	1,083.2	1,524.4	1,570.5	100.0
Guam	1,361.8	1,159.9	^c 1,210.1	
Northern Marianas	676.2	535.9	506.8	
Australia	3,725.8	5,213.1	5,497.0	
New Zealand	1,408.8	2,334.2	2,365.5	
Total	8,255.9	10,767.3	11,149.9	

– = data unavailable, % = percent, FSM = Federated States of Micronesia, PATA = Pacific Asia Travel Association, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands, SPC = Secretariat of the Pacific Community, SPTA = South Pacific Tourism Association.

Note: Excludes Nauru, Timor-Leste, and Tokelau.

Slight discrepancies in shares because of rounding off.

^a Estimated. ^b Air arrivals only. ^c Guam 2005 is fiscal year data.

Sources: Country collection agencies, SPTA, SPC, and PATA.

Visitor arrivals in the Pacific Islands have amounted to around 1.5 million annually in recent years, with about 34% of these arrivals in the Fiji Islands (Table 7). Arrivals in Australia, Guam, New Zealand, and Northern Marianas are also shown but grouped separately. As may be seen in Table 8, Australia and New Zealand are the two major source countries for Pacific tourism. Japan, UK, and the US are also important.

Organized tours from the PRC are expected to begin generating revenues for some island economies following the signing of the PRC–Pacific Island Countries Economic Development and Cooperation Guiding Framework. Under the framework, the Pacific island countries will be granted approved-destination status for PRC citizens.

Achievement of the growth in visitor expenditures forecast by the World Travel and Tourism Council (Table 6) will require increases in the number of visitors to the region. These increases will have to be generated in the

Table 9: Visitor Arrivals to Pacific Countries by Major Source Markets, 2005

Source market	2005 (‘000)	Share 2005 (%)
Australia	331.4	24.8
New Zealand	236.1	17.7
United States	183.4	13.7
Japan	117.7	8.8
Pacific Islands	101.5	7.6
United Kingdom	76.3	5.7
France	76.0	5.7
Other Asia	75.9	5.7
Other Europe	57.2	4.3
Canada	23.0	1.7
Germany	15.4	1.2
Other countries	30.2	2.3
Not stated	12.5	0.9
Total	1,336.5	100.0

Note: Excludes visitors to Guam, Northern Marianas, New Caledonia, and Tahiti.
% = percent, SPTA = South Pacific Tourism Association.

Sources: Country collection agencies and SPTA.

face of the growing number of highly competitive and desirable destinations across Asia that are attracting visitors. Additionally, travel patterns appear to be changing, with travelers in parts of Asia—especially—focused largely on more regular short breaks to closer destinations. Growth of visitation to the Pacific will require:

- preserving the region’s natural amenities;
- continuing development of infrastructure that match expectations of customers;
- expanding the volume and variety of commercial accommodation; and
- sustaining growth in the supply of reasonably priced airline seats—i.e., the crucial supply line for tourism in the Pacific.

The Air Transport Sector

Types of Air Services in the Region

Air services in the Pacific region can be categorized into four broad operational types.

Level 1: Domestic routes. These routes, serviced by small, twin-engine, propeller-driven aircraft, are frequently non-commercial. They primarily serve important social purposes, such as visiting friends and relatives (VFRs), and services (health, justice, welfare, and education), and are critical to local and national development. They, however, may also be valuable for tourism.

Level 2: Smaller regional non-jet routes. Often with very low-traffic potential, these are international routes that need to be serviced, but do not commercially justify jet operations. These routes carry limited amounts of VFRs, tourism, business traffic, and services. They also provide feeder services into international hubs, and are critical to national economic goals because of their integrative role.

Level 3: Regional jet routes. These second-tier international routes support jet operations at least thrice weekly. Such operations often have been provided in the past by Australian or New Zealand airlines, with island airlines operating in parallel. In some cases, services operate under code-sharing⁴ arrangements. These routes serve a mix of VFRs and, sometimes, limited tourism traffic. They may not have significant growth potential because of demographics (limited population, aging) and capacity constraints imposed by national accommodation and infrastructure. These services, however, generally serve national development goals.

Level 4: International routes. These routes typically support the operation of wide-bodied jet aircraft. They pass through the region, with opportunities to connect to long-haul international markets. Often, these are international tourism routes, which are dominant in terms of volume and revenues. They may carry fresh produce to important Pacific cities. These services are critical to regional economic development because of their role in trade and tourism.

⁴ The practice where a flight operated by an airline is jointly marketed as a flight for one or more other airlines. Most major airlines have code-sharing partnerships with other airlines, and code sharing is a key feature of airline alliances. The term “code” refers to the identifier used in flight schedules, and under a code-sharing agreement participating airlines can present a common flight number.

The weekly frequency, seat and cargo capacity, and aircraft types utilized in domestic and international air services on Pacific routes as of November 2006, may be seen in Appendix 5.

Airline Ownership and Fleets

Most Pacific islands have at least one domestic operator. However, there is increasing dependence on external carriers to provide international services. The reasons for this vary from the small population catchments and limited resources of some islands (e.g., Niue, Wallis and Futuna, Kiribati, Republic of the Marshall Islands [RMI], and Tuvalu) to restructuring that has recently taken place (Samoa and Tonga).

Most airlines in the Pacific remain in government ownership, reflecting their central importance to island economies and tourism and the largely non-commercial nature of many of the routes serviced—particularly domestic (Level 1) and interisland (Level 2) routes. In fact, all are state owned with the exception of Air Pacific, the recently developed Polynesian

Table 10: Summary of Air Service Provision in the South Pacific, including the French Territories

	Number	Islands
Islands with national carriers	11	Cook Islands, Fiji Islands, French Polynesia, Kiribati, RMI, Nauru, New Caledonia, PNG, Samoa, Solomon Islands, and Vanuatu
Islands operating their own international service provider	7	Fiji Islands, French Polynesia, Nauru, New Caledonia, PNG, Samoa, and Vanuatu
Islands dependent on external operator(s) for international services	9	Cook Islands, FSM, Kiribati, RMI, Niue, Solomon Islands, Tonga, Tuvalu, and Wallis and Futuna
Islands with domestic services	11	Cook Islands, FSM, Fiji Islands, French Polynesia, Kiribati, RMI, New Caledonia, Samoa, Solomon Islands, Tonga, and Vanuatu

FSM = Federated States of Micronesia, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands.

Source: Centre for Asia Pacific Aviation. 2006.

Blue joint venture, the French territory carriers, and a handful of smaller operators. Even a majority of the shares of Air Pacific and Air Tahiti Nui are government held, and Polynesian Blue retains a 49% state shareholding. Ownership structure and fleet size and type for most Pacific island airlines are provided in Table 11.

Table 11: Ownership and Fleets of Airlines of the South Pacific

	Ownership	Service type	Fleet size	Aircraft	Orders
Cook Islands					
Air Rarotonga	3 private investors	Levels 1 & 2	6	3 EMB110 Bandeirantes	
				1 Saab 340A	
				1 Cessna 172	
				1 Piper Twin Comanche	
Fiji Islands					
Air Pacific	51%, Government of the Fiji Islands; 46.3%, Qantas; and 1%, Governments of Tonga, Kiribati, Nauru, and Samoa	Levels 3& 4	6	2 B747-400	5 B787-900s
				1 B767-300ER	
				1 B737-700	
				2 B737-800	
Fiji Airlines (formerly Sun Air)	100%, Air Pacific	Level 1	11	Beechcraft BE-65	
				Islanders	
				Twin Otters	
Air Fiji	100%, Aviation Investments (50%, Government of Tuvalu and 50%, China National Aero Technology Corp.)	Levels 1 & 2	11	3 Islanders	
				7 EMB110 Bandeirantes	
				1 EMB120	
Federated States of Micronesia					
Continental Micronesia	100%, Continental Airlines	Level 4	13	B737-800	
				B767-400ER	
Kiribati					
Air Kiribati	100%, Government of Kiribati	Level 1	2	1 Harbin Y12	1 Y12
				1 CASA 212	

Table 11: Ownership and Fleets of Airlines of the South Pacific
(continued)

	Ownership	Service type	Fleet size	Aircraft	Orders
Republic of the Marshall Islands					
Air Marshall Islands	100%, Government of the RMI	Levels 1 & 2	3	1 Dash 8 Q100	
				2 Dornier 228	
Nauru					
Our Airline	100%, Government of Nauru	Level 3		1 B737-300	
Papua New Guinea					
Air Niugini	100%, Government of PNG	Levels 1, 2, 3, & 4		1 B767-300ER	1 Dash 8 Q20011
				2 F100s	
				5 F28-4000s	
				3 Dash 8s	
Airlines PNG	100%, John Wild	Levels 1 & 2	14	8 Dash 8 Q100	1 B737
				5 Twin Otters	
				1 King Air	
Samoa					
Polynesian Blue	49%, Government of Samoa 49%, Virgin Blue 2%, Samoan investor	Level 3	1	1 B737-800	
Polynesia Airlines	100%, Government of Samoa	Levels 1 & 2	1	1 Dash 8	
Solomon Islands					
Solomon Airlines	100%, Government of Solomon Islands	Level 1	3	1 Islander	
				3 Twin Otters	
Tonga					
Peau Vava'u Airways ^b	Owned by King Siaosi Tupou V	Level 1	1	1 Douglas DC3C	
Airlines Tonga Air Fiji	49%, Air Fiji and 51%, Teta Tours Tonga	Level 1	3	2 Harbin Y12 1 Convair	1 Dash 8
Vanuatu					
Air Vanuatu	100%, Government of Vanuatu	Level 1 & 3	3	1 B737-300	
				1 ATR-42	
				1 Twin Otter	

Table 11: Ownership and Fleets of Airlines of the South Pacific
(continued)

	Ownership	Service type	Fleet size	Aircraft	Orders
French territories					
Aircalin	72%, Caisse d'Épargne; 27%, Agence pour la Desserte aérienne de Nouvelle-Calédonie, and 1%, others	Levels 1, 2, 3, & 4	4	2 A330-200s	
				1 A320-200	
				1 Twin Otter	
Air Tahiti Nui	61.4%, Government of French Polynesia	Level 4	5	5 A340-300	1 A340-300

^a Peau Vava'u Airways suspended operations indefinitely in November 2006 after its offices in Nuku'alofa were destroyed by fire during riots.

% = percent, PNG = Papua New Guinea, RMI = Republic of the Marshall Islands.

Source: Airlines, Centre for Asia Pacific Aviation. 2006.

Government ownership coupled with the desire of Pacific island governments to use airlines to fulfill social service functions have imposed capital constraints and, in a number of cases, highly inefficient operating structures on the airlines. The trade-off for airline support through government funding and subsidy has been substantial limitation of the growth and development of air services and, in particular, of the fleets of the carriers. Many airlines, especially those on domestic and smaller interisland routes, operate a mix of older turboprop aircraft. They consequently face high-operating costs and negligible margins.

Few of these operators—or their government owners—can sustain acquisition of additional aircraft. Where aircraft have been acquired, the outcome has often been very damaging to national economies because of costly lease arrangements and poor choices of aircraft type and route use. Air Pacific is the only island carrier with a consistent record of profitability. Significantly, the consistent earnings record reflects the value of the long-term equity and commercial relationship with Qantas, which owns 46.3% of Air Pacific.

Trends in Air Freight

A close nexus between trends in the air freight sector and passenger services exists, underscoring heavy reliance in the region on the use of “belly-hold” capacity on passenger aircraft for freight. Consequently, air freight generally has expanded on the back of growth in scheduled passenger services (usually tourism based), and on thicker routes has been subject to marginal cost pricing.

The problem with dedicated air freighters in the Pacific is that lower returns and demand for services, with limited volumes of high-value traffic, means they cannot offer the density and frequency of service offered by passenger aircraft. The economics of aircraft operations depend on achieving high rates of aircraft utilization and high-load factors (at least 70%)—reducing operating and ownership costs as much as possible—and managing returns through passenger and cargo mix, and fare and rate charges.

The tendency on relatively thin- (low-loading), medium-haul routes has been to shift services from wide-bodied aircraft (B747 and B767 in the case of Boeing aircraft, which dominate most long-distance Pacific routes) to narrow-bodied (increasingly B737) aircraft, which have less cargo capacity. This is in part a reflection of technical advances, as enhanced engine efficiency and reliability enables twin-engine jets to fly safely for relatively long distances over water. There is thus an increasing use of twin-engine, narrow-bodied equipment on connecting sectors.

This trend is reducing belly-hold capacity and increasing the premium for freight carriage on these services. For example, the introduction of advanced twin-jets such as the B737-800 that are well suited to long, thin Pacific air routes, threatens to further reduce available cargo capacity. Freight volumes are relatively small in the Pacific. However, operators cannot ignore them as they can add sufficient revenue to convert an unprofitable route into one with a small profit.

Inadequate Airport and Freight Handling Facilities

In total, there are 184 airports in the Pacific, with most in PNG (69, only 17 paved), French Polynesia (39), and New Caledonia (11). The number in other island countries and territories ranges from 12 in the Solomon Islands (only 1 paved) to only 1 each in Guam, Nauru, Niue, and Tuvalu. Fully 161 of the 184 airports have runways shorter than 2,000 meters, and 52 are shorter than 1,000 meters (See Appendix 6 for the breakdown for each island country and territory).

The limited length of the runways at a number of Pacific airports—notably in locations such as Port Vila (Vanuatu) and Pago Pago (American Samoa)—hampers transport of air freight. Additionally, pavement strength can effectively limit the landing weight-load of aircraft at some airports.

Storage and handling facilities are either constrained or unavailable at many Pacific airports. Nadi Airport in the Fiji Islands is better than

most, reflecting its role as a freight transfer hub, but has limited cooling facilities. Handling costs for air freight can also be expensive, adding to the already high rates.

Pressures for Air Service Reform

Continued Restructuring and Greater Competition in the Market

The Pacific aviation market historically has been highly volatile and exposed to rapid changes in provision of international and domestic air services. This instability, stemming in part from uneconomic route structures and poorly capitalized operators, has often limited available service capacity and frequency, and disrupted services for both passengers and freight.

In some island states, recent years have seen the demise or enforced restructuring of national carriers and the introduction of price-based competition from low-cost airlines (LCAs). The result has been the emergence of a much more positive and sustainable operating environment. The weakest links in regional air service provision have for the most part been removed, bolstered by the participation of the stronger airlines companies from Australia, New Zealand, and the Fiji Islands. This has provided a solid base for continued development on a more commercial basis, particularly for the tourism-focused islands of the Fiji Islands, Samoa, Tonga, and—to a lesser extent—Niue.

In other countries, including the French territories, competition is still relatively limited and heavily focused on the denser routes out of Australia and New Zealand. The Central Pacific remains an area of concern because of questions about the future of Solomon Airlines, Air Marshall Islands, and Air Nauru. Of the 11 routes where more than one carrier operates, seven involve LCAs (either Pacific Blue/Polynesian Blue or Freedom Air).

The principal developments in the last 12–18 months through 2006 include:

- The proliferation of LCA operations (Pacific Blue Airlines, Polynesian Blue, and Freedom Air) applying downward pressure on fares on nonstop routes linking Australia and New Zealand with the larger Pacific island tourism destinations;
- Related competitive impact on full-service operations, particularly Air Pacific, Air Vanuatu, and Air New Zealand (through its Pacific

Express fares). This has triggered the introduction of lower fares on some routes, diminishing returns for operators;

- Attempts to restructure a number of existing national operators (e.g., Solomon Airlines and Air Kiribati). Solomon Airlines' planned privatization has been shelved, but it has resumed services in its own right with a leased aircraft, operating five times weekly between Honiara (Solomon Islands) and Brisbane (Australia) and twice weekly between Honiara and Port Vila;
- Repossession of Air Nauru's sole B737-400 in December 2005, disrupting services across the Central Pacific. A replacement B737-300 was subsequently secured and brought into service in October 2006 under a new brand, Our Airline. Our Airline is being proposed as the vehicle for a subregional venture;
- Emergence of a new operating model, with the Polynesian Blue joint venture between Pacific Blue Airlines and the Government of Samoa. This has seen the establishment of a new low-cost flag carrier for international services out of Samoa, and Polynesian Airlines reduced to domestic services. Polynesian Blue may become the template for similar developments in other parts of the Pacific;
- Niue has negotiated a contract with Air New Zealand, underwritten by the Government of New Zealand through the New Zealand Agency for International Development (NZ Aid), to provide direct services to the New Zealand market;
- In Vanuatu, various options are being considered to provide service into and out of the Melbourne market, including the establishment of a seat brokerage operation supported by private tourism interests. Air Vanuatu is also examining the acquisition of a second jet aircraft;
- Tonga's domestic market has been opened to competition—albeit temporarily—with the allocation of a second operating license to the Airlines Tonga joint venture, involving Air Fiji; and
- PNG has a second international carrier, with Airlines PNG taking up Port Moresby (PNG)—Cairns (Australia) flights with a Dash 8. The airline also launched twice-weekly B737-200 services—its first jet operation—between Port Moresby and Brisbane in August 2006, in competition with Air Niugini (subject to government approvals). This service will directly challenge Air Niugini's dominance of the premium market out of PNG by operating in a single business-class configuration at discounted rates. Airlines PNG will lease the B737 from the failed OzJet operation (now relaunched as a charter business).

The Pacific domestic and regional operating environment, and the international environment affecting it, is marked by contrasts. The benefits from volume growth on some sectors are moderated by pressures on costs and returns associated with rising aircraft fuel prices and intensive fare competition on key routes. Pricing competition and a relatively volatile market have applied significant pressure to the profitability and, in some cases, the viability of airlines. Together with the spiraling increase in global aviation fuel prices, this has given rise to an unstable industry environment highly susceptible to change, and has intensified the challenge to governments to maintain essential services.

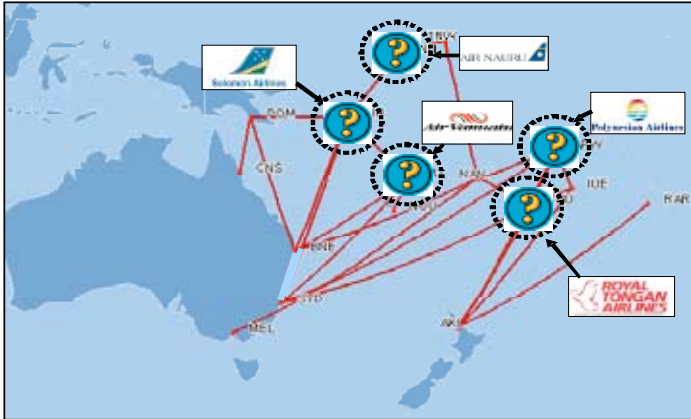
Given the unlikely prospect of a substantial easing in fuel prices, the current situation may accelerate the need for a rational solution, whether through privatization, joint ventures, or contractual arrangements with external operators. The Polynesian Blue joint venture model provides a potentially viable option for FIC countries, given the inability of their national carriers to compete either on price or cost with LCAs. Integration into a more capital and cost-efficient system is not only desirable but also probably inevitable in such an environment. This should be underpinned by flexible government policies toward airline ownership, and market deregulation where possible (e.g., adoption of the Pacific Islands Air Services Agreement, discussed below).

The Impact of Market Changes

The developments discussed above have removed some uncertainty from the Pacific market in the past 2 years, though conditions remain unresolved in a number of island countries/territories. To illustrate this, changes in service frequency and capacity between the islands and destinations within the Pacific region between 2004 and 2006 are analyzed hereafter.

In 2004, when the last major status report on the region was prepared as part of *The Pacific Regional Transport Study* (Australian Agency for International Development [AusAID] 2004), the market was in a state of flux. The collapse of Royal Tongan Airlines was then recent, and there were concerns about the financial viability of at least four other national carriers—Solomon Airlines, Air Nauru, Polynesian Airlines, and Air Vanuatu. Figure 1 shows the route network in the Pacific in that year, and the central position these carriers (depicted with question marks over their home countries) occupied in the system.

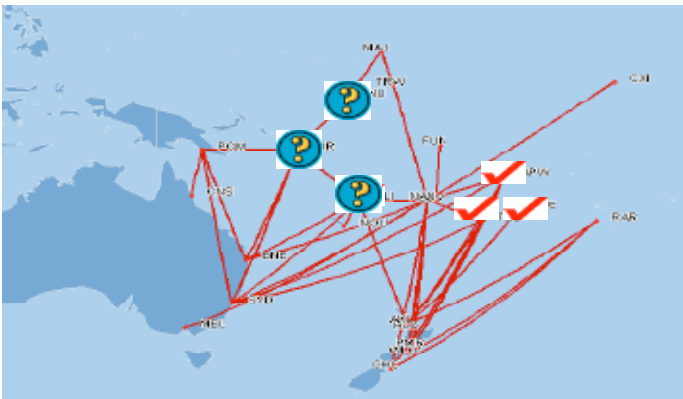
Figure 1: Overview of Route Structure and Airline Situation in 2004



Source : Centre for Asia Pacific Aviation. 2006.

By 2006, the situation with Polynesian Airlines had improved through the Polynesian Blue restructure, but doubts about the other three operators remained. There was, thus, a more stable and improved situation for part of the region despite continuing problems in the Melanesian segment (Figure 2)

Figure 2: Overview of Route Structure and Airline Situation in 2006



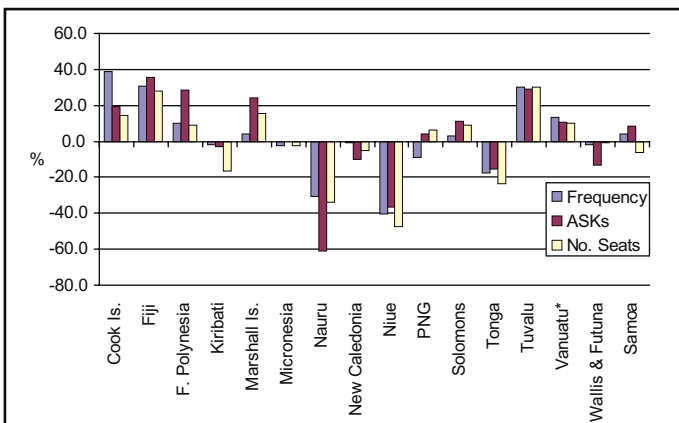
Source : Centre for Asia Pacific Aviation. 2006.

Problems in the Melanesian segment may be relieved with the start of the rebranded Air Nauru service, Our Airline, on twice-weekly links from Brisbane to Honiara, Nauru, Majuro (RMI), and Tarawa (Kiribati). Already, services to Tonga have been reestablished through external operators. Polynesian Airlines has been reformed into a more stable structure, and Niue has established services with another operator to New Zealand. Most important is that all the airlines now underpinning air services to these islands—Air New Zealand, Air Pacific, and Pacific Blue—operate from substantial capital bases with extensive resources and experience in commercial aviation. None of these carriers is likely to succumb to the financial problems that have beset some island operators, and they have the capacity to expand to meet market growth.

Uncertainty still exists both over the long-term prospects of Solomon Airlines and Our Airline. The Government of Solomon Islands had not yet committed to a course of action with the former, while the latter has ambitions to become a subregional operation with the participation of island states within its ambit. Air Vanuatu is also facing financial pressures.

Analysis of the variations in frequency and capacity of Pacific air services between 2004 and 2006 adds weight to optimism about prospects for these services. Average weekly seats, available seat kilometers (ASKs), and

Figure 3: Percentage Change in Service Frequency and Capacity in the Pacific Region between 2004 and 2006



% = percent, () = negative, ASK = available seat kilometers, PNG = Papua New Guinea.

Note: Vanuatu does not include Vanair services.

Source: International Air Transport Association, Official Airlines Guide. 2006.

numbers of flights for 16 Pacific island states for 12 months (canceling out the seasonality factor) to June 2004 were compared with the corresponding period to June 2006. The outcome in percentage terms is shown in Figure 3.

Across the islands examined, total frequencies rose by 1.9% and ASKs by 2.5% over the 2-year period. However, there was wide variation in the results between the islands. The Fiji Islands, Vanuatu, and Cook Islands (off a low base)—all experienced LCA entry—were the most significant beneficiaries. The Fiji Islands' frequencies grew by 31%, ASKs by 35%, and seat numbers by 28%. Comparable results in the Cook Islands were up 39%, 19%, and 14%, respectively, while in Vanuatu comparable results were up 14%, 11%, and 10%, respectively.

The main “losers” were islands most severely affected by the “shakeout” in the region. Tonga, with the demise of Royal Tongan Airlines, saw frequencies fall by 17%, ASKs by 15%, and seats by 23%. There was a reduction of 40% in frequencies, 37% in ASKs, and 47% in seats for Niue because of service changes. Nauru's frequencies, ASKs, and seats were down 31%, 61%, and 34%, respectively, because of the disruption of Air Nauru operations and the use of lower-capacity charters. However, the replenishment of services to Tonga with the introduction of Pacific Blue, and Air New Zealand's commitment to Niue, should provide a platform for future growth for those island countries. The outlook in Nauru is less certain.

Operating Cost Structures

Airlines servicing the Pacific region, like international and domestic airlines, globally have been confronted with sharply increasing operating costs in recent years because of a combination of factors:

- Aviation fuel prices escalated to record high levels. Air Pacific's fuel expenditure, for example, rose from 27% to 34% of total costs in 2005/06,⁵ resulting in the imposition of ticket surcharges. Fuel prices eased in late 2006, but a scarcity of production capacity is expected to trigger further increases;
- Insurance costs have more than doubled since the September 11 terrorist attack in the US;
- Requirements for expenditures on security have increased;

⁵ Air Pacific full-year profit announcement, June 2006.

- Aircraft lease costs for popular short-haul types, such as B737NGs, have climbed by 60–70% in the past 4 years;
- Labor costs are under pressure, with many carriers facing shortages of skilled personnel (particularly pilots and maintenance engineers); and
- Airport and regulatory charges are rising.

The airlines, of course, are reacting to these pressures. Air New Zealand is undertaking a 4-year program to lower costs by an additional \$165 million⁶ after achieving improvements of \$47–54 million (footnote 6) in the 18 months ending in 2006. The airline anticipates that its fuel bill will reach 1 billion New Zealand dollars (NZ\$) for 2005/06, twice the level of 2 years ago.⁷ Every \$0.68 (footnote 6) increase in the price of fuel reduces Air New Zealand's earnings before interest and tax by \$5.4 million (footnote 6) before hedging on an annualized basis.

Virgin Blue unit costs rose by 3.4% in the 9 months to 30 June 2006 because of a \$54.4-million⁸ increase in fuel expenditure.⁹ Air Pacific announced an expected decline in its earnings in 2005/06 because of the combination of high-fuel overheads (fuel costs had almost tripled to \$316,798 per day), a relatively flat tourism market, and competition from low-cost operators on Australia and New Zealand routes. The airline was instituting internal cost efficiencies in an effort to lower overheads, and moving to smaller aircraft types on some routes to minimize fuel consumption and expenses.

Air Pacific is also investing in more fuel-efficient aircraft by acquiring five B787-900s to replace existing B747-400s and B767s. The new aircraft are 20% more fuel efficient than older wide-bodied types, and offer a longer range to provide greater operational flexibility. The fuel situation has refocused attention on improving productivity and reducing employee levels at typically over-manned Pacific operators (Table 12). The restructuring of Polynesian Airlines, with international operations being taken up by Polynesian Blue, will see employee numbers decline from 393 to the Government of Samoa's target of 195. Air Kiribati is also reviewing staffing levels, while Our Airline is downsizing to remain viable.

⁶ Based on an exchange rate of 1 New Zealand dollar (NZ\$) = \$0.68.

⁷ Air New Zealand announcement to the Australian Stock Exchange, April 2006.

⁸ Based on an exchange rate of 1 A\$ = \$0.78.

⁹ Virgin Blue announcement of results for the 6 months to 31 March 2006.

Table 12: Comparison of Employees and Aircraft by Airline

Airline	Number of aircraft	Number of employees
Jet/Turboprop operators		
Airlines PNG	14	427
Air Vanuatu	3	n/a
Solomon Airlines	3	95
Air Pacific	6	747
Turboprop only		
Air Kiribati	2	80
Air Tahiti Nui	5	593
Our Airline	1	70
Air Niugini	11	1435
Air Marshall Islands	3	106
Air Fiji	11	165
Air Raratonga	6	51
Polynesian	1	195

Sources: Airline annual reports and Centre for Asia Pacific Aviation, 2006.

The Entry of Low-Cost Airlines

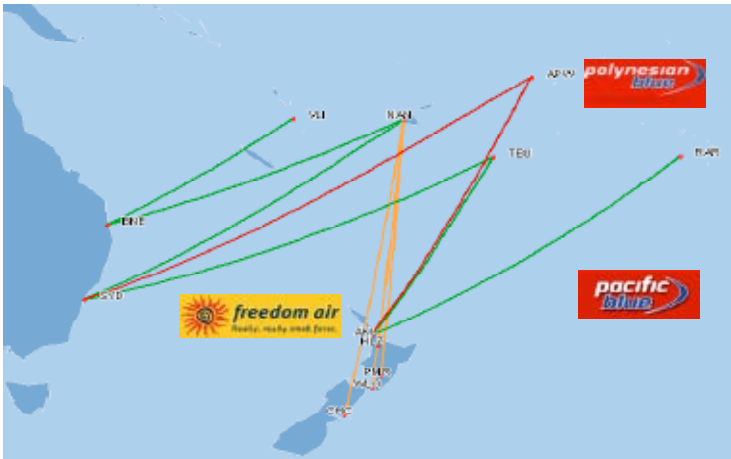
Additional competition and significantly lower fares offered by LCAs have spurred growth beyond historic levels in affected markets. These have given rise to other issues, such as inadequate hotel accommodations during peak seasons (especially in the Fiji Islands and Vanuatu).

The prospect of more expansive LCA coverage in the FIC region through Pacific Blue its Polynesian Blue joint venture—and Freedom Air suggests that benefits will spread wider over time. LCA-based growth encourages external and internal investment in accommodations and airports, and generates higher tourism receipts with consequent economic gains.

Freedom Air's Fiji Islands service, the establishment of Polynesian Blue in Samoa, and extension of services by Pacific Blue mean that low-cost operations are in place on 11 routes linking Australia and New Zealand with the Cook Islands, Fiji Islands, Samoa, Tonga, and Vanuatu (as shown in Figure 4).

The impact of the LCAs in terms of traffic growth and development are discussed in more detail in the case studies in Appendixes 1–4.

Figure 4: Low-Cost Airline Routes in the South Pacific



Source: International Air Transport Association and Centre for Asia Pacific Aviation. 2006.

However, a number of general conclusions can be drawn from the Pacific market's exposure to the low-cost model to date:

- More intense competition has spurred high levels of growth, with significantly improved tourism returns. The Fiji Islands' gross earnings from tourism, for example, rose by 1.6% to \$419.9 million in 2005, with a 3.6% increase in visitor nights. Samoa saw a 55% improvement in tourism earnings from Australia, and 100% from New Zealand in April 2006, the most recent reporting period.
- Changes to travel patterns have occurred in some markets, with increased numbers of short-stay travelers taking advantage of cheaper fares and greater availability of seats.
- While incumbent national airlines within the region are at a competitive disadvantage, in that they do not have the critical mass or strong home markets of LCAs (i.e., Australia and New Zealand), there have been few tangible signs to date of substantial detrimental effect on the passenger loads of national airlines. Load factors for these carriers have generally held up well despite the introduction of additional capacity. In the 18 months following Pacific Blue's entry onto Australia–the Fiji Islands and Australia–Vanuatu services, for example, Air Pacific's loads averaged about 68% and those of Air Vanuatu 52%.

- The returns of national operators have come under pressure as they responded with pricing initiatives to counter the fare discount strategies of LCAs. This has further emphasized the need to reduce costs and improve productivity and efficiency.

With the entry of the LCAs during 2004 and 2005, the Pacific market has been substantially altered in structure, with increasing emphasis on point-to-point services with smaller capacity aircraft. As noted, this has limited freight capacity into and out of the islands, as LCAs generally operate narrow-bodied aircraft with a focus on passenger rather than freight carriage.

The experience of the Fiji Islands, Tonga, and Vanuatu in 2005 and 2006 implies potential impact elsewhere as LCA-type operations expand further into Pacific markets. These were the first island markets affected by the introduction of low-cost, low-fare competition out of Australia and New Zealand. LCA services to Samoa through Polynesian Blue in 2005 and Cook Islands in 2006 through Pacific Blue also began. Moreover, there are plans for LCA operations to New Caledonia and other islands.

Fare Pricing Implications

Airfares have spiraled downward in most markets contested by LCAs, in some cases by 30–40% from previous rates offered by national carriers.

Table 13: Comparison of Economy Fare Pricing on Pacific Routes Involving Lower Cost Airlines

Route (Distance)	High (A\$)	A\$/km	Low (A\$)	A\$/km	Low Fare % High Fare
Auckland–Nadi (2,160km)					
Air Pacific	541	0.25	287	0.13	53.0
Air New Zealand	468	0.22	325	0.15	69.4
Freedom Air	529	0.24	263	0.12	49.7
<i>Average</i>	<i>513</i>	<i>0.24</i>	<i>292</i>	<i>0.13</i>	
Brisbane–Nadi (2,718km)					
Air Pacific	678	0.25	297	0.11	43.8
Pacific Blue	629	0.23	349	0.13	55.5
<i>Average</i>	<i>654</i>	<i>0.24</i>	<i>323</i>	<i>0.12</i>	

Table 13: Comparison of Economy Fare Pricing on Pacific Routes Involving Lower Cost Airlines (continued)

Route (Distance)	High (A\$)	A\$/km	Low (A\$)	A\$/km	Low Fare % High Fare
Sydney–Nadi (3,174km)					
Air Pacific	772	0.24	311	0.10	40.3
Pacific Blue	695	0.22	359	0.11	51.7
<i>Average</i>	<i>734</i>	<i>0.23</i>	<i>335</i>	<i>0.11</i>	
Auckland–Apia (2,894km)					
Air New Zealand	534	0.18	300	0.10	56.2
Polynesian Blue	512	0.18	265	0.09	51.7
<i>Average</i>	<i>523</i>	<i>0.18</i>	<i>283</i>	<i>0.10</i>	
Sydney–Apia (4,329km)					
Air New Zealand ^a	712	0.16	621	0.14	87.2
Polynesian Blue	799	0.18	529	0.12	66.2
<i>Average</i>	<i>756</i>	<i>0.17</i>	<i>575</i>	<i>0.13</i>	
Auckland–Tonga (2,007km)					
Air New Zealand	422	0.21	236	0.12	55.9
Pacific Blue	421	0.21	189	0.09	44.9
<i>Average</i>	<i>422</i>	<i>0.21</i>	<i>213</i>	<i>0.11</i>	
Sydney–Tonga (3,590km)					
Pacific Blue	699	0.19	369	0.10	52.8
Brisbane–Vanuatu (1,901km)					
Pacific Blue	575	0.30	335	0.18	58.3
Air Vanuatu	851	0.45	370	0.19	43.5
<i>Average</i>	<i>713</i>	<i>0.38</i>	<i>353</i>	<i>0.19</i>	
Sydney–Vanuatu (2,486km)					
Pacific Blue ^a	624	0.25	384	0.15	61.5
Air Vanuatu	905	0.36	360	0.14	39.8
<i>Average</i>	<i>765</i>	<i>0.31</i>	<i>372</i>	<i>0.15</i>	
Auckland–Vanuatu (2,242km)					
Air Vanuatu	786	0.35	389	0.17	49.5
Christchurch–Port Vila (2,989km)					
Pacific Blue	716	0.24	476	0.16	66.5

Table 13: Comparison of Economy Fare Pricing on Pacific Routes Involving Lower Cost Airlines (continued)

Route (Distance)	High (A\$)	A\$/km	Low (A\$)	A\$/km	Low Fare % High Fare
Christchurch–Port Vila (2,989km)					
Pacific Blue	604	0.22	466	0.17	77.1

% = percent, km = kilometers, A\$ = Australian dollar, NZ\$ = New Zealand dollar.

Note: The prices stated are based on the highest (unrestricted) and lowest one-way economy rates available online through airline websites for travel in July 2006. All are inclusive of taxes and charges. Unless otherwise stated, they relate to nonstop services. Each has been converted for comparative purposes to Australian currency based on 1 NZ\$=A\$0.82 (exchange rate as of 26 June 2006).

^a Indirect services.

Sources: Airline websites and Centre for Asia Pacific Aviation (2006).

A survey of online website fares on affected Pacific routes for travel during July 2006 was conducted for this study to ascertain the extent of pricing competition, the availability of low fares, and the differential between discounted rates on offer and unrestricted full economy fares. The outcome of the survey (shown in Table 13) indicated that national airlines were close or equivalent to LCA offerings at the lower-fare end even though there was a significant differential on unrestricted rates in one or two cases.

It should be noted that taxes and charges, including fuel surcharges, were included in the tabled fares. Their inclusion has the potential to distort pricing given the variations in the charges between airlines. Exchange rates may also influence results. Nevertheless, the gross fares provided were relatively consistent with the lowest economy rates available, on average equal to 56% of the highest fares. While the level of discounting on international fares varied with the competitive environment, low fares were typically 60–70% lower than higher unrestricted fares.

On a per-kilometer basis, pricing was most aggressive on routes to Samoa, Fiji Islands, and Tonga. This reflected, in part, direct competition from the larger, established operators, Air Pacific and Air New Zealand, through their heavily discounted Bula Fares and Pacific Express Fares. Fares on indirect routes were also highly competitive, as indicated by Air New Zealand's Sydney–Auckland–Apia (Samoa) unrestricted rate, which actually undercut Polynesian Blue's upper-end fare on its nonstop service. Similarly, Pacific Blue's full-economy fare for Sydney–Brisbane–Port Vila was substantially below that offered by Air Vanuatu on its direct service.

Freight Carriage in the Pacific Islands

Relatively thin volumes of air freight characterize the Pacific market, with heavy emphasis on imports from Australia and New Zealand (these exceeded export tonnages from the islands by 2.6:1 in 2005).

Most freight is carried in the belly-holds of passenger aircraft, with only limited volumes of sufficient value to cover full-freighter costs. Even then, there are insufficient volumes on a regular basis to justify scheduled air freight services. The fluctuation in seasonal demand and poor operator returns ensures that the availability of freight capacity is constrained on any regular basis. Additionally, there are problems with the limited freight volumes in some directions. Space is often restricted because of the need in some cases to carry return fuel loads.

Table 14 shows aggregate air freight exports to Australia and New Zealand from the Pacific island states and Pacific island country imports from Australia and New Zealand for 2005. The Fiji Islands' exports to Australia and New Zealand account for nearly 86% of the aggregate from the Pacific islands. The Fiji Islands' position is less dominant as an importer from Australia and New Zealand—accounting for 36%—with PNG, for a further 20%; and Cook Islands, French Polynesia, and New Caledonia each accounting for 9–10%.

The 13,386 tons of inbound air freight to Pacific island states in 2005 from Australia and New Zealand were dominated by food and live animals, 34%; machinery and transport equipment, 26%; and manufactured goods and articles, 20%.

Outbound air freight from the Pacific islands to Australia and New Zealand was heavily weighted toward food and live animals (63%) and miscellaneous manufactured articles (28%). Foodstuff, with the exception of live fish, generally provides lower returns than manufactured goods. If spare capacity is available on a passenger service leaving a country, airlines will often offer to carry low-value freight such as foodstuff to cover the marginal cost of carriage.

Seasonal issues are also associated with food imports and exports. Additional air freight capacity is often required before Easter and Christmas for French Noumea and New Caledonia. Supplementary services are often provided because of the greater demand for passenger travel. A dedicated freighter is deployed on occasion to meet the additional demand. Seasonal pressures also exist on outbound air freight from the Pacific, such as for the Fiji Islands' exports of ginger at certain times of the year.

Table 14: Aggregate Australia and New Zealand Volumes of Air Freight Imports from and Exports to Pacific Islands, 2005

Imports from:	Imports			Exports to:	Exports		
	Tons	Share (%)	Cum. Share (%)		Tons	Share (%)	Cum. Share (%)
Fiji Islands	4,426	85.6	85.6	Fiji Islands	4,879	35.8	35.8
PNG	248	4.8	90.4	PNG	2,771	20.3	56.1
Samoa	199	3.8	94.2	Cook Islands	1,296	9.5	65.7
Cook Islands	72	1.4	95.6	French Polynesia	1,295	9.5	75.2
New Caledonia	66	1.3	96.9	New Caledonia	1,218	8.9	84.1
Vanuatu	52	1.0	97.9	Solomon Islands	461	3.4	87.5
Samoa	34	0.7	98.5	Samoa, Western	437	3.2	90.7
French Polynesia	25	0.5	99.0	Tonga	362	2.7	93.4
Solomon Islands	24	0.5	99.5	Vanuatu	296	2.2	95.5
Tonga	16	0.3	99.8	Guam	224	1.6	97.2
Guam	2	0.0	99.9	Nauru	146	1.1	98.3
Others	7	0.1	100.0	Other	238	1.7	100.0
Total	5,172	100.0%		Total	13,624	100.0%	
<i>Top 10</i>	<i>5,165</i>			<i>Top 10</i>	<i>13,386</i>		

% = percent, Cum. = cumulative, PNG = Papua New Guinea.
Sources: Australian Bureau of Statistics, Statistics New Zealand, 2006.

Constrained Freight Capacity on Narrow Body Aircraft

While specifications on individual aircraft and service costs may vary significantly from generic specifications, guidelines published by aircraft companies illustrate the trade-off between passengers and cargo payload, and between payload and distance. Guidelines published by Boeing and Airbus may be seen in Appendix 6.

In each case, the greater the passenger payload relative to engine capacity, the lower the potential cargo payload. Longer distances require more fuel, a factor most likely to be reflected in reduced cargo rather than reduced passenger loadings. Within aircraft families, the larger types have greater range and capacity and are therefore economical mainly on medium-to-long, dense traffic routes. In addition, recent models of Boeing's twin-engine aircraft tend to have higher passenger capacity relative to cargo. This is consistent with the general industry focus on optimizing passenger loads and returns.

The use of narrow-body aircraft (mostly B737s) has become the norm for many Pacific islands. However, freight rates are very high for the limited space available in the lower hold of narrow-body aircraft. For example, on a 5-hour flight on a B737-700 or B737-800 with two lower-hold doors, the 27–44 cubic meters of freight space is mainly taken up by baggage. Certain carriers use seat bags to provide additional freight capacity.

Wide-body aircraft used on routes to/from the Pacific operate largely out of Sydney and Auckland, with some capacity between Brisbane and Port Moresby. The use of wide-body aircraft in the Pacific Islands is restricted to the Cook Islands, Fiji Islands, PNG, and Samoa, but more limited in the latter three. The Fiji Islands is the best served of the islands in this regard and plays a distribution role for the Pacific. Capacity is available to the Fiji Islands from Australia, Japan, New Zealand, and US. While shippers can bring palletized freight into the Fiji Islands, difficulties occur in distributing it from there on interisland routes due to the smaller, unsuitable aircraft types in use. Some help is provided by limited “semi-scheduled” and ad hoc freight charters serving Honiara, Solomon Islands, and Port Moresby.

Freight Rates

Freight rates are an outcome of demand and cargo capacity. In the Pacific, rates are relatively high because of the limited availability of carriage space and low volumes. However, even discount rates are unlikely to provide the stimulus necessary to generate sufficient volumes to justify increased services.

Table 15 shows typical freight rates in the Pacific. Variations are likely under contractual arrangements, with regular high-volume customers exacting some reductions on stated rates. The significant benefits flowing from larger freight volumes are clear, with saving on rates for freight above 45 tons averaging 23%.

Air freight rates in the Pacific compare unfavorably with those on mainstream routes between Australia and Asia, or between Australia and New Zealand. Examples of mainstream rates include:

- Melbourne–Sydney–Hong Kong: less than A\$1 per kilogram (kg),
- Melbourne–Singapore: around A\$0.60 per kg.,
- Melbourne–Auckland: around A\$0.60 per kg.,
- Melbourne–Japan: around A\$1.50–1.60 per kg., and
- Melbourne–London: around A\$3.30–3.60 per kg.

High Aircraft Fuel Costs

The challenges created by high-freight rates are compounded by the high costs for fuel purchased in the Pacific islands. For example, while one can

Table 15: Freight Rates for the South Pacific Islands, 2006

Country	Standard/ Min (A\$/kg)	Variation (%)	Over 45 tons (A\$/kg)	Variation (%)	Others (A\$/kg)
Fiji Islands	5.25	(20.8)	2.75	(46.4)	2.65 for > 250 tons; 1.60 for >500 tons
Kiribati	8.80	32.7	7.35	43.3	–
Nauru	7.65	15.3	5.85	14.1	5.10 for >250 tons
Samoa	6.25	(5.7)	4.70	(8.4)	–
Solomon Islands	6.85	3.3	6.25	21.9	Spot rates for part charters 3.50–4.99
Tonga	6.40	(3.5)	4.80	(6.4)	–
Vanuatu	5.20	(21.6)	4.20	(18.1)	3.50 for >100 tons
Average	6.63		5.13		

> = more than, () = negative, % = percent, A\$ = Australian \$.kg = kilogram,
Min = minimum.

Sources: The Air Cargo Tariff and Centre for Asia Pacific Aviation. 2006.

buy fuel at \$2.40/gallon in Brisbane, one would expect to pay \$4.20/gallon in Honiara, Solomon Islands. This price differential has a substantial impact given the following average fuel burn per hour by aircraft type (subject to maximum take-off load), as follows:

- Embraer: 2.1 tons per hour,
- B737-200: 3.5 tons per hour,
- B737-800: 2.6 tons per hour,
- B767: 5.5 to 6 tons per hour,
- A330-300: 6 tons per hour, and
- B747-400: 9.5–10 tons per hour.

Faced with high fuel charges and high rates of fuel burn, airlines often carry return fuel loads. An aircraft of 60 tons may need to carry almost 8 tons of fuel to reduce the amount of fuel purchased at the Pacific airport for the return journey.

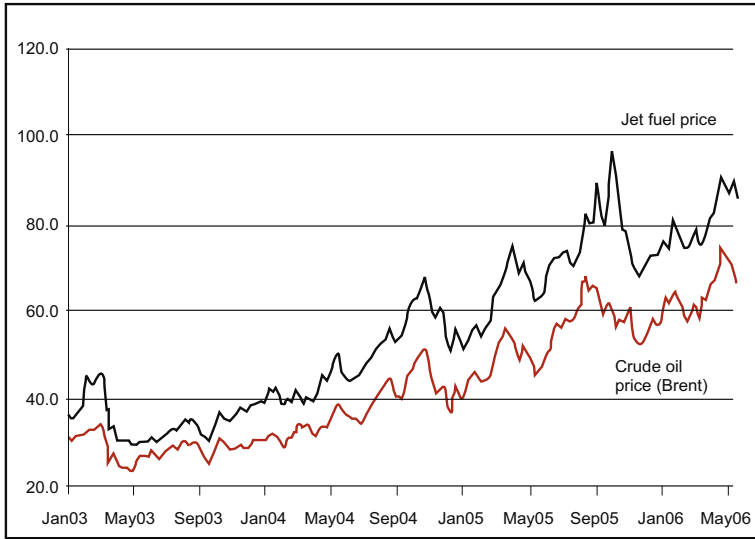
Influence of the External Operating Environment

Global and Regional Overview

The global environment for aviation has, to a considerable extent, stabilized from the extremely erratic market behavior and industry dysfunction seen in recent years. There has been relatively steady growth in passenger traffic and freight across the major markets, and intensive investment in new fleets despite increasing fuel overheads and a limited supply of skilled labor.

Jet fuel prices rose by 37% in the 12 months ending May 2006, applying significant pressure on fares, cargo rates, and returns. While there has been some short-term relief in recent months, the longer-term prognosis is for continuing high prices based on a crude oil price of about \$60–70 per barrel. Limited refining capacity has widened the premium applied to jet fuel over crude oil prices from 10–15%.

According to the International Air Transport Association (IATA), the rise in fuel has added \$20 billion to the costs of international airlines since mid-2005. Consequently, operators have pursued more aggressive hedging policies and/or imposed surcharges on ticket sales and cargo rates to counter fuel-related expenses.

Figure 5: Jet Fuel and World Oil Prices, 2003–2006 (\$)

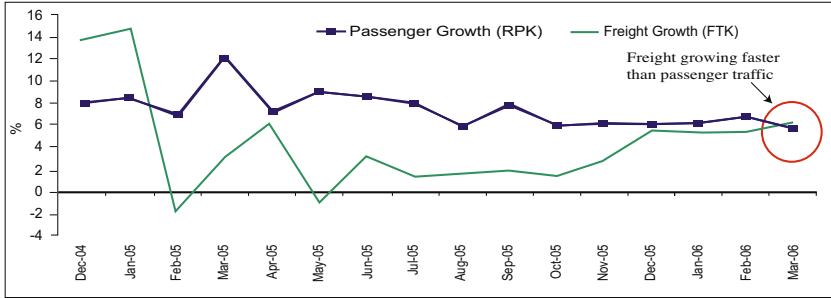
Source: Platts, 2006.

Escalating fuel-related costs have diluted airlines earnings despite generally robust economic and market conditions. IATA expected passenger and freight growth of 6–7% for 2006. In contrast, passenger growth averaged 1.5% between 2001 and 2004, and was only positive because of a bounce-back in demand during the last year. The 11% increase in 2004 was the highest seen since the aftermath of the Gulf War in 1991, attributable in part to the most robust global economic conditions in 30 years.

Freight growth, in particular, has been strong. The 6.2% increase achieved in March 2006 was the highest rise for 12 months, exceeding the 5.7% improvement in passenger traffic. The Asia-Pacific region—led by the PRC—and the Middle East are driving the upward trend, although Europe and North America have also gathered momentum.

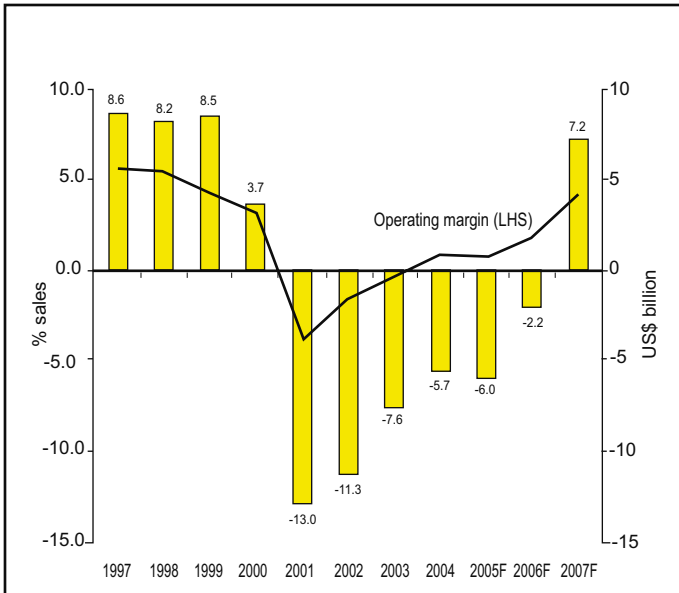
International airlines collectively lost an estimated \$43.6 billion between 2001 and 2005, following 8 consecutive years of profitability. Despite the stress related to fuel costs, losses are expected to drop to \$2.2 billion in 2006, and return to a \$7.2 billion cumulative profit in 2007—the first positive earnings outcome since 2000. Margins of around 4% are anticipated in 2007 (the best returns for operators since the late 1990s).

Figure 6: Global Freight Growth Overtakes Passenger Growth



() = negative, % = percent, FTK = freight ton-kilometers, RPK = revenue passenger-kilometers.
 Source: International Air Transport Association. 2006.

Figure 7: Historic Trends and Forecast Earnings and Margins for International Airlines



% = percent, () = negative, \$ = US dollar, LHS = operating margin, RHS = net losses.
 Source: International Air Transport Association. 2006.

The Asia and Pacific market should continue to underpin earnings growth globally, while the US carriers are expected to rebound from a \$5.4-billion deficit in 2006 to a combined \$1.1-billion profit in 2007 (IATA forecasts).

Progress with Regulatory Reform

Both IATA and the International Civil Aviation Organization (ICAO) are advocating a policy of progressive liberalization of the airline industry, led by the major markets of the US and Europe. The aim is to enable the airlines to respond better to commercial forces and market competition. Government participation in aviation other than for safety and technical oversight is seen as an anachronism.

In a global context, consolidation—or some other form of rationalization—is probably inevitable. Far too many airlines are operating to be able to survive in a gloves-off, unregulated market. But the inertia of the existing system and the requirement that most major countries develop common positions through a slow process of bilateral renegotiation means that full mergers will be extremely difficult for some time yet. Progress in this regard has been achieved in Europe, but not without significant compromise by the airlines involved. However, to try to achieve some rationalization, some interesting and apparently sustainable partnership models are emerging outside the European Union (EU) in response to market conditions, especially in Asia where a number of low-cost operators are involved in cross-border joint ventures.

As ownership restrictions are relaxed over the next decade, bilateral relationships can be expected to grow closer. Multilateral allegiances are expected to be more “strategic.” Mergers or close alliances are probably more likely to form between airlines on different continents rather than between neighboring flag carriers.

Consolidation also would be desirable in the Pacific, given the excessive number of marginal national carriers operating in the region. Most of these carriers are supported in one way or another by their governments. Consolidation is consequently unlikely to be achieved until island governments adopt more flexible and pragmatic approaches to providing air service.

The Evolving Airline Model

Several factors have given rise to opportunities for multinational partnerships in Africa, Asia, and Europe:

- liberalization of markets;
- more relaxed attitudes toward cross-border airline investment; and
- government moves generally to reduce direct exposure to the volatile aviation sector.

This drive to fully or partially privatize and consolidate indicates a greater preparedness by governments to adopt less-rigid approaches to foreign ownership and control within the traditional bilateral system.

Airline privatization has been a key factor providing the impetus for change. With the introduction of more commercial structures subject to market forces, there has been a push to increase levels of foreign liquidity as a means to strengthen share prices and broaden capital base. Increased competition brought about by market liberalization is also playing a role in driving change. This has imposed financial pressures on some airlines, and a requirement to enter into equity alliances with other operators to strengthen competitive positions and capitalize on growth opportunities.

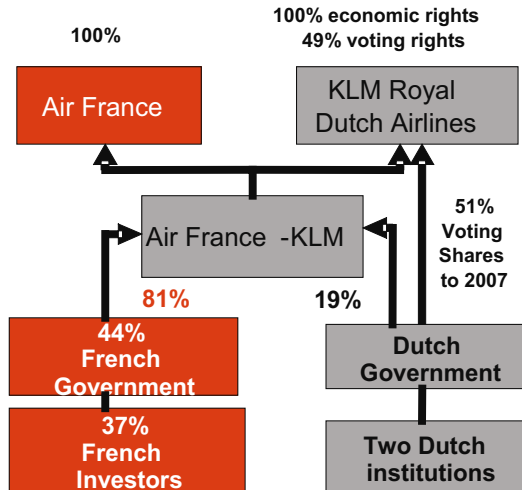
Airline Consolidation in Europe and Elsewhere

In Europe, heavy competition in key markets—particularly from LCAs—has challenged the viability and cost structures of smaller national operators, several of which have been losing money. These factors are leading to substantial restructuring and the creation of innovative ownership models designed to provide additional capital and more cost-efficient structures while protecting national identity and brand.

Cross-Border “Mergers”

In “domestic” Europe, consolidation has helped airlines restructure by allowing them to link route systems and cooperate on schedules. These partnerships aim to rationalize costs and capacity, although regulatory, union, and/or nationalism issues often undermine these goals. Two recent notable examples of cross-border mergers are outlined below.

Figure 8: The Air France–KLM Model



Source: Centre for Pacific Aviation. 2006.

1. **Air France–KLM Royal Dutch Airlines.** The first cross-border merger in the EU was the formation of a new holding company carrying 100% of the shares of both these airlines. The structure is illustrated in Figure 8. Air France shareholders maintain an 81% shareholding. However, the Government of France’s previous holding in Air France was diluted from 54–44% through the issue of new shares. The Government of the Netherlands and two Dutch foundations hold 51% of the voting rights in the KLM subsidiary for 3 years, ensuring that KLM retains its landing rights under existing agreements.
2. **Lufthansa–Swiss International Airlines.** The takeover of Swiss by Lufthansa is expected to generate revenue and cost benefits of 160 million euro (€) annually from 2007. Swiss will effectively become a profit center for the Lufthansa group while retaining an independent brand, management, and base in Switzerland (see the structure of the acquisition in Figure 9). The continued development of the airline’s intercontinental hub in Zurich is accommodated under the arrangements.

Because of antitrust laws and requirements to secure traffic rights, the acquisition is phased, with Lufthansa initially purchasing 11% of Swiss. It increased its stake to 49% following the provision of antitrust

approval by the EU and the US, and will move to 100% once the relevant bilateral agreements on traffic rights have been obtained, completing the complex transaction some time in 2006.

Domestic Mergers

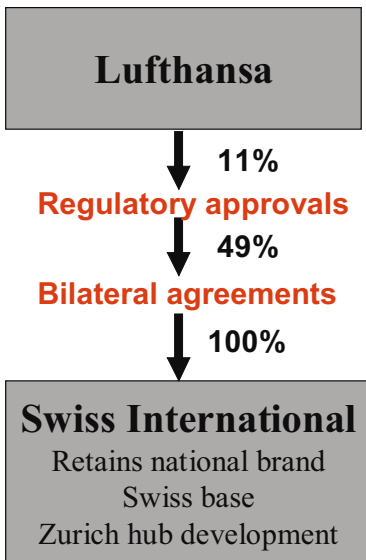
There are few practical constraints on domestic mergers where there is no conflict of national ownership between the two airlines. Mainland airlines in the PRC have thus consolidated from some 25 airlines into three main entities over the past 5 years. In Australia, Qantas and Australian Airlines were merged in the mid-1990s, although the merger of the two airlines into one operation took many years because of a legacy of conflicting union agreements.

Moves to consolidate have been considerably slower in the US due, in part, to bankruptcy protection laws that provide a safety net for troubled operators and act as a barrier to rationalization. Antitrust legislation and restrictions on the extent of foreign ownership of US

airlines have also limited the scope for partnerships. However, the merger between America West and US Airways suggests a more pragmatic approach to the oversupplied domestic US market. This has strengthened the positions of both airlines with a \$1.1-billion infusion of capital from partners and suppliers, financing, cash reserves, and sales of surplus aircraft.

The US government has also indicated its willingness, under an “open-skies” pact with the EU, to lift the ceiling on European investment in US airlines from 25–49%. While a US–EU agreement is still to be ratified, this would bring the US in line with the foreign ownership limits of many other countries, including Australia.

Figure 9: Lufthansa-Swiss Merger



Source: Centre for Pacific Aviation. 2006.

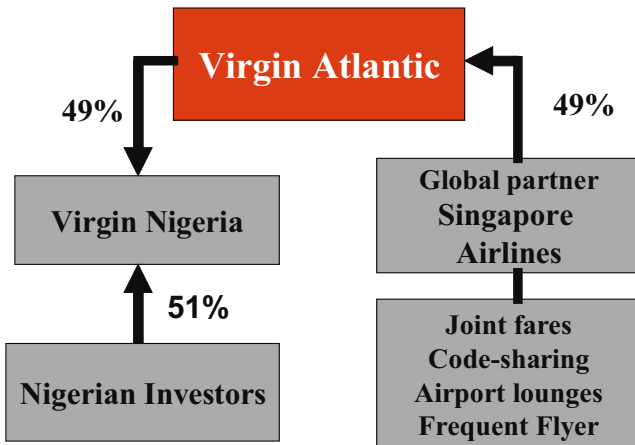
Other Types of Equity Partnerships Develop

Virgin Atlantic–Singapore Airlines. Virgin Atlantic has been instrumental in forging equity partnerships in other parts of the world. The British carrier formed a global partnership with Singapore Airlines (SIA) in 1999, with SIA taking a 49% shareholding. This was essentially a strategic alliance that provided SIA access to the trans-Atlantic market out of Heathrow through Virgin Atlantic. While the partnership has enabled the carriers to code share (footnote 4), share airport lounges and frequent-flyer programs, and operate joint round-the-world fares, the expectations of neither airline have been fully realized yet.

Virgin Nigeria. A more recent initiative is Virgin’s investment in the Nigerian national carrier to form Virgin Nigeria. The Nigerian Government selected Virgin as the preferred strategic investor and technical partner in the country’s first fully private airline in September 2004. Virgin holds 49% of the Virgin Nigeria operation, which serves as the Nigerian flag carrier from a base in Lagos. The other 51% is held by Nigerian investors. The share structure is illustrated in Figure 10.

SriLankan Airlines–Emirates. Sri Lanka allowed the United Arab Emirate’s Emirates Airline to buy 44% of SriLankan Airlines (then Air Lanka) and assume control under a long-term management contract in 1998.

Figure 10: The Virgin Group Structure



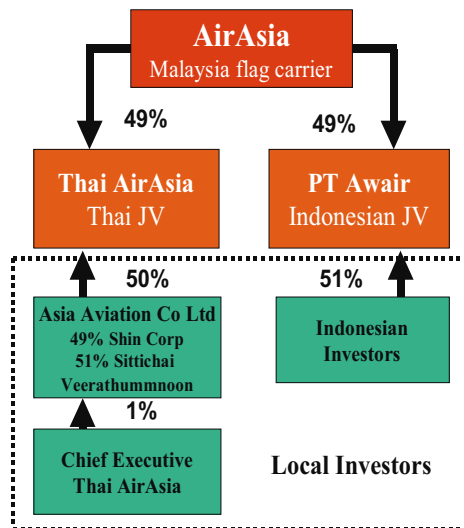
Source: Centre for Pacific Aviation. 2006.

The objective of restructuring the national carrier was to make SriLankan more viable. SriLankan subsequently returned to profitability by leveraging off its alliance, expanding services into Europe, the Middle East, and India, and substantially increasing operations out of its Colombo hub.

The Asian Model

The introduction of new types of LCA structures is creating pressures for regulatory change in Asia. In Thailand, such change has been achieved, with the Government of Thailand lifting airline foreign ownership limits from 35% to 49% to accommodate the entry into the market of AirAsia through its Thai AirAsia vehicle. Thai AirAsia is one of a number of LCAs that have established cross-border joint ventures as a means of accessing new markets and capitalizing on international air rights normally only available to national carriers. Malaysia's AirAsia, for example, has also established a 49%-owned joint venture in Indonesia, Indonesia AirAsia, to complement its Thai interests and expand its regional presence. In the Indonesian case, the introduction of AirAsia saw its transition from a full-service carrier to a low-cost model (the AirAsia joint venture structures are shown in Figure 11).

Figure 11: Structure of Air Asia Grouping



Source: Centre for Pacific Aviation. 2006.

These cross-domestic/international ventures are majority owned by local investors, therefore satisfying national and bilateral requirements, even though they are controlled and operated by a foreign airline. Qantas similarly set up Jetstar Asia in Singapore by creating a joint-venture structure with Singaporean investors (including the majority government shareholder in SIA, Temasek) holding 55.7% of equity. Jetstar Asia recently took this a step further by acquiring another Singaporean low-cost operator, Valuair, and merging the two under the Orangestar holding company. This provided Qantas with a vehicle for expansion in the high-growth Asian market. Qantas has since sought to build on this by coordinating Jetstar Asia/Orangestar operations with its new Jetstar International services out of Australia. In another initiative, Tiger Airways—an LCA partly owned by Singapore Airlines—has entered into a commercial and operational joint venture with a Philippine domestic carrier (SEA Air), which will see Tiger’s aircraft operate in Philippine domestic and international markets.

Slow Movement toward Liberalization in the Pacific

On a broad scale, aviation liberalization in the Asia-Pacific region is being accelerated by the development of bilateral trade relations, including a proliferation of free trade agreements between countries. Moves to establish multilateral structures within or outside economic blocs are a logical extension of this, but much more difficult to achieve.

The Association of Southeast Asian Nations (ASEAN) has become a lynchpin for multilateralism in the region by moving to introduce full air cargo and passenger liberalization between member countries by 2015. This will build on various subregional initiatives, including an “open-skies” agreement achieved in 2004 between Brunei, Singapore, and Thailand; and the multilateral air cargo agreement between Brunei, Cambodia, Singapore, and Thailand. The recent agreement with India providing access for ASEAN airlines to Indian destinations was another significant step forward.

The PRC will be an integral component of any future multilateral structure. With the PRC considering an air services agreement with ASEAN, and India planning to link with the ASEAN multilateral initiative, the potential exists for a continuum of liberalization to develop throughout Asia.

The more liberal bilateral structures being implemented regionally indicate an increasing acceptance by Asian governments of the economic benefits derived from aviation, particularly for regional centers and infrastructure. This realization has been hastened by ambitions to capitalize on the enormous growth potential.

The Pacific Perspective

Efforts to bring the Pacific under a single air services agreement, the Pacific Islands Air Service Agreement (PIASA), have experienced mixed success. While the development of a single Pacific market through PIASA has been seen as an important step toward greater regional cooperation, the continued opposition and nonparticipation of the Fiji Islands significantly dilutes its potential effectiveness.

PIASA was endorsed by the Pacific Island Forum in 2003. One of its key objectives was to establish a single aviation market in the Pacific. If achieved, this would facilitate air service provision and encourage greater efficiency and competitiveness by allowing multiple designations of carriers, ownership and control rules that are more liberal, unlimited capacity, third country code sharing, and expansive aircraft leasing provisions.

Ten FICs have signed PIASA to date, including the Cook Islands, Kiribati, Nauru, Niue, PNG, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. The Fiji Islands does not support PIASA. Three other FICs—the Federated States of Micronesia (FSM), Palau, and RMI—also have not yet signed.

PIASA is not yet in force; this occurs 30 days after the deposit of the sixth ratification instrument. As of May 2007, five FICs—Cook Islands, Nauru, Samoa, Tonga, and Vanuatu—had provided a ratification instrument.

Liberalization of ownership and control provisions has occurred on a one-off basis. An example was the restructuring and partial privatization of the Polynesian Airlines, which created Polynesian Blue. Polynesian Blue, while still 51% held by the Government of Samoa and other local interests, is controlled by a foreign entity, Australia's Virgin Blue. In another case, the Government of the Fiji Islands intervened when 50% foreign-owned Air Fiji sought to operate in Tonga, withdrawing its license to operate the route in favor of Air Pacific's plans to launch a B737 service between Tonga and Suva. This encouraged Air Fiji to pursue partnerships

to establish operations outside the Fiji Islands. Its Airlines Tonga joint venture in the Tongan domestic market is an example. Air Fiji also has extended its operational reach through an agreement to supply technical and commercial services, aircraft, and pilots to Solomon Airlines.

Code Sharing and Other Partnerships Grow out of Necessity

The development of further code-sharing (footnote 4) arrangements between operators is supporting liberalization within the Pacific region, and may be viewed as an acceptable “soft option” for those countries wishing to open their markets progressively. Code sharing offers an airline extended market access by “piggy-backing” on another carrier’s services without having to commit capital and cash flow to establish its own operations. It also provides opportunities for national carriers to grow markets with minimal competitive risk while preserving air service rights.

Code sharing is a relatively painless form of liberalization, but has practical limitations in terms of access to capacity and pricing. The demise or wholesale withdrawal of some carriers has presented opportunities to establish code-sharing arrangements. This type of partnership is already widely used by the larger airlines as a means to leverage island markets that would otherwise not be viable (see Table 16). Qantas and Air New Zealand are both very active in this regard.

The problems that Air Marshall Islands, Air Kiribati, and Solomon Airlines experienced also provided an opportunity for Air Nauru to enter into code-share associations until the suspension of its services in December 2005.¹⁰ Air Nauru essentially provided either directly and/or through code-share arrangements interisland service and—in some cases—links to Australia for Kiribati, RMI, and Solomon Islands.

Aside from code shares, other forms of cooperation have emerged as operators such as Pacific Blue penetrate the Pacific market. Air Fiji operates agreements with Pacific Blue and Air New Zealand/Freedom Air to provide service linkages in the Fiji Islands domestic market. This has strengthened Air Fiji’s revenue flow through sale commissions and passenger feed from inbound flights by its partners. Air Fiji is also exploring other commercial

¹⁰ Air Nauru ceased providing services in its own right after the US Export-Import Bank repossessed its B737-400 because the Government of Nauru defaulted on lease payments. However, Nauru continued to provide charters on its routes for an interim period.

Table 16: Forum Island Country and French Carriers and Code-Share Partners

Airline	Code-Share Partner	Operator	Route
Forum Island Country Carriers			
Air Vanuatu	Qantas	Air Vanuatu	Sydney, Brisbane–Port Vila
	Aircalin	Air Vanuatu	Noumea–Port Vila
	Air New Zealand ^a	Air Vanuatu	Auckland–Port Vila
Air Pacific	Qantas	Air Pacific	Nadi–Sydney, Brisbane, Melbourne, Honolulu, Los Angeles, Auckland, Canberra, Christchurch
	Qantas	Qantas	Auckland–Wellington–Christchurch
	American Airlines	Air Pacific	Los Angeles–Fiji Islands
	Air Vanuatu/Solomon Airlines	Air Pacific	Nadi–Port Vila–Honiara
	Air Kiribati	Air Pacific	Nadi–Christmas Island–Honolulu
Polynesian	Air Pacific	Air Pacific	Apia–Nadi
Air Niugini	Qantas	Air Niugini	Cairns, Sydney, Brisbane–Port Moresby
French Island Carriers			
Aircalin	Qantas	Qantas/Aircalin	Sydney, Brisbane to Noumea
	Air New Zealand	Aircalin	Noumea–Auckland
Air Tahiti Nui	Qantas	Air Tahiti Nui	Auckland–Papeete and Papeete–Los Angeles
		Qantas	Auckland–Sydney
	Japan Airlines	Air Tahiti Nui	Tokyo/Osaka–Papeete

^a Subject to respective government approval.
Source: Centre for Asia Pacific Aviation. 2006.

associations in the region through aircraft supply (capitalizing on its relationship with major shareholder China National Aero Technology) and provision of technical services.

Limited Progress toward a Regional Solution

The prospect of a subregional airline emerging to take collective responsibility for air services in the Pacific has been discussed for many years. Indeed, the concept of greater coordination among FICs to achieve a sustainable air service structure is a stated ambition of the Pacific Island Forum under transport reform principles agreed upon in 2004 (Appendix 7).

Despite this, no significant progress in terms of cross-border agreements has been made. While moves in this direction have been thwarted by interisland rivalry and failure to secure consensus on operational and other issues, changes occurring in the regional environment suggest that subregional operation(s) may become more feasible. These changes include: (i) the development of a harmonized regional aviation regulatory system through the Pacific Aviation Safety Office (PASO); (ii) more intense financial pressure on national carriers leading to, in a number of cases, business failures; and (iii) the support received from a majority of countries for the establishment of PIASA.

The potential benefits flowing from the PIASA initiative are limited by the staunch resistance by the Fiji Islands and a few other island states to the concept of liberalization on a regional scale. There has been some progress, however. Air Pacific, Air New Zealand, and Pacific Blue/Polynesian Blue have adopted de facto roles as regional operators, providing linkages to and from the international hub markets. Air Pacific services five island markets through the Fiji Islands. Air New Zealand serves eight islands, mostly out of Auckland. The Virgin Blue Group serves five islands from Australia and New Zealand. Importantly, however, services between the islands—particularly those with very small markets—receive minimal coverage, usually through local turboprop operators with limited capacity and frequency. Full harmonization of the regional market would dramatically increase the benefits.

The Our Airline Initiative

Air Nauru has viewed itself for some time as a nascent subregional operator. Its efforts in this regard most recently focused on the Central Pacific grouping of the Solomon Islands, Nauru, RMI, and Kiribati. This

effort was disrupted in December 2005 when the Export-Import Bank of the US repossessed the airline's only aircraft for defaulting on lease payments. In June 2006, the Government of Nauru announced it had secured a replacement B737-300, and indicated that it would advance its subregional aspirations by re-branding as Our Airline, specifically with a view to pursue partnerships with other islands. Discussions have taken place in this regard with FSM, Kiribati, RMI, Solomon Islands, and Tuvalu. Given the limited commercial value of the former Air Nauru system, the Government of Nauru views that the only feasible way to ensure a more sustainable maintenance of air services is to seek the participation of the island beneficiaries.

Nauru Air Corporation (NAC)—the holding entity for Air Nauru (now Our Airline)—underwent some restructuring and rationalization during its non-operation, with further improvements planned. By mid-October 2006, twice-weekly services resumed under the Our Airline banner between Brisbane, Honiara, Majuro, Nauru, and Tarawa following regulatory approval of the replacement aircraft.

In the meantime, the Government of Nauru was attempting to develop an acceptable establishment and working model for the regional venture, which would be managed and operated by NAC. The Smaller Island States Leader's Meeting supported the initiative. The Government of Nauru would remain a core shareholder in the venture, and lease the B737 to NAC on a subsidized basis for use in the multilateral service. The Government of Nauru would provide the aircraft at about two thirds of the normal leasing cost until 2012, retaining funds for heavy maintenance. These subsidies would be essential to Our Airline during the establishment and early operational phase of the joint venture.

The viability of this venture would depend on support by potential partner governments, particularly Solomon Islands. Such support will be influenced largely by projected returns from the Our Airline operation. If these returns were to fall short of projections for whatever reason, or financial difficulties were encountered by the airline, the island shareholders would be required to provide capital funding. A similar situation could occur if insufficient funds were available for the maintenance reserve, which would be provided through lease payments from NAC.

While the joint venture model is still being refined, the proposal provides for other islands to take equity in the venture in return for designating Our Airline as their flag carrier. The latter would provide Our Airline with access to a pool of available traffic rights so it can further

develop services and explore other route options, particularly on fifth freedom (see Appendix 8) sectors. Air Nauru was a designated airline for RMI and has been negotiating—unsuccessfully to date—similar arrangements with Kiribati.

The Our Airline model offers an opportunity to coordinate with existing national carriers in partner islands, including Solomon Airlines, Air Kiribati, and Air Marshall Islands, which service their respective domestic markets with government support. The Our Airline model could enhance the viability of these national carriers by providing, for example, interlined¹¹ and/or code-shared services through ticketing between international and domestic operations; joint supply of support services (sales, marketing, distribution, and revenue accounting systems); or joint purchasing (fuel, insurance, and aircraft).

¹¹ Interlining is when passengers, baggage, and freight are transferred from one carrier to another using only one ticket or one check-in procedure from point of departure to destination.

Challenges and Responses in Selected Forum Island Countries

Case studies were undertaken of aviation development in four important Pacific markets, encompassing six FICs: (i) the Fiji Islands; (ii) Solomon Islands; (iii) Tonga, Samoa, and Niue; and (iv) Vanuatu. Each case study provides a brief overview of the economy, trade, and tourism in the subject FIC(s). The aviation market (passenger and freight) and past and recent developments concerning air service provision are examined, as are existing constraints, progress toward reform, lessons learned, and prospects for the future.

These FICs have been selected because of their relevance to the regional aviation market and because their recent responses to challenges in their aviation sectors appear to promise movement toward sustainable improvement, with potential for wider application in the region. The case studies may be seen in four appendixes, as described below.

1. **Republic of the Fiji Islands**, the central island and hub market for the Pacific and base for the growth of Air Pacific. Case study in Appendix 1.
2. **Solomon Islands**, where the “virtual-airline” structure was tested, and privatization of the national carrier has been under consideration. Case study in Appendix 2.
3. **Tonga, Samoa, and Niue**. These are three interrelated island markets where low-cost carriers are influencing air service provision and tourism development. Case study in Appendix 3.
4. **Vanuatu**, another market subject to low-cost carrier operations where innovative solutions to air service supply are being pursued. Case study in Appendix 4.

Lessons from the Case Studies

The four case studies focus on different approaches to problems of service sustainability that are common to many, if not most, of the Pacific island nations. The case studies examine how governments and/or national airlines responded to developments and issues that threatened their air services. The key lessons from the case studies include:

- The Fiji Islands experience demonstrates the benefits of a commercial approach to aviation provision. The growth of air traffic has increased the potential of the Fiji Islands as a Pacific hub, and brought greater tourism wealth to the island economy.
- The entry of new LCAs to the Fiji Islands, Samoa, and Vanuatu has stimulated the growth of tourism to those countries that have granted access.
- Attempts by many governments to maintain control of national flag carriers (NFCs) have not been sustainable because of limited financial capacity, lack of scale to maintain safety and economic regulatory systems, and limited market synergies created by protectionism.
- Samoa's experience with the formation of Polynesian Blue demonstrates a viable and perhaps preferred alternative to government ownership and control, through a public-private joint venture with appropriate divisions of risks and returns.
- Vanuatu's exploration of private sector participation suggests that governments need not be directly involved in "solutions" to provide air service for supply to expand.

In several cases, new structures evolved out of necessity because of crisis, such as the collapse of Royal Tongan Airlines, the withdrawal of Polynesian Airlines from the Niue-Auckland sector—leaving Niue with no jet services—and the suspension of Solomon Airlines' air operator's certificate.

Similarly, the significant and rising losses associated with Samoa's Polynesian Airlines were part of the catalyst for the establishment of Polynesian Blue, and the entry of low-cost carriers into the Australia-New Zealand-Fiji Island market was at least partly responsible for the planned move of the Fiji Islands' Air Pacific into domestic services.

While still under development, the private sector model in Vanuatu aimed at reestablishing Port Vila-Melbourne services provides an interesting

alternative approach. The participation of the tourism sector and airlines in this charter-style venture will depend on sufficient support from private interests.

The various emerging models from the case studies serve to underline some options that may offer opportunity for wider application. An assessment of the advantages and disadvantages of these options for service provision are summarized in the table below.

Table 17: Assessment of Development Strategies in Case Studies

Case Study	Emerging Options	Positive Aspects	Negative Aspects
1. Fiji Islands	LCA entry and development	<ul style="list-style-type: none"> ▪ Strong tourism growth, reduced seasonality; ▪ Improved links to Australia and New Zealand; ▪ More competitive, lower fares; ▪ Greater diversity (“safety net” for services); and ▪ Requirements for additional tourism infrastructure. 	<ul style="list-style-type: none"> ▪ Pressures on returns of national carrier;
	Vertical integration	<ul style="list-style-type: none"> ▪ More competition for domestic operators and ▪ Strengthens Air Pacific, extends regional participation. 	<ul style="list-style-type: none"> ▪ Upsets equilibrium in the Fiji Island’s domestic market; ▪ Threat to Air Fiji; and ▪ Entrenches national carrier domination.
2. Solomon Islands	Privatization	<ul style="list-style-type: none"> ▪ Stability and capital brought to struggling Solomon Airlines; ▪ Government burden reduced; ▪ Opportunity to introduce experienced operator, enhance efficiency; and ▪ Offers benefits of restructure, service development 	<ul style="list-style-type: none"> ▪ Likely loss of local jobs and ▪ Process requires additional funding.
	“Virtual- airline” structure	<ul style="list-style-type: none"> ▪ Commercial solution; ▪ Limits offshore risk exposure; and ▪ Reduces capital requirement, pressure on government. 	<ul style="list-style-type: none"> ▪ Revenue benefits reside externally; ▪ Risk of service withdrawal; and ▪ Can be costly (e.g., wet leases^a).

Table 17: Assessment of Development Strategies in Case Studies (continued)

Case Study	Emerging Options	Positive Aspects	Negative Aspects
3. Samoa, Tonga, and Niue	Polynesian Blue joint-venture model	<ul style="list-style-type: none"> ▪ Transparent process; ownership, control structure; ▪ Improved governance; ▪ Reduces government capital requirement, need for ongoing support; ▪ Entry of stronger, low-fare operator, and better returns; and ▪ Enables restructuring of Polynesian Airlines. 	<ul style="list-style-type: none"> ▪ Up-front cost of establishment; ▪ High-redundancy payouts; and ▪ Potential underwriting cost.
	Route-specific subsidized service (Niue)	<ul style="list-style-type: none"> ▪ Realistic outcome, transparent underwriting arrangement with New Zealand; ▪ Greater service stability, stronger operator; and ▪ Limited frequency. 	<ul style="list-style-type: none"> ▪ Nonmarket solution, establishes monopoly.
4. Vanuatu	Private sector risk-sharing model	<ul style="list-style-type: none"> ▪ Innovative, private sector participation; ▪ No direct government funding (indirect support through Air Vanuatu); and ▪ Closer aviation–tourism nexus. 	<ul style="list-style-type: none"> ▪ Possible risks due to on-selling, market-based structure.

^a Lease of aircraft with crew.
LCA = low-cost airline.

Source: Centre for Asia Pacific Aviation. 2006.

Moving to a More Sustainable Air Services Structure

The Policy Approach: Laying the Foundation for a Sustainable Solution

This section examines the objectives of aviation reform in the Pacific, the priorities for governments, and approaches to deregulation as a means of facilitating reform and improvement in providing air service.

The Objectives of Reform

The basic objective of the reform process, whatever that may entail, is to ensure long-term, stable, and robust provision of air services at reasonable prices and frequencies.

An NFC is not necessarily required to achieve this objective, though it may, in some cases, be perceived as a justifiable option as a last resort. Recent developments show that larger external operators, given adequate commercial incentive, are willing and able to displace the need for island states to maintain their own international operations (Tonga and Niue are current examples).

For island states where tourism is an important source of economic prosperity—the Fiji Islands, Samoa, and Tonga, in particular—air services should support sectoral development, including expatriate travel, especially for groups that provide remittances.

In terms of freight requirements, the provision of adequate belly space capacity needs to be available, particularly for imports of essential

commodities. Where applicable, exports such as fresh fish should be linked by air services at adequate frequency to, at least, long-haul connecting hubs.

Solutions must reflect and accommodate market realities. Artificial solutions will no longer work, as they will be undermined by powerful commercial forces that are now a fact of life. Any solutions also must accommodate some basic, inflexible, operational limits in the evolving system. Principal among these are long, thin routes; the cost of acquisition and operation of long-haul aircraft; the poor economics of operating single aircraft or small fleets; seasonality of demand; and infrastructure inadequacies.

Any solutions must also address a frequent problem that compounds the difficulties inherent in these inescapable operational limits: poor business decisions by airlines and, on occasion, by governments—with only nominal reference to airline management—particularly concerning fleet choice, route planning, and use of inappropriate aircraft on certain routes. The very nature of certain routes, with only small markets to anchor them, has been a fundamental issue in the region.

The Challenges Ahead

Air service provision on at least some of the main arterial routes linking the islands with Australia, New Zealand, and the Fiji Islands is in a more robust condition than what existed 2 years ago. Real progress has been realized with the establishment of greater competition on these routes, with subsequent gains in volume and returns, and in economic benefits for tourism-based islands in particular. Building on this progress through the development and application of appropriate policy, and the provision of suitable infrastructure to support growth, will be central to capitalizing on what has been achieved to date.

The increased involvement of Air Pacific and Air New Zealand, coupled with the entry and growth of Virgin/Pacific Blue, has provided a solid foundation that did not previously exist. Fares are more affordable and service coverage is generally more comprehensive. The routes involved are, for the most part, commercial in nature and responsive to demand, capacity, and competitive requirements. There is nothing to suggest that, subject to the relaxation of regulation, this will not continue given the stability and strength of the major operators involved.

However, impediments associated with access to some island states remain. The benefits flowing from larger airline involvement will only

accrue to those countries if they allow it. Most islands still operate restrictive air service agreements on routes other than those linking them with Australia or New Zealand, where agreements tend to be more liberal. The perennial risk of exposure to market forces is that services can be reduced or withdrawn in the event of a downturn in demand and returns. This is inevitable in a commercial environment where the provision of capacity is aligned with demand—however unpalatable that may be for the islands involved. However, airlines do not decide to rationalize services lightly, given consideration of future relations with the country involved and the substantial costs of scaling down, then rebuilding once the market recovers.

While the pressure on national operators will increase over time and their market shares are likely to decline, load factors will improve. There are considerable advantages to restructuring costs to maintain viability and develop more commercially. This is market reality. Governments need only support routes that cannot support themselves. If budgetary constraints preclude financial support at any meaningful level, other options should be considered, such as offering subsidized contracts to external operators or providing access to domestic markets. This is especially the case where it is more sensible to introduce outside operators than to continue to invest capital in inefficient local airlines.

The issues that will continue to provide the greatest policy challenges for governments include:

- building on the progress achieved in recent years, with the introduction of more robust operators on key sectors;
- determining a regulatory balance between light-handed, or minimal, controls to facilitate development, and appropriate levels of regulation for nonviable routes;
- maintaining marginal domestic operations;
- overcoming capacity limitations and other problems with the movement of air freight to, from, and between the islands; and
- addressing the impact of seasonality on passenger traffic as well as freight, which compounds existing problems.

Facilitating Further Change through Deregulation

The policy challenge for island governments is to facilitate rather than impede the process of commercialization of air services that is taking hold

in the Pacific. This entails governments minimizing—even avoiding—economic regulation to enhance the operating freedom of carriers and—by extension—opportunities for resolution of service deficiencies. If market restrictions are removed, or at least relaxed, more solutions become achievable.

Regional liberalization has progressed at an uneven and unconvincing pace. Commercial realities, more than consensus, have driven successful outcomes to date, but such realities and outcomes are generally specific to circumstances in particular islands and the state of their national carriers. It is clear, however, that the ability of island governments to protect their markets from new competitive inroads is greatly diminished, and becoming less so. Put simply, the protective walls that can be built are no longer high or thick enough to keep out the waves of change. Protective measures are likely to be counterproductive, cutting off a country from benefits enjoyed by its neighbors. The implications for air services of an island state seeking to prevent change vary, depending on the nature of its existing bilateral relations and the status of its national airline (where one exists).

Services connecting with Australia and New Zealand. Clearly, change is inevitable in services between Australia and New Zealand and many island nations, and should not now be prevented. Such change is a consequence of the introduction of low prices and, in some cases, new airlines on those major routes. The result has been very substantial increases in inbound tourism and significant national economic benefits, with limited or no negative financial impact on concerned incumbent national airlines.

Services connecting with other island states. There are, in practice, few obstacles to prevent greater access by other island states' airlines within bilateral agreements. However, these rights can be applied selectively, or islands can refuse to enter into agreements. There are several reasons for an island state to adopt this strategy. One is where a country has what it considers a stronger position under the bilateral than its partner is. Another is when there is concern that change could generate disadvantage for the country, such as financial damage to the flag carrier. This can occur as the result of a foreign airline being granted access, or by allowing dual designation so that another national airline gains access to what is a monopoly route. A third reason is when the other state requires unacceptable grants of rights in return for changes. A further complication can occur where a foreign operator acts as *de facto* international flag

carrier for an island, as in the case of Our Airline with Kiribati. While the Nauru–Kiribati bilateral agreement stipulates consultation with Nauru on any proposal to extend air rights by Kiribati, this stipulation was apparently ignored when Kiribati granted access to Air Pacific on the Nadi–Tarawa route.

Domestic services. There is nothing to prevent a state from either granting or proscribing access to its domestic markets by foreign airlines.

The fact that traditional regulation no longer has the same impact on the market means that governments must continually reassess their bilateral and multilateral strategies if they wish to achieve goals. Maintaining the existing regulatory structure will not preserve the status quo in evolving international markets. However, regulation may be necessary to maintain a viable situation on low-volume domestic links. If, for example, cabotage (see Appendix 8) was allowed, there is a risk that foreign entry could occur selectively, focused only on the (probably) small number of routes capable of profit generation. This could have the effect of further marginalizing the existing carrier and may result in governments having to increase subsidy to maintain a spread of services within the domestic system.

While the presence of an incumbent carrier, by itself, could deter entry, there is also potential for a more robust and better-resourced entrant to take up domestic sectors with the objective of forcing the withdrawal of the home carrier. Thus, allowing cabotage may remove the ability of governments to manage the process of establishment of more sustainable air services. There are circumstances, however, where cabotage could be provided as a means of attracting operators to serve domestic sectors as, for example, an extension of regional services. Governments need to assess the consequences—in terms of both opportunity and detriment—before committing to a course of action.

Bilateral Relaxation of Entry and Route Controls

Bilateral air services agreements among the island states tend to be much more restrictive than their respective agreements with Australia and New Zealand. For the latter, the relatively open market access already in place suggests a limited scope for the larger countries to seek further liberalization of bilateral links with the island states. If the island states seek further liberalization of third and fourth freedom rights (Appendix 8), or intermediate fifth freedom access, it is likely that these would be

granted. Beyond fifth freedom, rights may be contentious, but there are currently very limited realistic opportunities in this regard.

One of the main reasons incumbent island airlines have opposed inter-FIC liberalization is the concern that subsidized flag carriers would embark on unprofitable, non-commercial, and disruptive competition. Following the withdrawal of Royal Tongan Airlines as an international operator and the establishment of commercially based Polynesian Blue, the prospect of this occurring is considerably reduced.

While amendment of the respective air services agreement is one way of liberalizing, it also may be possible, exceptionally, to agree to temporary access on a predetermined basis under, for example, a Memorandum of Understanding, or Exchange of Notes. For commercial reasons, such temporary rights exchanges need to be of reasonable duration to permit the airline effective start-up and wind-down operations.

In some cases, a state may consider it desirable to invite a foreign operator to provide domestic services, either on a temporary basis or without restriction. This is entirely within the discretion of the state. Where a foreign airline already operates internationally to an island state, for example, the aircraft used could be extended for use on one or more domestic sectors. This can be a valuable option, generally concluded on a contract basis.

Where a state wishes to invite a foreign airline to provide its domestic services, the preferred process is to invite tenders, specifying the terms of the requirement in some detail. Terms can be both qualitative and quantitative. With this approach a transparent and, generally, best option can be achieved under the best conditions.

For practical purposes, any liberalization of access to French airlines based in the Pacific will generally require negotiation with Metropolitan French authorities. There are potential benefits from integrating the strengths of the French carriers into the Pacific system. It is something of an anomaly that they currently operate within the region, with little or no contact with FIC states.

Freight can be a valuable supplement to passenger revenues, as is excess baggage on some routes. Thus, although strong reasons for liberalizing access for all-cargo operations exist, there can be commercial impacts on passenger operations. Consequently, even this sector remains relatively closely regulated in the Pacific. Moreover, to generate economic operations, wider use of fifth freedom rights is generally necessary—and these are not correspondingly available. Charters may offer some exceptions

in this respect, but their ad hoc nature offers little continuity. In general, even with considerable liberalization, there are few sectors where all-cargo operations, in any event, would be sustainable in the long term.

The Multilateral Opportunity

PIASA offers a hard-won agreement as a way forward for the nations of the Pacific. PIASA framed a compromise among the island states and gained the support of both ICAO and IATA. It provides a step-by-step approach to reducing barriers to operation by other FIC flag carriers among the island states. It does not provide initially for additional entry by major country airlines, such as those from Australia, New Zealand, French Pacific entities, or the US. The agreement is designed to liberalize progressively, to allow island states and their airlines time to adapt to a changing environment.

PIASA has been rejected by one country, the Fiji Islands, largely on the basis that it purportedly threatens the viability of one or more NFCs. It has also been accused of many other faults, in some cases implying that air services among FICs would deteriorate if PIASA were to enter into effect.

These concerns are dispelled by the findings of the study *Impact Assessment of Pacific Island Air Services*,¹² prepared for the Pacific Islands Forum Secretariat in 2005. According to the study, liberalization of all 14 FIC air transport markets would yield annual aggregate net benefits of \$64 million, with airline profits actually increasing by \$3.2 million consequently (some 76% of the airline-related gains would accrue to the Fiji Islands). While benefits would be unevenly distributed between the island operators, the study concluded that none would lose money. Further, the report found that some \$41 million of the gains would come from additional spending by inbound tourists (\$27 million of that from tourists switching from French territory destinations to take advantage of cheaper fares to FICs).

As PIASA is uniquely available for FICs, there are strong grounds for continuing to promote the multilateral option, given the regulatory and operating changes occurring globally and that have occurred within the region in the past year. PIASA offers the opportunity to move to a long-term regulatory, operating, and marketing framework that responds to new market realities and maximizes benefits to FICs.

¹² McGregor and Company, 2005.

Airline Privatization and Public–Private Partnerships

Partnerships between large and small airlines, as opposed to those between small ones, are becoming desirable—even inevitable, at least on routes between Australia/New Zealand and the island nations. Such partnerships can take various forms, from code sharing and interlining to more complex relationships involving significant input at management and technical levels. Qantas with Air Pacific and Virgin Blue with Polynesian Blue are examples of the latter.

As part of the process of liberalization, FICs are faced with the question of whether government-owned airlines are compatible with a liberalized regulatory environment. In theory, a state-owned airline could operate commercially and capitalize on greater market access. However, prior experience in the Pacific strongly suggests otherwise. Expansion internationally has often produced disastrous and very costly outcomes for island governments. Airlines generally require ready access to capital to respond effectively to liberalization opportunities. Such access is rarely possible where governments—with their protracted approval practices—are involved. Consequently, privatization becomes desirable and probably inevitable where a government owns an international airline.

Privatization of a government-owned airline most likely implies purchase of equity by foreign airlines, as exemplified by the Polynesian Blue setup. One way of facilitating this process is to remove, or at least relax, foreign ownership rules in air services agreements between FICs. However, privatizing the flag carrier is not a prior essential to achieving a partnership arrangement with a foreign airline. However, it does often offer a degree of comfort to the partnering airline that issues such as corporate governance will be more predictable and removed from political intervention—essentials for a commercial operation. For this reason, it will generally be desirable to combine privatization with an approach to potential partners. As with the process of route tendering, privatization of an airline is desirably the subject of a tender, public or closed. If the latter approach is utilized, as wide a range as possible of prospective suitors should be sought.

Strategy Options to Achieve Reform

The various strategies available to deliver greater air service sustainability are discussed in greater detail in this section. These strategies can be

applied individually or combined. The policy environment required to facilitate desired outcomes varies accordingly.

Previous experience with aviation reform in the Pacific region and on specific initiatives examined in the case studies points to strategies appropriate to different route types and requirements. Later in this section, the different approaches are aligned with the four types, or levels, of air service in the region. This reflects a need for the application of strategy by governments to be consistent with:

- market and route-specific requirements (i.e., whether services are for tourism, trade, and/or community purposes);
- whether routes are commercial or non-commercial (i.e., whether demand is sufficient to support competition, or the routes have limited or no commercial appeal); and
- growth prospects/potential for future development.

A range of models is available to address improvements in service sustainability, but the most appropriate one for a particular island or route will depend on the above issues. In each case, it is important that the model chosen is workable and capable of delivering the desired objectives on a sustainable basis. This outcome clearly has not been achieved often in the past, to the detriment of fragile island economies and the viability of service provision.

Overview of Available Strategies

In general, the most effective strategies are the least complicated, recognize budgetary and resource constraints, and seek realistic outcomes in the context of the political, commercial, and operational environment.

Private sector participation may drive these arrangements with strategic or commercial objectives. Examples include Polynesian Blue, which enables Virgin Blue to access the Samoan market and Samoan-held rights while optimizing utilization of its aircraft. Other beneficiaries of private sector participation are Air Pacific—where the cornerstone shareholding of Qantas underpins its operational and commercial processes through their commercial agreement—and Niue, through its apparently successful relationship with Air New Zealand.

Commercial agreements involving code sharing, aircraft leasing, and/or provision of support services (administration, training, etc.) have

also enhanced revenue generation and lowered costs for some smaller operators. Air New Zealand, Air Vanuatu, Air Pacific, and Air Fiji have been particularly active in this regard. Such arrangements usually offer mutual benefits, including strategic links, better utilization of equipment and resources, and expanded market access for the larger airlines. The “virtual-airline” model established by Solomon Airlines is one such example. Solomon Airlines effectively outsourced its international operations through wet-lease¹³ agreements with Air Vanuatu and Qantas. These services were flown under the Solomon Airlines name, while its operational role was limited to administration and ticket sales.

The primary role of government is to facilitate outcomes that are either commercially driven (competitive entry) or have a commercially based structure (e.g., subsidized contract arrangements). Such outcomes can be achieved in a number of ways, as outlined below.

- 1. Risk sharing.** Governments should be prepared to provide ongoing support for services covering non-commercial sectors. There are options for maintaining air service provision with appropriate government support. The risk-sharing structures can take several forms.
 - **Direct or indirect subsidies**, comprising payments to contracted providers to compensate for operating losses on routes that cannot sustain commercial returns for reasons of passenger density and mix, fare pricing, and/or limited growth potential.
 - **Underwriting arrangements**, whereby, for example, governments agree to cover losses incurred by operators if passenger loads fall below certain levels (as in arrangements in Niue and Samoa).
 - **Public-private partnerships**, could entail governments taking up equity in joint ventures, or entering into commercial partnerships with private operators for the supply of air services. Such a relationship is similar to the Polynesian Blue entity, which is effectively a joint venture overlaid by a commercial arrangements for service provision. This type of partnership ensures that governments maintain a direct involvement in the oversight of essential services, and potentially benefit from the dividend flow. The downside is that establishment costs can be high, and government bears joint responsibility for capital provision to the joint venture should it be required.

¹³ Aircraft lease with crew.

- **Public–public partnerships.** Governments can also seek to engineer joint provision arrangements with one or more island governments through a cross-border joint venture. The current attempt by the Government of Nauru to align with a number of neighboring islands through the proposed Our Airline subregional structure will again test whether a multilateral airline is possible in the Pacific.
 - **Regional Cooperation.** Cross-border cooperation has not proved achievable in the past due mostly to conflicting national interests and concerns about equitable distribution of benefits. It has developed on a bilateral rather than multilateral basis. Examples are Our Airline serving as the national carrier for RMI and Air Vanuatu providing leased aircraft to Solomon Airlines. The bitter dispute that frustrated Air Pacific’s bid to become a single regional carrier for the Pacific during the 1980s illustrated how multiple government involvement can impede rather than facilitate solutions. Some participants in that venture refused to provide additional capital, and there were concerns that benefits from the airline were not being distributed equitably. Therefore, other island shareholders, including Nauru and Samoa, became disenchanted and established their own regional airlines. The result was generally disastrous as the market became saturated with capacity and all operators incurred substantial losses.
2. **Tendering** of domestic or interisland services. Governments can establish processes to invite offers for the provision of contracted services through selective or open-tender arrangements. This provides an opportunity to test the extent of market interest and select the most appropriate tender according to criteria specified in the Request for Tenders documentation. Another option may be to conduct a Request for Proposals, which encourages prospective providers to structure more innovative solutions within a much less prescriptive framework.
 3. **Privatization** of local airlines. Governments can move to introduce private operators and other investors by developing and managing a bid process, including preparatory planning and financial work. Offers could be invited for all of the airline or a smaller shareholding. Ideally, an established air service provider capable of bringing expertise and resources to the national carrier would assume an anchor shareholding. Privatization also provides an opportunity for government to recapitalize

their airlines and extract some return from their historic investment in air services.

- 4. Liberalization.** The adoption by governments of a more liberal operating environment, in itself, can provide a catalyst for service reform. For example, provision of cabotage would enable an external operator to enter domestic markets. This could be achieved in a managed process that ensures that only carriers capable of providing these services on a sustainable basis can take up the opportunity. Alternatively, governments could expand or remove limits on existing bilateral agreements, or enter into “open-skies” arrangements on a unilateral, bilateral, or multilateral basis (e.g., through PIASA). Solomon Islands stated its ambition in 2005 to enact an “open-skies” policy and to ratify PIASA as a means of attracting more operators and innovative route structures. It views Honiara as a potential hub for east–west traffic in the Pacific.

Governments clearly have a stake in maintaining and, if possible, developing essential air links to their islands. It is also in the national interest to achieve solutions that do not invest in inefficiency and waste scarce resources while providing for improved services at affordable prices for passengers and freight. This is a difficult balancing act for Pacific governments, as experience has shown.

Application to the Four Pacific Route Types

The strategies outlined above are aligned in Table 18 with the appropriate route types in the Pacific, according to four levels of air service operation prevalent in the Pacific.

The various approaches are not mutually exclusive and may be combined to provide greater benefit. For example, tenders of Level 1 and Level 2 routes could be accompanied by subsidy arrangements to make them more attractive to operators.

The nature and mix of strategic options need to be aligned with the specific air services requirements of island governments and their resource availability. To some extent, these options should be approached in an integrated manner because, at each level, they are interconnected and will have overlapping effects. For example, the reestablishment of point-to-point jet services between Niue and Auckland was achieved with the assistance of a performance-based underwriting arrangement.

Table 18: Development Models for the Four Route Types

Route Type	Description	Characteristics	Options
Level 1	Domestic	Mostly uncommercial	<ul style="list-style-type: none"> ▪ Subsidized arrangements; underwriting (e.g., Niue arrangement). ▪ Risk-sharing structure (as with Vanuatu). May be public-private partnership. ▪ Subregional model (public-public partnership, e.g., Our Airline). ▪ Tendering of services. ▪ Privatization. ▪ Commercial partnership.
Level 2	Smaller regional routes (turboprop focused)	Generally low traffic, little commercial value	
Level 3	Regional point-to-point jet routes	Commercial jet routes, generally from Australia and New Zealand	<ul style="list-style-type: none"> ▪ Tendering of services. ▪ “Virtual-airline” model. ▪ Joint venture – public-private (e.g., Polynesian Blue) or private-private. ▪ Commercial partnership. ▪ Risk-sharing structure.
Level 4	International (“spine”) routes	Commercial, wide-bodied jet links to international markets	<ul style="list-style-type: none"> ▪ Commercial partnership (equity unlikely); could involve French carriers.

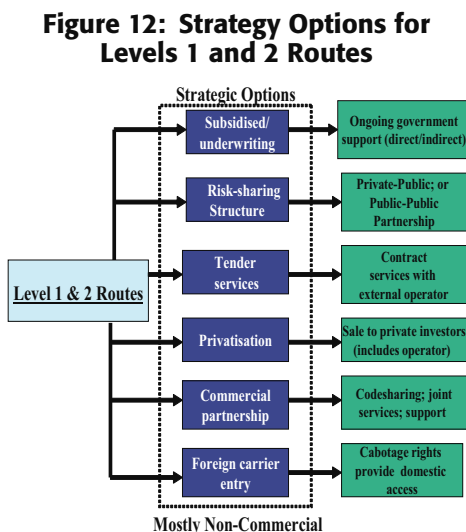
Source: Centre for Asia Pacific Aviation, 2006.

This combined a Level 3 route (i.e., point-to-point jet route) with the underwriting approach more commonly applied to Level 1 or 2 routes. The Polynesian Blue joint venture also resolved problems on Level 3 routes while enabling restructuring of Polynesian Airlines on Level 1 and Level 2 routes.

Similarly, commercial partnerships and privatization are possible for operators on any of the four route types, though privatization is probably more feasible in a commercial operating context than with a smaller, non-commercial operator. Privatization is more likely for operators on Level 1 and Level 2 routes, but is also possible for Level 3. A number of the major Level 3 carriers are already wholly or partially in private hands (Air New Zealand, Air Pacific, Polynesian Blue, and Pacific Blue). However, other Level 3 operators are not (for example, Our Airline, Air Vanuatu, and Solomon Airlines). This indicates that many strategies applicable to Level 1 routes are also appropriate for Level 2 routes and even Level 3 routes. Level 4 routes are the exception to this overlap, given their specific function and requirements. A commercial partnership of some kind is really the only feasible option for Level 4 routes.

Level 1 and Level 2 Routes

Level 1 routes are domestic, interisland routes, while Level 2 are intraregional, low-traffic routes. These are the least commercial of the four Pacific route types and many are non-commercial. As such, they generally require the greatest level of government support through either subsidy arrangements or some form of underwriting. Developing solutions for Level 1 and Level 2 routes is often the most demanding. They usually lack profitability and offer only marginal growth, yet entail essential community services. Strategic options open to governments for Level 1 and Level 2 routes are summarized in Figure 12.



The strategic options vary from the tender-with-subsidy approach, to the adoption of risk-sharing structures (e.g., public–private partnerships), to the introduction of commercial alliances with larger Level 3 carriers or otherwise, and offering of cabotage rights for domestic entry by foreign operators.

Tendering for a Contracted Solution

Combinations between smaller operators or between large and small operators appear readily possible, and desirable, on Level 2 routes—even Level 1 routes. This would apply to both services and to aircraft selection—for example in coordinating equipment purchasing or tendering jointly for services. In each of these cases, a process of public tender is generally the best course. Provided it is transparent and suitably framed—taking account island neighbors’ needs, for example—this method offers a useful means of publicizing the opportunity and encouraging a cost-effective response.

Once states have determined their aviation and tourism goals, then seeking public (or closed) expressions of interest will serve a multiple purpose in addition to producing a solution to the immediate issue of providing appropriate service. This process will:

- stimulate a general awareness that substantial change is underway, so that each country will accelerate its process of adaptation;
- encourage potential partners to explore their own options and generate competition between them for participation in the market; and
- clarify any areas where direct subsidy is necessary (even if, through the terms of the tender, that is provided by an internal cross-subsidy).

There are other less formal means of achieving this outcome, but the above approach has the advantage of transparency.

Some forms of subsidy or underwriting arrangements are likely to be incorporated, if only to attract a wider interest from potential operators than would otherwise be the case given the relatively thin, largely non-commercial nature of the routes involved. It may be that larger operators with suitable aircraft for domestic or intraregional services will pursue the tender independently or in conjunction with one or more local carriers. This may result in a more competitive bid as they have the ability to spread operating costs over expansive group operations, effectively cross-subsidizing less profitable services.

Cooperation with Larger Airlines

The involvement of more established operators has the potential to strengthen national carriers through commercial partnerships, including operational and technical support and service linkages. This large–small partnership approach is the most market-oriented outcome and therefore one that is most likely to occur as the market evolves (in the absence of direct market intervention). It is also more likely to be durable.

As the Samoa case study (Appendix 3) illustrated, Virgin/Pacific Blue’s establishment of Polynesian Blue through a tender with the Government of Samoa provided the catalyst for loss-making Polynesian Airlines to be downsized and refocused on domestic and interisland turboprop operations. Importantly, this reduced both government funding requirements and risk, while enhancing service at more affordable fare levels. A similar example from the Tonga case study was Air Fiji, which has sought to migrate its fleet and support resources into other markets through the Airlines Tonga joint venture. This has delivered the Fijian carrier with access to a new domestic market and brought competition to Tongan domestic routes with consequent pricing benefits. Air Vanuatu’s commercial alliance with Solomon Airlines further underlined the value of airline–airline cooperation.

Developing Partnerships through a Subregional Structure

The concept of a subregional airline through a joint venture or otherwise gives rise, as discussed earlier, to a range of issues concerning establishment and workability. However, it remains an option for Level 1 and 2 routes where traffic volumes are largely uneconomic and competitive outcomes unlikely.

Greater cooperation between the islands in air service provision is consistent with the transport reform principles adopted and promoted by the Pacific Islands Forum (see Appendix 7). Realistically, however, this can only be achieved if the framework and objectives are agreed upon between the participating island states from the beginning, and there is an underlying structure capable of delivering equitable benefits to partner islands.

Subregional operations could be established on non-equity grounds through, for example, a chain of code-sharing relationships, or interlining

between the national carriers of participating islands. While this may avoid the inevitable difficulties in persuading islands with little or no resources to acquire shareholdings, the absence of equity also indicates less commitment and makes exit from the structure less onerous (and perhaps more likely). There are other approaches to subregional establishment, such as a commercial framework, perhaps involving a charter-style arrangement, or through a public–private partnership that shares the risk of provision between the air service provider and governments.

The proposed Our Airline joint venture for the Central Pacific is an opportunistic and highly ambitious approach to subregional establishment that not only involves multiple island states, but may also incorporate their national carriers. In a “best case” outcome, it could catalyze the establishment of a more sustainable service system in a largely uneconomic subregion of the Pacific, with shared ownership and support for other national carriers through commercial linkages with Our Airline. Conversely, Our Airline could go the way of other attempted multilateral initiatives and become mired in bitter disputes between the shareholders over equitability and capital liability—a likely scenario if Our Airline performs poorly.

In the absence of more commercial solutions, and with little prospect of market entry by other operators, a subregional development strategy has greater attraction even if the direct involvement of multiple governments historically has proven to be fatal. If a multilateral strategy is attempted, it should be structured to the greatest extent possible along commercial lines and operational best practice. That means the establishment of an entity (joint venture or other) with a high degree of governance and transparency overseeing service provision under a supply agreement that incorporates Key Performance Indicators to ensure services are delivered in an efficient and cost-effective manner.

Our Airline has eschewed the preferred strategy for establishing a subregional airline—development of a Request for Proposals process—in favor of structuring a joint venture around its existing national carrier and the aircraft “gifted” to Nauru by Taipei, China. Nauru consequently may not necessarily have the most appropriate provider for the role. Indeed, the volatile past of Our Airline’s predecessor, Air Nauru, suggests there may be questions about its financial stability and ability to generate positive returns, even with the improvements of recent restructuring. A Request for Proposal has the advantage of

- providing a transparent and equitable process for jointly determining air service provision,

- encouraging a range of proposals from different operators (including more innovative solutions and/or partnership arrangements with local operators), and
- establishing a program and schedule for change.

The risk in proceeding without a Request for Proposal is that discussions over a subregional structure may be frustrated by government-to-government disputes. This would see reversion to a service system that is vulnerable in both a commercial and financial sense. Through a Request for Proposal, the islands can agree on Terms of Reference that seek innovative but commercially grounded solutions and encourage participation from interested parties in the Pacific and further afield. The Terms of Reference would need to be carefully structured and competitive, with a view to optimizing cooperation between domestic and international services with the objective of meeting requirements for passengers and freight. The contract with the successful operator would run for a fixed period (at least 5 years), with the option for a review on expiry. The operator would also be required to achieve certain minimum Key Performance Indicators demonstrating reliability of service, on-time performance, scheduling, and capacity.

Offering Cabotage Rights as an Incentive to Establishment

Governments can offer cabotage rights as a means of encouraging the establishment of more viable domestic services (Level 1 routes) by foreign carriers. This is appropriate in markets where national carriers are too weak to sustain services even with the aid of subsidies, or in the few cases where the island markets are large enough to accommodate competition. Such an approach may provide an opportunity for airlines with appropriate fleets, operational support, and management expertise to establish services in home markets. Subsidies are still likely to be required, but governments would not need to provide the capital support that may otherwise be necessary with their own national operators.

The Potential for “Milk Run” Services

“Milk runs” are another possible solution for Level 2 routes, in particular, but there are complex regulatory and commercial equations. Such routes are usually anchored at each end by a relatively large market, so that there

are passengers of various origin and destination on board the aircraft at any one time.

There are numerous possibilities, in theory, for multi-stop service on Level 2 routes, with through economics enhanced by the ability to uplift and discharge along the route. In some cases, this type of route is currently serviced, at low frequency, by jet (B737) operations. Continental Air Micronesia, for example, provides this service in the North Pacific. Air Nauru also did so until the loss of its only aircraft. However, the latter airline was highly dependent on two components of the operation, which it subsequently lost: the profitable Australia–Norfolk Islands charter contract, and sole access to the Tarawa–Nadi route.

Aircraft type is another problem in establishing viable “milk run” services. Use of jets offers greater baggage space—often a necessary ingredient—than is available on the smaller Dash 8. But the Dash 8 (with a little over one-third the seating capacity of the B737) offers a much better match for market size and, in doing so, holds out the prospect of higher frequency connections. Airlines PNG, the largest operator of turboprops in the region, has performed some charters and held discussions from time to time about providing multi-stop Dash 8 operations, usually involving the Solomon Islands. Air Vanuatu is another potential aspirant, given its previous service arrangement with the Solomon Islands.

For viable “milk run” services, a liberal regulatory regime among several nations is required so that the airline is able to pick up and set down at each stop, as well as carry through traffic. “Milk runs” can operate effectively in certain circumstances, but are vulnerable to being undermined by fragmentation. Thus, a Port Moresby–Honiara–Port Vila–Fiji Islands service operated by one airline (or even jointly by two or more) would generate good efficiencies and probably operate with reasonable frequency. This would be dependent on freedom to enter and pick up/set down in each market (e.g., “fifth freedom” rights). However, a free and open market would leave such a “milk run” open to disruption if, for example, another airline entered one sector of the “milk run.” The impact on Air Nauru of Air Pacific’s entry to Nadi–Tarawa demonstrates the vulnerability of this type of operation to competition. This has not occurred with Continental Micronesia on its run between Honolulu, FSM, RMI, and Guam because of its ability to leverage off its strong market position in the US territories at either end of its service system. Competitive entry to these routes is also difficult for non-US carriers because of demanding regulatory requirements to secure approval to access US airspace.

Service Enhancement through Privatization

Privatization remains another option for governments to introduce more robust air services on Level 1 and Level 2 routes, albeit one that is inevitably more complex than a straightforward commercial relationship. It has been actively considered in recent years by governments in connection with a number of island carriers, including Air Niugini and Solomon Airlines.

However, private sector participation has only been practically achieved on a partial basis with a small handful of larger operators, including Air Tahiti Nui, Air Pacific (through the entry of Qantas), and Polynesian Blue. This is partly because of the generally poor track record of earnings, institutionalized high overheads, and the restrictive employment policies of many smaller island carriers. As such, it has been difficult to develop credible valuations and attract private investors, including other operators.

For privatization to be a feasible option, governments need to provide a flexible regulatory environment that allows restructuring of local carriers to realize their often-considerable upside potential offered by cost reduction opportunities, and establishes a stable operating base for future growth. The latter includes broad linkages into the region through liberal bilateral structures.

Reduced government participation in the ownership of airlines—even a wholesale exit—is a desirable outcome from a number of perspectives. It helps ensure that limited government capital is channeled into other critical areas, such as health and social services, and not absorbed in maintaining unproductive investment in operations that could be provided more efficiently and cost-effectively by the private sector.

Privatization may not always be possible. If this is the case, governments should explore other avenues for private sector participation in air service provision, including tendering of services or the direct involvement of foreign carriers in their home markets. The latter may entail changes to cabotage rights to provide for entry.

The attempted privatization of Air Niugini in 2001, part of the Morauta government's highly ambitious sales program for PNG state-owned entities, was undermined largely because of the airline's weak financial position. Another negative factor was the complicated structure adopted by the Government of PNG for the privatization process to satisfy local concerns that Air Niugini would not end up in foreign hands. Timing was also significant. The initial sale process coincided with a global decline

in the aviation market, which limited both the range of potential bidders and prices offered. While indicative offers were fielded from a number of airlines in the Asia-Pacific region, none was deemed satisfactory, and the sale was placed on hold.

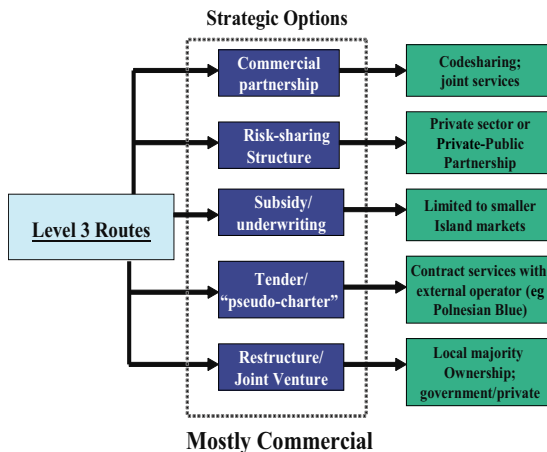
As with Air Niugini, the poor condition of Solomon Airlines’ balance sheet, with significant net worth but potential for unknown or contingent liabilities, represented a substantial impediment to the government’s proposed privatization in 2005/06. Uncertainty over valuation inevitably raised concerns among investors. There also was a lack of clarity over Solomon Airlines’ international strategy, which shifted from operating through other airlines (“virtual airline”) to taking a more direct role in providing services and acquisition of an aircraft.

Appropriate marketing of the transaction to interested parties to ensure participation in the privatization process is also a key component. This aspect becomes considerably more difficult in an extremely volatile political and civil environment, as has existed in the Solomon Islands. Instability impacts at different levels on the operating environment—disrupting traffic patterns and sharply reducing passenger numbers, and has the potential to retard the government decision-making/policy process.

Level 3 Routes

Level 3 routes are second-tier intraregional international routes that support jet operations. These services are central to the efficient function

Figure 13: Strategic Options for Level 3 Routes



of the Pacific network as they provide links to the major hub markets of Australia, New Zealand, and the Fiji Islands. Such links can be achieved directly on point-to-point services, through charter-style arrangements, or indirectly through “milk runs” (Level 2 routes anchored at either end by Level 3 routes).

Given the generally higher density of traffic, better growth prospects, and ability to sustain competition, as compared to Level 1 and Level 2 routes, the provision of services for Level 3 routes is usually resolved on a commercial basis. There are exceptions, however, where the origin markets are very small or offer only limited potential (Niue, for example). In these cases, there is a continuing need for government subsidies or underwriting arrangements.

Level 3 services have evolved considerably in the past 18 months to 2 years through the introduction of LCAs and greater participation on nonstop jet routes by established airlines from Australia, the Fiji Islands, and New Zealand. This development is consistent with the high priority placed on air services to and from these markets in view of their practical market context. Given the strength of Australia and New Zealand airlines, an Australian or New Zealand airline in a joint venture with an FIC entity generally may provide Level 3 services on some routes.

Commercial Opportunities of Alliances

While the greater competition associated with recent developments in Level 3 services has challenged the dominance of incumbent national operators, it has also given rise to opportunities for these operators for commercial partnerships. Examples are Air Vanuatu’s code-share links with Air New Zealand, and Air Fiji’s domestic service alignment with Pacific Blue in the Fiji Islands.

Polynesian Blue was established through a tender process, which broadly encompassed the provision of international air services for Samoa and assumption of a shareholding of up to 49% in the new airline. The Government of Samoa offered exclusive access to its Australia rights to the winning party. This process succeeded in attracting competitive bids from all of the major operators—Air Pacific, Air New Zealand, and Pacific Blue. Samoa then selected Pacific Blue as the preferred operator and proceeded to detailed negotiations over the structure and terms of the joint venture (see Appendix 3 for details of the Polynesian Blue structure).

The Polynesian Blue model may be replicated elsewhere in the Pacific. Indeed, discussions were held about a similar involvement by

Pacific Blue in Nauru following the suspension of Air Nauru services. Pacific Blue previously showed interest in the proposed privatization of Solomon Airlines, which now appears unlikely to proceed.

Code-sharing arrangements also have the potential to provide a real presence in the international market to airlines with limited resources. This practice is already well entrenched in the Pacific through Air Pacific, Air Vanuatu, and Air New Zealand, among others. Code sharing enables local operators to more actively market and promote services and build revenue without a need to acquire costly aircraft. Tickets sold in this way are generally independently priced (each carrier sets its own fare level), so it also instills a degree of competition that would not otherwise exist. There are limitations to what code sharing can achieve. It provides no certainty of service provision or real prospects for growth, as the operation of services, their frequency, and the availability of seats on those services are controlled entirely by the operating airline. Agreements of this nature can be terminated, sometimes at relatively short notice, depending on the terms.

A “Virtual-Airline” Structure

The establishment of a so-called “virtual-airline” structure has provided another option for national operators to capitalize on links with other carriers. It has the benefit of minimizing airline exposure to the high cost of servicing international markets by maintaining these operations through third party operators. There are already several examples in the Pacific. As noted in this report, Solomon Airlines had no international aircraft of its own, but secured charters and/or code shares with other carriers to fulfill an international role. This served Solomon Airlines well, in that its international operations continued to be profitable and cross subsidized its loss-making domestic routes. Solomon Airlines has since moved away from the “virtual-airline” structure.

Air Kiribati similarly maintains domestic services only, and sells seats on external operators providing international services through a sales and marketing subsidiary. The airline and the Government of Kiribati entered into a blocked space arrangement with Air Pacific to obtain 24 of the 118 seats on each weekly flight between Nadi and Kiritimati. This service is then part-chartered by Kiribati to travel on to Honolulu.

Establishment of a “virtual-airline” structure may involve a tendering process or direct negotiations with a preferred carrier. Such a structure can take a range of different forms, but generally involves the provision of operations and/or support services by a third party (usually an experienced

operator). It can be applied to Levels 1–3 routes, or even Level 4. A “virtual-airline” scenario could, for example, see an established operator wet-lease (footnote 14) a number of aircraft (such as Air Vanuatu’s arrangement with Solomon Airlines), or dry-lease or damp-lease¹⁴ them for use on domestic or interisland routes. These aircraft would be operated under the Air Operator’s Certificate of the lessor (assuming this complied with local aviation regulations). This provider, allowing for a transfer of skills, would handle the training of pilots and flight attendants. There would be an agreed payment for use of the aircraft and provision of crew, training, maintenance, and operational support. The local operator may continue to manage the service, provide strategic and planning input, and handle sales and marketing activities. Inevitably, some jobs would be lost through the resultant restructuring.

The benefits of a “virtual-airline” structure are multifold:

- A more stable foundation would be established for growth of services and associated employment;
- Fleet requirements would be handled by the service provider, negating the need for an expensive re-fleeting program. Alternative back-up aircraft could also be brought in by the provider in the event of maintenance problems; and
- Maintenance, engineering, and crew training would effectively be outsourced to the provider.

One negative aspect is that control of essential operations is placed with one or more external operators, with a potential risk to services in the event of difficulties with the external operator. This is especially true where marginal operations are involved. Kiribati’s service and freight capacity was diminished for many months when Air Nauru’s B737 was withdrawn and replaced by an F100 charter.

Alternative Solutions to Air Service Provision

Localized solutions on Level 3 routes are also possible, as demonstrated by Niue’s arrangement with Air New Zealand for the provision of B737 services between the island and Auckland. The active involvement of

¹⁴ Dry-leased aircraft are leased without crew. Damp-leased aircraft are leased with flight crew but not cabin crew.

the Government of New Zealand in negotiations was important to this outcome, reflecting the close relationship between New Zealand and Niue. The Niue model offers limited risk to the underwriter, NZAID, in that the requirement to compensate for operating losses is only triggered if passenger loads fall below agreed levels. Apparently, this has not been necessary to date. Air New Zealand also benefits from the charter-style arrangement by increased utilization of its aircraft.

Polynesian Blue also performs a “pseudo charter” function, in that its Apia (Samoa)-Sydney and Apia-Auckland services are integrated with the Pacific Blue network. The same B737 that serves Samoa also operates across the Tasman Sea, and by doing so improves its operating economics for the Virgin Blue/Pacific Blue group. This, in turn, assists Polynesian Blue in maintaining more competitive prices on its Samoa services. Each of these models then leverages off the more expansive network structure of the larger airlines, including their ability to purchase fuel, insurance, and other items, and provide maintenance and training, from a broader base. These operational benefits of scale flow through to the islands as lower fares (and in the case of Polynesian Blue, dividends to the government from profitably provided services). Samoa and Niue also gain access to the domestic and international networks offered by Virgin Blue and Air New Zealand. With Virgin Blue’s increasing connectivity with Asian and US carriers, this potentially enhances linkages to the islands for visitors from Asia, Europe, and the US.

Risk Sharing by the Private Sector

Another interesting but untried model for service provision on Level 3 (or Level 2) routes is that being developed by the tourism industry in Vanuatu. The proposed establishment of a private company to forward-sell tickets for the provision of services between Port Vila and Melbourne is essentially a different form of charter. Operators would effectively underwrite the service by purchasing seats through the venture for use by local businesses, tourism companies, and possibly the national airline, Air Vanuatu. This is an example of the private sector assuming the risk for the provision of a service that directly benefits them, rather than leaving that responsibility to government. Additional details of the model may be seen in Appendix 4.

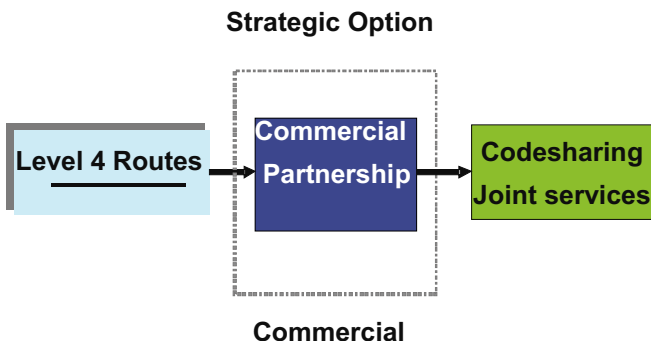
Level 4 Routes

Level 4, the so-called “spine” routes, are best serviced by wide-bodied, twin-aisle aircraft. This is because of the seat economics of these aircraft on long-haul flights, as well as their freight uplift capability. With improving aircraft technology, some of the next generation single-aisle aircraft are now beginning to challenge the low flight costs of the larger aircraft.

Level 4 routes provide direct connections with major visitor markets, and are essential to the long-term health of the region’s aviation and tourism industry. As such, they should be treated as a priority by aviation and tourism authorities.

Full-scale partnerships or joint ventures are less likely in these cases — at least the precedent has not yet been created. However, good prospects exist for code sharing and/or interlining with domestic, intra-regional operators. Air Pacific could provide these, ideally in partnership with a major airline, or by airlines from non-FIC countries (e.g., Air Tahiti Nui). Air New Zealand already provides linkages to the US market through the Cook Islands, Apia, and Tahiti. Hawaiian Airlines also serves American Samoa and plans to establish services between Honolulu and Apia that will be code shared by Polynesian Blue. Continental Micronesia also operates on these “spine” routes to Majuro and FSM. Interest also has come from another international operator, Japan Airlines, which is planning to begin B767 charters to RMI in November, subject to repaving and other improvements of Majuro Airport to enable it to handle larger aircraft. Other potential non-FIC country airlines that should be envisaged in these circumstances include Australian airlines and those from New Caledonia and Tahiti (Aircalin and Air Tahiti Nui).

Figure 14: Strategic Options for Level 4 Routes



Government Policy Implications

The range of strategic options available for the various types of routes is largely dependent on island governments adopting or maintaining a reasonably flexible and nonrestrictive approach to air services policy and regulation. This has not been the case in the past, with many islands taking a lukewarm or even resistant approach to liberalization. Some (e.g., the Fiji Islands) have been hostile to more open regimes, especially on fifth freedom routes, for fear that it would weaken the competitive position of their national carriers.

Liberalization generally has grown by stealth more than good planning in the Pacific, as islands respond to particular commercial opportunities rather than take proactive roles by creating a regulatory environment conducive to carrier entry and expansion. While access to third and fourth freedom rights and code sharing has been more relaxed, most islands still maintain single-airline designation and rigid ownership and control provisions in their bilateral agreements.

There are signs that attitudes are changing, with PIASA gaining support and some islands introducing initiatives designed to encourage service provision. An example is Tonga's decision to allow a second domestic carrier, and the declared support of Solomon Islands for an "open-skies" structure following by its approval of fifth freedom rights for Our Airline. The development of the regional services proposal by Our Airline would exert pressure for more expansive deregulation on a subregional basis among the various islands approached for partnership in the proposed joint venture. This is assuming that Our Airline receives the required multinational support to build on Air Nauru's previous "milk-run" structure by securing for Our Airline a mix of third, fourth, fifth, and sixth freedom rights.

The slow pace of transition to a more liberal system in the Pacific may or may not accelerate as islands become more aware of the service options and potential benefits available, and less fearful of the local impact. The financial crises afflicting national carriers in Samoa and Tonga proved to be a catalyst for change. Similar problems emerging in Vanuatu may do the same. In such a volatile environment, governments should be prepared to examine alternative strategies for providing air service discussed in this section, and determine the policy parameters needed to make them work. That does not necessarily mean wholesale market deregulation.

Selective deregulation, assessed according to a national benefits criteria, may be more effective. If, for example, the granting of cabotage rights provides a realistic opportunity for carrier entry, and the advantages outweigh any potential detriment, then this is sensible policy. Similarly, approvals of fifth freedom services should be exposed to a benefits test and determined on a case-to-case basis. Given the fragile nature of many island services, especially on domestic routes, it is important that governments do not prevent what might be a satisfactory outcome through an inflexible policy approach.

Competition, while preferable for the benefits brought to pricing and service provision, is not sustainable on the typically thin routes away from the major air lanes to Australia, New Zealand, and—to a lesser extent—the Fiji Islands. Competition should not be a practical priority for governments, except for those routes with more substantial growth prospects.

A more achievable base objective is establishment and maintenance of services according to demand at levels of supply and fare rates that align with local requirements and affordability. For non-commercial services, government policy strategy will need to provide for the allocation of ongoing subsidies to operators, or for underwriting arrangements.

Consideration should also be given to progressive reform of current regulations that require substantial ownership and effective control of airlines by an island state's nationals. ICAO is advocating a move by governments away from this position to a requirement that an airline's principal place of business and incorporation be in the particular home country. This is consistent with increasing globalization of airline ownership and capital structures. This would also provide greater flexibility for the islands in pursuing innovative air service solutions. It would mean, for example, that foreign airlines could acquire majority ownership in an island carrier and operate its international rights without the need for nationals from that country to maintain a shareholding of 51% or more. This may be highly attractive to operators and could potentially enhance the privatization potential of some local carriers.

Conclusions and Recommendations

A viation in the Pacific is directly influenced by the economic and demographic characteristics of the island nations and by their propensity for trade and tourism, their geography, and their relationship with Australia and New Zealand.

The aviation market is seasonal and highly sensitive to changes in pricing, stability, and travel patterns. Some routes are economical in their own right, such as those linking into and out of the major markets of Australia, New Zealand, Fiji Islands, and beyond. These routes support competition and are subject to the usual pressures and opportunities of supply and demand. Other routes, particularly domestic routes of the island nations and, in some cases, regional routes between them, are distinctly non-commercial because of thin traffic. While underlying demand is relatively low outside the larger islands, the function of these routes is largely to service business, essential freight, VFRs, and community services. As such, these routes often require ongoing funding support from island governments or other sources.

The realities of the operating environment for aviation in the Pacific are:

- relatively small (in some cases diminishing) populations, often spread widely across a number of islands, making it a challenge for governments to provide not only air services but basic needs such as communications, health care, and education;
- generally small and slowly growing economies based on a limited range of activities, and/or subject to the seasonal changes associated with the peaks and troughs of tourism; and
- political and social tensions and instability in some island states (most recently, the Fiji Islands and the Solomon Islands). These

are detrimental not only to tourism development but also to the maintenance of a consistent strategy and policy for air services. Narrow national policies and strategies have led to costly investments in national carrier services.

Tourism has growth potential in many, but not all, Pacific countries. It already contributes to economic growth in a number of them, and prospects may improve for others in a less volatile and enhanced environment for air service and infrastructure. Continued growth of visitation to the Pacific requires

- preservation of the region's natural amenities;
- continued development of infrastructure fulfilling customer expectations and international requirements (e.g., ICAO standards);
- growth in the volume and variety of commercial accommodation; and
- sustained growth in the availability of reasonably priced airline seats. This element represents the crucial supply line for tourism in the Pacific.

The continued growth of tourism will clearly require significant private investment in infrastructure. Such investment, as well as tourism growth, is threatened by an unstable political environment.

Reassessing the Options for Aviation

Past mistakes and overly ambitious aviation development have proven to be disastrous for a number of island states, placing undue pressure on their fragile economies. With small and generally slow growing economies and small populations dispersed across many islands, government tax revenue and funding capacity for public infrastructure and services are very limited. The corollary of this is that island governments, with little capital to draw on without diverting funds from vital community services, cannot afford further damaging forays into air service expansion, or even provision. This fact has been recognized by Samoa, which has effectively reduced government exposure to international operations through the establishment of Polynesian Blue.

The value of government ownership of airlines needs to be reassessed. If state participation does not bring the capital and financial “comfort”

required to operate air services, or even offer certainty of provision, then other options should be considered. This report concludes that a number of existing and emerging alternative strategies could provide more satisfactory and commercially oriented outcomes for the Pacific islands with less risk.

Experience in the Pacific

The case studies in Appendixes 1–4 of this report reveal a checkered history of airline development and aviation infrastructure across the region. Understandably, island governments have seen employment and tourism growth as important objectives of national interest. The fulfillment of such objectives, however, has often been translated into a perceived need for governments to own airlines.

Government ownership has often proved an expensive means of providing unstable airline services. Often, such problems have been compounded by inadequate investment in aviation infrastructure, particularly regulatory support and airports. The outcome has generally been a stop–start, inconsistent approach to the provision of air services, often resulting in inadequate private investment in tourism infrastructure. Such investment needs to be supported by stable, sustainable air services at prices that attract leisure travelers. The failure to provide such air services has meant that the tourism potential in many island states has not been realized.

There was a sharp contrast between the experiences of island states examined in the case studies. Air service development in the Fiji Islands, for example, illustrated the value of participation of strong, globally linked airlines such as Qantas—through the Air Pacific relationship—and Air New Zealand—through Freedom Air and Pacific Blue. Such participation increases:

- the global visibility of the region through airline participation in global distribution systems and broader domestic/international marketing;
- market penetration as a consequence of coordinated scheduling and interlining structures;
- the accessibility of the region to the main visitor source markets of

Australia and New Zealand, and through those countries to other international markets in Asia, Europe, and US; and

- support for and development of a higher standard of providing airport and other aviation infrastructure.

These developments, in turn, have reduced the need for government participation in providing many airline services throughout the region. The Fiji Islands serves as both a point-to-point for airlines from Australia, New Zealand, and other islands, and a hub market for Air Pacific, which services large and small markets through Nadi. The introduction of low-cost, low-fare operators to the Fiji Islands has substantially stimulated traffic growth in the market, with few detrimental side effects for Air Pacific. Air Pacific has largely maintained its market dominance despite some pressure on returns. More importantly, liberalization and the consequent entry of LCAs have brought significant benefits to the Fijian economy by boosting tourism receipts and lowering the cost of air travel to Australia and New Zealand.

The entry of LCAs has also delivered market growth and improved visitor receipts for other tourism-based economies, such as Tonga, Samoa, and Vanuatu. LCAs currently provide the only links to the Australian market for both Tonga and Samoa. Polynesian Blue demonstrates in Samoa how the equity and operational participation of one of the larger airlines can give rise to a more economic solution for air service provision. Through its creation, the Government of Samoa has been able to transfer responsibility for international services to Virgin Blue/Pacific Blue and, by doing so, has stemmed the heavy losses and capital drain incurred through Polynesian Airlines. By operating with the support and resources of Virgin Blue, Polynesian Blue has achieved profitability within a wholly commercial structure and been able to offer cheaper fares on services to Australia. The involvement of the Government of Samoa has been reduced to a 49% shareholding and to underwriting of any performance shortfall in the operation (which has not occurred to date).

The case studies looked at a number of other strategic options for providing air service. In the Solomon Islands, Solomon Airlines developed a “virtual-airline” structure that enabled it to serve jet markets to Australia, the Fiji Islands, and Vanuatu through leasing arrangements with other airlines. This had the advantage of allowing Solomon Airlines access the larger markets without the need for it to commit to aircraft of its own. It has also allowed Solomon Airlines’ international service to operate

profitably and offset losses from its domestic system. While the model has some upside, the high cost of wet-leasing (footnote 14) aircraft is reflected in Solomon Airlines' relatively expensive fares, particularly to Australia. Tourism groups have cited this as a reason for the limited growth in the Solomon Islands market. Solomon Airlines recently broke away from this model and acquired a jet to operate services in its own right.

Another strategy has emerged in Vanuatu, where tourism interests are behind the development of a new company to forward-sell fares to underpin reestablishment of services between Port Vila and Melbourne. This company is still under development, but serves as a possible model for private sector involvement in air service provision in other island states.

Niue, on the other hand, illustrated a potential service approach for smaller islands with limited or no tourism. Its arrangement with Air New Zealand, whereby NZAID provides underwriting support if passenger loads fall below a certain level, was essentially a public-private partnership.

The Policy Approach

In an environment where capital is scarce, strategic planning should be undertaken to ensure that capital is applied effectively. Airline services pose a particular challenge in this context. The provision of airline services involves a substantial financial commitment. Regular air passenger services that are not heavily utilized, or where fares do not cover costs, constitute a large and persistent drain on cash reserves.

Airline services are part of basic infrastructure for communities, and are essential for tourism development. In addition to providing indispensable services, airlines are like other commercial enterprises, and aim to provide an acceptable return on capital. This is done with pricing that is tailored to targeted markets and provides returns, by ensuring the most-cost effective supply of services, and by pursuing gains in efficiency and productivity. In order that airline operators can fulfill the roles that—particularly in the Pacific—often conflict, it is desirable for governments to develop policies for aviation that adhere to the following principles.

- Remove or minimize direct government involvement in the ownership and operation of air services. Ownership of airlines and/or aircraft by government should only be considered as a last resort.

Scarce capital should be used for basic infrastructure and safety regulation.

- Seek and encourage private sector participation in providing air services where practicable, through joint ventures, tendering, or other ways.
- Promote efficient maintenance and further development of airline services on a commercial basis. If that is not possible, promote services within a commercially based, transparent structure.
- Separate commercial and regulatory activities. Governments should participate with airlines and other governments in sharing skills and resources in providing safety and other regulatory services. PASO is a prime example of value created by sharing skills and resource.
- Establish a regulatory environment that is conducive to the development and growth of air services and does not present impediments to achieving solutions for air service provision. Liberalization of air service agreements should be pursued unless it is inconsistent with the objectives of air service reform or restructuring.
- Ensure that aviation infrastructure, including airports and regulatory systems, is capable of supporting service improvement and development.
- Encourage continued assistance by the larger established airlines in commercial partnerships and support services, including development of aviation infrastructure and training.
- Develop and adopt tourism-specific strategies to drive growth and development. This recognizes that, for many countries in the Pacific, tourism holds significant potential as an engine for economic growth and opportunity.

Recommendations

Based on the analysis in this report and consistent with the policy principles above, the following specific policy and strategy recommendations are provided for each of the four types of routes in the Pacific.

Level 1 and Level 2 Routes

The domestic routes of the island nations (Level 1 routes), and the intra-regional non-jet routes between them (Level 2 routes), are frequently non-commercial because of thin traffic. For these routes, governments are often faced with the need to facilitate services in an environment where they would not normally be provided by commercial airlines. In these circumstances, it is recommended that governments explore targeted approaches that can stimulate interest by commercial airlines and simulate commercial supply.

For example, where subsidies are required to attract airlines, routes can be tendered so that bidding airlines are encouraged to supply the services to the required standard at minimum cost, with an incentive to reduce the level of subsidy over time.

Recommendations for Level 1 and Level 2 Routes

1. Privatization of national carriers should be pursued where practicable—assuming the particular airline has proven value and appeal. This should preferably involve a competitive bidding process and an established operator securing a cornerstone shareholding.
2. If this is not workable, governments should seek tenders for domestic service provision incorporating contract performance targets and a subsidy component. Local carriers could be given the opportunity to participate in the tender, ensuring a competitive process. Alternatively, if this is not possible because of the depleted state of the carrier, its operations could either be absorbed by the successful tenderer, or closed down.
3. Governments should seek to provide a regulatory environment conducive to the establishment of more sustainable domestic services. This may entail maintaining restrictions on market access as a means of providing greater control over the process of installing another operator (and ensuring certainty of return for any contracted provider). Alternatively, cabotage rights which offer domestic access to foreign operators may be provided. The latter, for example, may enable external operators already serving the country to extend services onto domestic routes economically. It also may encourage the development of new regional services that, without domestic access, would not be viable. In deciding which policy option is more applicable, consideration should be given to: (a) the future of the national carrier---that is, whether it should close or continue on some routes; (b) the impact on subsidy arrangements; (c) the likelihood of entry by external operators; and (d) whether, if entry does occur, adequate coverage will be provided.

Level 3 and Level 4 Routes

Intra-regional, jet, point-to-point routes (Level 3 routes) are second-tier international routes, while international (spine) routes (Level 4 routes) pass through the region and connect to long-haul international markets. The economics of the airline industry dictate that long, thin routes of the type commonly found in the Pacific can be reasonably profitable for a single airline provider, but cannot sustain competition between two or more airlines. Because governments control access rights to these routes, they have greater leverage in dealing with the airlines than they do for Level 1 and 2 routes.

Recommendations for Level 3 and Level 4 Routes

1. Governments should explore the full range of options available for air service provision discussed in this report. These include commercial arrangements between carriers, tendering of services, “virtual-airline” operations, “milk-run” structures, joint ventures, and other partnership opportunities.
2. Where possible, governments should seek the involvement of larger airlines in air service provision through one, or a combination of a
 - request for Tenders or Request for Proposals process,
 - joint venture or public–private partnership,
 - commercial arrangement (e.g., code sharing), and/or
 - route-specific arrangement for provision, incorporating performance underwriting.

A partnership option with a local carrier is only feasible if the local carrier has potential to complement the service provision of the larger airline—for example, if the local carrier provides domestic services that can interlink with the other airline. If this is not the case, governments should consider closure of the local operator.

3. In the case of commercial routes offering the prospect of competitive entry, governments should negotiate either “open-skies” or expanded-access agreements. PIASA is designed to do this on a multilateral basis. In preparation, governments should implement the principles on a bilateral basis to prepare for regional liberalization.
 4. In the case of non-commercial routes, where a route-specific arrangement is in place, governments should manage access through bilateral agreements to ensure that contractual requirements are satisfied.
 5. Levels 3 and 4 commercial routes generally require a high degree of deregulation to encourage development by commercial operators, including liberal market access and code sharing. As such, governments should adopt liberal approaches to rights provision on these routes.
-

Appendix 1: The Fiji Islands Case Study¹

The Fiji Islands comprises an archipelago of 332 islands spread over about 1.3 million square kilometers (km²) of ocean. The islands, with a total land area of around 18,300 square km, are mostly mountainous and of volcanic origin, with only 16% of the land suitable for agriculture.

Just over 100 islands of the archipelago are permanently inhabited with a population of over 840,000, making the Fiji Islands the second most populous of Forum Island Countries (FICs). Population growth rate, at less than 1% per year, is among the lowest of FICs because of migration. However, population growth in urban areas has been much higher than in rural areas because of sustained rural-to-urban migration.

Table A1.1: Fiji Islands, International Trade, 2004

Main Export/Import Partners	Exports		Imports	
	\$ (million)	Share (%)	\$ (million)	Share (%)
Australia	164.0	19.2	319.3	27.7
PRC	–	–	32.6	2.8
Hong Kong, China	–	–	20.7	1.8
India	–	–	25.2	2.2
Indonesia	–	–	20.1	1.8
Japan	35.3	4.1	47.9	4.2
Kiribati	16.0	1.9	–	–

¹ This case study was prepared prior to the overthrow of the government in December 2006. Projections are therefore uncertain.

Table A1.1: Fiji Islands, International Trade, 2004 (continued)

Main Export/Import Partners	Exports		Imports	
	\$ (million)	Share (%)	\$ (million)	Share (%)
New Zealand	31.6	3.7	204.9	17.8
Portugal	10.3	1.2	–	–
Samoa	53.3	6.2	–	–
Singapore	–	–	285.2	24.8
Thailand	–	–	33.6	2.9
Tonga	25.8	3.0	–	–
Tuvalu	13.5	1.6	–	–
United Kingdom	109.5	12.8	–	–
United States	201.3	23.6	26.8	2.3
Other ^a	193.0	22.6	134.5	11.7
Total	853.6	100.0	1150.9	100.0

-- = zero or data unavailable, \$ = US dollar, % = percent, PRC = People's Republic of China.

^a "Other" may include countries listed for which no data are shown.

Source: Asian Development Bank. 2005.

Growth in the country's gross domestic product (GDP) slowed to 1.7% in 2005 following average yearly growth of 3.4% from 1999 to 2004. Continued expansion of tourism and related hotel activity was not sufficient to offset declines in the production of clothing and gold.

The country's main exports are sugar, clothing and footwear, fish, gold, timber, copra, and mineral water. Export earnings fell 3.2% in 2005 mainly because of declines in clothing, footwear, and fisheries products. Export earnings from clothing dropped 47% after the country lost its clothing quota in the US. Merchandise imports, driven by growth in consumption and the rising cost of oil, grew by 6.5%, widening the current account deficit to nearly 13% of GDP. The major trading partners are Australia, New Zealand, Singapore, UK, and the US, with Samoa and Tonga the principal regional trading partners.

Economic growth is expected to recover somewhat in 2006–2007. The tourism sector remains buoyant, and construction, financial services, fisheries, timber, and transport are projected to record growth. Mineral water production, which more than doubled over 2001–2005, is expected to become the seventh largest foreign exchange earner. The future is less certain for sugar and clothing. These industries are contracting as the

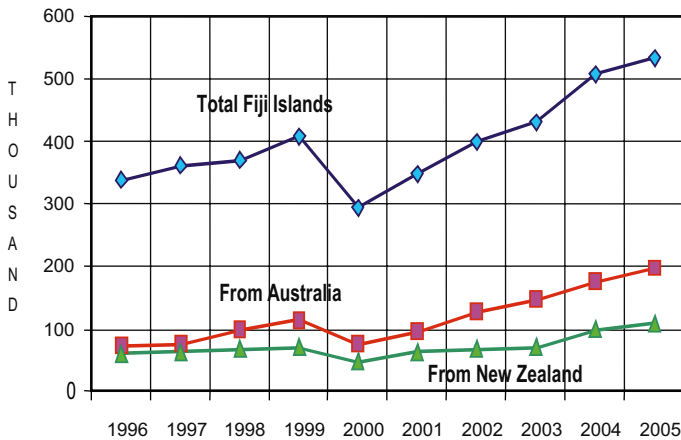
European Union (EU) cuts sugar subsidies and the clothing industry loses guaranteed access to major markets, resulting in the loss of employment and foreign exchange earnings. The continued strong performance of visitor arrivals is expected to sustain expansion in the tourism industry through 2007, with strong beneficial effects on other sectors of the economy.

Tourism

The Fiji Islands is the most popular tourist destination in the South Pacific, accounting for about 40% of the 1.33 million visitor arrivals in the region in 2005. Tourism is a major source of foreign exchange for the Fiji Islands, and accounts for 12.8% of GDP and 9.5% of employment.

Visitor numbers peaked at 410,000 in 1999, and then plummeted to 294,000 in 2000 following political instability. Recovery was relatively quick with arrival numbers at a new peak by 2003. Over half of all visitors to the Fiji Islands come from Australia and New Zealand. The US and the UK are also major sources of visitors, but arrivals from Japan have declined substantially since reaching a peak in 1996.

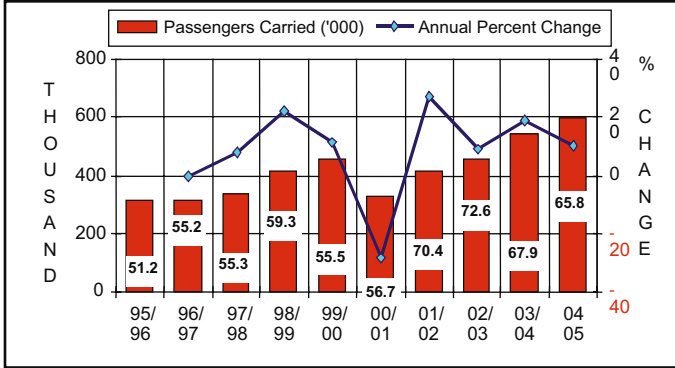
Figure A1.1: Visitor Arrivals in the Fiji Islands, 1996–2005



Note: Australia and New Zealand are resident departures. Fiji Island visitor arrivals 2004 and 2005 estimated.

Sources: Fiji Island Bureau of Statistics, Australian Bureau of Statistics, Statistics New Zealand. 2006.

Figure A1.2: Air Pacific Services – Passengers Carried and Annual Percent Change



Note: Excludes charters to other airlines.
Source: Air Pacific Annual Report 2004/05.

The Fiji Visitors' Bureau estimates that about 39% of island visitors were from Australia in 2004 and around 20% from New Zealand. Resident departures for the Fiji Islands from Australia as well as from New Zealand averaged over 10% growth annually during the past 4 years. Departures from Australia in 2005 were up over 70% from the pre-political instability peak in 1999, while departures from New Zealand were up almost 60% over the same period.

The Fiji Islands tourism market has suffered from three main liabilities in recent years: (i) the history of civil instability, which has deterred long-haul tourists particularly; (ii) the difficulty of matching demand with hotel infrastructure; and (iii) the seasonality of demand. However, the market has staged a recovery and will likely—subject to maintenance of civil order—benefit greatly from the continuing strength of the Australian economy and the perception of the Fiji Islands as a safe haven tourist destination from such concerns as SARS and terrorist attacks.

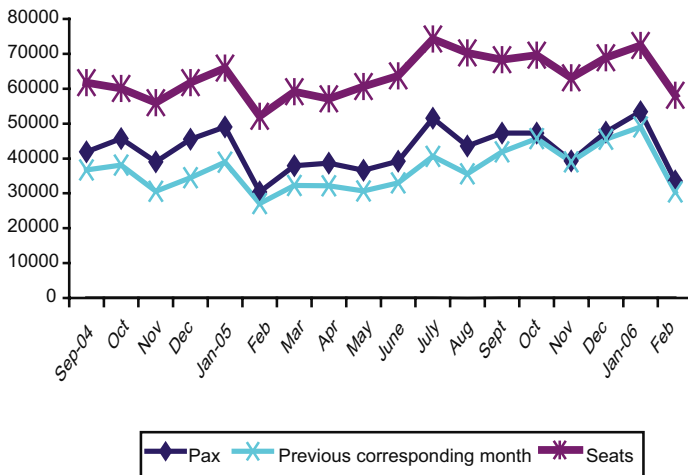
The Aviation Market

Political instability severely affected the Fiji Islands air passenger market in 2000. As shown in Figure A1.2, passengers carried by the national carrier, Air Pacific, declined almost 29%. The market did not recover until 2003/04,

but continued its resurgence the following year, with Air Pacific carrying over 595,000 passengers, up 10% on the previous year.

The LCA Pacific Blue launched services to Nadi, Fiji Islands from Brisbane and Melbourne in September 2004 with three weekly services from each port. Nadi was the airlines' first Pacific destination beyond New Zealand and offered Australian domestic connecting flight options on Virgin Blue. The airline aimed to make the Fiji Islands a more affordable holiday option and more accessible to independent and adventurous travelers who would move beyond the larger resorts. Midday or early afternoon arrivals were scheduled to appeal to the short break market. The growth out of Australia to the Fiji Islands since the introduction of Pacific Blue services is shown in Figure A1.3. The Australia–Fiji Islands market, taken as a whole with inbound and outbound passengers, expanded in line with capacity growth by 21.6% in the first year of Pacific Blue operations from September 2004 to August 2005, compared with the previous corresponding 12 months. However, growth slowed in the 6 months after that to 6.6%, reflecting seasonal variations and uncertainty about the forthcoming Fijian elections.

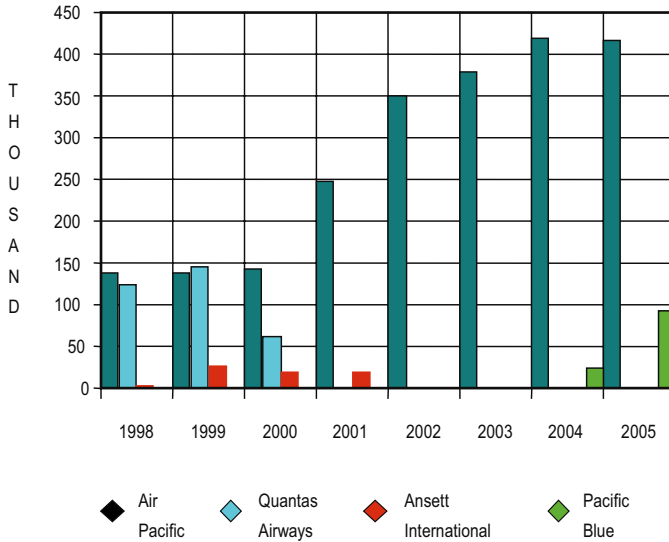
Figure A1.3: Passenger Traffic and Capacity in Australia–Fiji Islands Market since Entry of Pacific Blue, 2004–2006



Note: There are substantial variations between seasons.

Source: Australian Bureau of Transport and Regional Economics 2006.

Figure A1.4: Australia–Fiji Islands Market by Airline, Calendar Years 1998–2005 (Passengers)



Source: Australian Bureau of Transport and Regional Economics. 2006.

The additional capacity that Pacific Blue provided was largely absorbed by the market. Air Pacific's traffic levels did not diminish markedly. The Fiji Islands national carrier also managed to maintain viable average loads for the period, at 69%, as compared to Pacific Blue's 60%. Pacific Blue's market share in terms of passenger volumes virtually doubled in its initial 12 months of operation before reaching a threshold. Over the 18 months from September 2004 to February 2006, the airline averaged a market share of 17.6%, two points below its capacity share. Air Pacific remained dominant in the market during this period with an average 82.4% share of passengers. However, as shown in Figure A1.4, Air Pacific's traffic declined overall by 1% in 2005 as Pacific Blue extended services to the key Sydney–Nadi corridor from June 2005 to complement existing Brisbane and Melbourne services. Services to Melbourne were withdrawn in April 2006.

Freight volume and revenue, according to Air Pacific, improved 23.9% to 16,747 tons in 2004/05. The addition of wide-bodied aircraft into Brisbane and Auckland, increased frequency of flights to Melbourne and Los Angeles, and some recovery in fish exports to Japan and North America, were primarily responsible.

In March 2005, Air Pacific obtained technical certification from Boeing for increased zero fuel weight of its 747-400 aircraft to provide increased payload when the aircraft is carrying a full passenger load. An additional 7 tons of cargo can be uplifted on the Nadi–Los Angeles service, creating additional peak season freight-revenue-earning opportunities. Air Pacific also reported that air freight revenue from the garment industry was down, like garment exports. But a new freight revenue earning opportunity is the movement of movie equipment from Australia to the Fiji Islands. Each film shot in the Fiji Islands involves the movement of around 60 tons of freight in and out of Nadi. Post Fiji Islands had also contributed to cargo revenue by diversifying into mail sorting. Bulk mail is freighted into the Fiji Islands, franked and sorted, then forwarded to the US. Samoa and Tonga have also subcontracted mail sorting to the Fiji Islands.

Most routine exports air freighted out of the Fiji Islands are destined for Australia or New Zealand. In 2005, total volume amounted to 3,245 tons, 88% of which comprised food and live animals (mainly seafood). The Fiji Islands imports from the two countries in the same year amounted to 6,059 tons, with miscellaneous manufactured articles accounting for 31% of the volume, followed by machinery and transport equipment (22%), and food and live animals (19%).

Aviation Regulation and Airport Development

The Civil Aviation Authority of the Fiji Islands (CAAFI) is responsible for the regulation and safety of air services in the Fiji Islands. The Nadi Flight Information Region CAAFI is a commercial statutory authority that reports to the Ministry of Transport and Civil Aviation.

The Fiji Islands is not a signatory to PIASA. It prefers to continue with bilateral relationships, enabling it to adopt liberal positions where it is judged to be in the national interest. The government firmly supports development of the national carrier, Air Pacific, resisting broad-based liberalization and, in particular, the provision of fifth freedom rights (see Appendix 8) to fly beyond the island to other destinations (if the Fiji Islands was a party to PIASA, it would have to open fifth freedom access). The government views this position as essential to maintaining Air Pacific's competitiveness. It has not prevented, however, introduction of aggressive, price-based competition on key point-to-point (third and fourth freedom) routes out of Australia and New Zealand,

but does limit the Fiji Islands' progress with fifth freedom activity within the Pacific. The government's approach to the LCA routes reflects perceived national interests of the economy in developing tourism-based traffic.

Airports Fiji Limited, a fully owned government commercial company, is responsible for operation of 15 public airports in the Fiji Islands. These include the 2 international airports, Nadi International Airport and Nausori Airport, and 13 outer-island domestic airports. Nadi Airport, west of Suva, is the Fiji Islands' main international gateway. It has two runways—one of which is capable of handling up to B747-400s—and refrigerated cargo storage and animal quarantine facilities. Nadi is served by Air Pacific, Air New Zealand, Pacific Blue, Korean Air, Freedom Air, Air Caledonie International (Aircailin), Air Vanuatu, Solomon Airlines, Air Fiji, and Sun Air. Nausori Airport, the Fiji Islands' domestic hub, is located near Suva. It has a 1,868-meter runway and is served primarily by Fiji Air and Sun Air. Air Pacific also operates twice-weekly services to Auckland and Sydney, and weekly flights to Tongatapu (Tonga).

The Course of Aviation Development and Reform

Air Pacific is the Fiji Islands' national carrier. It has been serving the Pacific region since the late 1940s, and it began regular domestic services in 1951 as Fiji Airways. The airline adopted the name "Air Pacific" in 1971. Its international services—to Auckland—started in 1974, and expanded to Brisbane via Noumea (New Caledonia) the following year. Services to Honolulu from Nadi started in 1983, but were halted the following year.

In 1985, Air Pacific formalized a management support agreement with Qantas, and saw its first year of profit the following year. Services to Japan began in 1988, and in 1991, the airline initiated 5 years of aggressive expansion into the Asian market, with more flights to Japan and Taipei, China. Direct service to the US resumed in 1994.

Air Pacific's 10-year commercial relationship with Qantas began in 1997. It applies to code sharing,² engineering, spare parts management,

² The practice where a flight operated by an airline is jointly marketed as a flight for one or more other airlines. Most major airlines have code-sharing partnerships with other airlines, and code sharing is a key feature of airline alliances. The term "code" refers to the identifier used in flight schedules, and under a code-sharing agreement participating airlines can present a common flight number.

distribution of holiday products through Qantas Holidays, and operation of reciprocal frequent flyer programs. It has the potential to be extended further to include other forms of cooperation. Through this partnership, Air Pacific leverages off Qantas in the New Zealand domestic market and through feed provided out of Australia and across the Tasman Sea. Qantas gains access to the Fiji Islands. Qantas increased its equity in Air Pacific to 46.05% in 1999. The Government of the Fiji Islands holds 51%.

Air Pacific retrenched somewhat following the Fiji Islands' political crisis of 2000 and the ensuing dramatic decline in tourist arrivals. Tourism in the Pacific Islands recovered in 2003. The airlines' fleet began to expand again, and new services to Japan and Los Angeles started.

In 2004, competition on Air Pacific's Australian and New Zealand routes from LCAs began:

- Freedom Air, 100% owned by Air New Zealand, started direct services between the Fiji Islands and Hamilton, Palmerston North, and Christchurch in April 2004, and added services to Wellington in February 2005.
- Air New Zealand launched Pacific Express in 2004, a separately branded low-cost service. The first Pacific Express flight departed Auckland for the Fiji Islands in May. Air New Zealand reported that bookings for the following 12 months increased up to 107% over the same period of the previous year.
- Pacific Blue launched services to Nadi from Brisbane and Melbourne in September 2004, operating three weekly services from each port. Direct flights from Sydney to the Fiji Islands were introduced in June 2005.

In early 2006, Air Pacific announced it would add extra flights to Australia, New Zealand, US, and Kiribati, increasing network coverage to 17 cities in 11 countries. The additional flights will result in Air Pacific's fleet of six Boeing 747, 767, and 737 aircraft operating more than 110 flights weekly, delivering over 2.3 million seats yearly to and from the Fiji Islands. The airline has purchased five Boeing 787-9 Dreamliner aircraft, as well as rights for a further three. The five aircraft will start service in 2011 and 2012, serving all routes currently served by Air Pacific's wide-bodied fleet, including Auckland, Brisbane, Melbourne, Sydney, Los Angeles, and Tokyo. The existing fleet of 747 and 767 aircraft will be returned to their lessors with delivery of the new aircraft. Air Pacific's Boeing 737-NG fleet will continue to serve regional and smaller metropolitan markets.

Air Fiji, which began operating in 1967, currently provides domestic air services. In 1997, the airline doubled its fleet and now operates nine aircraft. They serve 13 island destinations with an average of 65 flights daily, and carry an average of 200,000 passengers annually. Its fleet includes an Embraer Brasilia, five Embraer Bandierante, and three Harbin aircraft. The Governments of the Fiji Islands and Tuvalu and private investors own Air Fiji jointly.

Air Pacific has recently decided to reenter the domestic market by acquiring the assets and business of Sun Air through its subsidiary, Fiji Airlines Limited. Fiji Airlines will initially start services with the current Sun Air routes and fleet. Existing aircraft will be refurbished and new aircraft added. Services from Suva to regional countries such as Tonga, Tuvalu, and Vanuatu are also planned to supplement existing Air Pacific flights. A new subsidiary, Pacific Sun, has been established to operate the regional service with two ATR 42-500s.

The Fiji Islands is the pivotal center of aviation in FICs. It plays a multiple role, with a significant domestic travel market, intra-FIC routes, strong connections with New Zealand and Australian cities, and links to international spine routes. Further, its international airport, Nadi, acts as a regional hub, and its national carrier, Air Pacific, is the dominant FIC airline.

Air Pacific accounts for the bulk of inbound travel for the Fiji Islands. Qantas has code-sharing rights on the major services from Auckland, Sydney, Melbourne, Brisbane, and Los Angeles. American Airlines code shares on Air Pacific and provides a feed from Los Angeles into the Fiji Islands by buying seats on Air Pacific's scheduled services. The LCA Freedom Air provides services from Wellington, Hamilton, and Palmerston North on seasonal schedules, focusing on the heavier winter travel.

Lessons from History and Impediments to Further Development

The Fiji Islands experience demonstrates the benefits of a commercial approach to aviation provision. The Air Pacific/Qantas partnership strengthened Air Pacific, contributing to its staying power in the face of new competition from LCA airlines such as Pacific Blue and Freedom Airlines. Air Pacific has largely maintained its traffic levels despite the

entry of the LCAs. The new low fares tended to expand the total market rather than shift market share from existing carriers as the market largely absorbed additional capacity. The growth of air traffic has increased the potential of the Fiji Islands as a Pacific hub, and brought greater tourism wealth to the island economy.

The increase in air passenger capacity and travel, however, revealed weaknesses in the Fiji Islands tourism market. Demand is highly seasonal. There is a shortage of accommodation in all market segments during peak season, which is compounded by inadequate domestic airfields and aviation links serving outer islands, limiting the distribution of tourism. Seasonality is also compounded by the lack of diversity of traffic origin. An additional major weakness is the history of civil instability, which has deterred long-haul tourists particularly.

Assessment of Future Prospects

The lessons from the Fiji Islands are largely positive. Strong operators in the Air New Zealand Group (including Freedom), the Air Pacific/Qantas group, and the Virgin Group (Pacific Blue) now serve the Fiji Islands market. Further, Air Pacific plans to extend its influence in the Pacific by establishing regional operation and domestic services. The latter will provide access to further revenue-earning opportunities and embellish the hub role of the Fiji Islands.

This robust international performance is built on a tourism sector that has managed to develop the type of product and infrastructure sought by markets. Future growth is dependent on the ability of the sector to continue to attract the investment required to grow product and infrastructure. Political stability is a critical success factor for any such investment.

The domestic air sector in the Fiji Islands is not so well placed. Long, thin routes do not generate profitability for airlines. On most routes, therefore, losses are likely if competition lowers returns on the few profitable routes.

It is important to note that the entry of new airlines, in particular LCA capacity, has stimulated growth of tourism in the Fiji Islands. The economic gains for the Fiji Islands have been significant, with further potential. While Air Pacific has expressed concern about the impact on its

returns and profitability, the airline has largely maintained its traffic levels despite the entry of Pacific Blue. Thus, the addition of competition from LCAs has expanded the Fiji Islands market substantially with relatively few detrimental side effects.

Appendix 2: Solomon Islands Case Study

The Solomon Islands is the third largest archipelago in the South Pacific, comprising 992 islands ranging from large land masses with rugged mountains and virgin forests, to low-lying coral atolls. The islands are scattered in a double chain covering 1.35 million square kilometers of ocean east of Papua New Guinea (PNG).

With a population of about 495,000, Solomon Islands is the third most populous of Forum Island Countries (FICs). It has one of the fastest growth rates at around 2.8% per year, driven by moderately high fertility rates and declining mortality. Over 80% of the population lives in rural areas, largely outside the formal economy, relying on subsistence agriculture and fishing. Some 12% of the population lives in Honiara, the capital.

The Solomon Islands economy is based mainly on fishing, forestry, and agriculture. Recovery from the collapse that began in 2000 with an ethnic and political crisis started in 2003. Growth of gross domestic product (GDP) in that year reached 3.6%, accelerating to 4.5% in 2004 and 4.4% in 2005 (Asian Development Bank [ADB]). Central Bank of Solomon Islands (CBSI) reported strong growth in all major sectors except fisheries. Good cocoa and copra production and exports fueled agricultural expansion, construction activities remained buoyant for the second year, and the forestry sector posted record export volumes. Given favorable political conditions, higher growth rates were expected for 2005 and 2006.

CBSI pointed to some fundamental issues that remain to be addressed, including: (i) the narrow base of the export sector, which is heavily reliant on forestry products; (ii) poor infrastructure and badly performing utilities; (iii) inefficiencies in public institutions and investment procedures; (iv) difficulties in acquiring land for development purposes; and (v) the tax system.

Table A2.1: Solomon Islands International Trade, 2004

Main export/ import partners	Exports		Imports	
	\$ (million)	Share (%)	\$ (million)	Share (%)
Australia	3.77	2.2	35.59	25.3
PRC	48.23	28.2	–	–
Fiji Islands	–	–	5.40	3.8
Hong Kong, China	0.75	0.4	1.46	1.0
India	2.25	1.3	6.70	4.8
Japan	16.60	9.7	5.48	3.9
Korea, Republic of	26.84	15.7	–	–
Malaysia	–	–	2.12	1.5
New Zealand	–	–	7.39	5.3
PNG	–	–	5.25	3.7
Philippines	8.73	5.1	–	–
Singapore	4.97	2.9	33.42	23.8
Thailand	26.89	15.7	–	–
United States	–	–	2.70	1.9
Viet Nam	5.31	3.1	–	–
Others ^a	26.44	15.5	35.18	25.0
Total	170.76	100.0	140.70	100.0

– = zero or data unavailable, % = percent, \$ = US dollar, PNG = Papua New Guinea,
PRC = People's Republic of China.

^a May include countries listed for which no data is shown.

Source: Asian Development Bank, 2005.

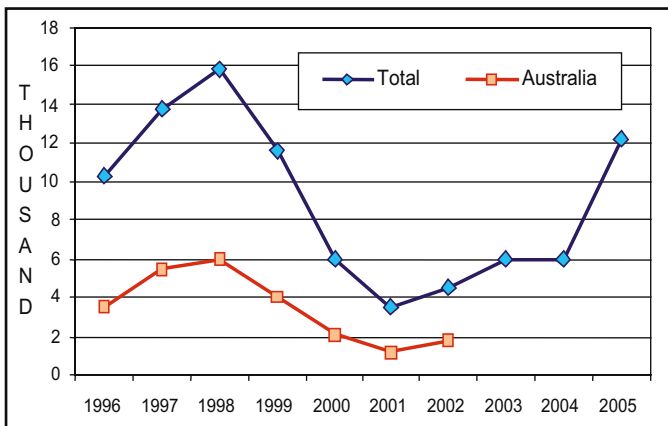
Solomon Islands is heavily dependent on imports, particularly oil for energy. Import value doubled in 2005, due mainly to oil imports at higher prices. Oil thus comprised 30% of Solomon Islands' total imports. However, surpluses in the services, income, and current transfer accounts more than offset the trade deficit to result in a current account surplus of \$16.7 million.

The major trading partners of the Solomon Islands are Australia, PRC, Republic of Korea, Singapore, and Thailand. The major regional trading partners are the Fiji Islands and PNG.

Tourism

Solomon Islands tourism attracts primarily dive and ecotourism enthusiasts. Visitor numbers peaked in 1998 at over 15,000, but plummeted from 1999 following political and ethnic unrest to a low of 3,500 in 2001. The South Pacific Tourism Organisation (SPTO) estimates arrivals recovered somewhat to around 6,000 in 2003 and 2004 and then increased significantly to 12,200 in 2005. Australia accounts for the largest share of visitors (about 35%), followed by New Zealand, US, PNG, UK, and Japan.

Figure A2.1: Visitor Arrivals in Solomon Islands



Sources: 1996–2002: Pacific Asia Travel Association.
2003–2005: South Pacific Tourism Association.

In its 2005 Annual Report, CBSI reported that the tourism sector continues to grapple with inadequate facilities and infrastructure, poor transportation, lack of qualified human resources, and inadequate accommodation. CBSI pointedly noted that the lack of financial and technological assistance from government resulted in the tourism “...industry lagging far behind in the region. The level of tourist arrivals in Solomon Islands out of the total number of tourists entering the Pacific region remains insignificant.” Figures for 2005 show that visitor arrivals to Solomon Islands comprised less than 1% of arrivals to the region. The World Travel and Tourism Council (WTTC) estimated that tourism directly accounted for 2.1% of employment and 2.6% of Solomon Islands GDP in 2005. With indirect

impacts added, the WTTC estimated that tourism's contribution accounted for 6.7% of employment and 8.1% of GDP. SPTO estimated that the Solomon Islands tourism industry contributes only 2.9% to GDP and only 1.6% to employment.

The Aviation Market

The air passenger market, including that for tourists, was severely affected by the ethnic crisis, and remains depressed. Most visitor traffic is related to business and aid-related travel. The Regional Assistance Mission for Solomon Islands (RAMSI) is a major factor in air travel to and from Solomon Islands. In 2004, Solomon Airlines carried over 31,000 international passengers, with 85% traveling between Brisbane and Honiara. Domestic passengers carried by the airlines had fallen from 77,800 in 1999 to only 36,800 in 2002. By 2004, numbers had recovered somewhat to 55,000, and increased to an estimated 60,000 in 2005.

Cargo is carried on every Solomon Airlines flight, both internationally and domestically. The international air freight market is small, however, accounting for about 700 tons of cargo per year. Imports include fresh fruit and vegetables, fresh eggs, day-old chicks, courier products, mail, urgently needed parts, general supplies, and personal effects. The principal items exported from Solomon Islands via air freight include chilled and frozen seafood products such as tuna, lobster tails, and prawns. Live products include live tropical fish and exotic birds and reptiles exported with government approval. These products are sent to markets in the US, Australia, Southeast Asia, and some neighboring Pacific countries.

During peak seasons, cargo capacity can be restricted because of heavy passenger demands. However, supplementary capacity by way of air freighters can be provided on an ad hoc basis.

Aviation Regulation and Airport Development

The Government of Solomon Islands has embraced the establishment of PASO as a solution to problems experienced by Solomon Airlines in providing sufficient resources to ensure adequate safety and security.

Australia's Civil Aviation Safety Authority (CASA) suspended Solomon Airlines in 2001 because undertakings for improvements in airline operations had not been delivered. There were concerns about the inadequacy of corporate management, control, and supervision. Communication of safety information within the airline and control of training and checking were also found to be lacking. Solomon Airlines regained its Air Operator's Certificate in June 2006.

Following Solomon Airlines' suspension by CASA, the Government of Solomon Islands supported the PASO concept, which enables it to maintain its sovereignty and responsibility for safety, but share skilled resources across the Pacific. New aviation legislation, harmonized with PASO, was passed by the Solomon Islands Parliament early in 2007. Solomon Islands is a signatory to PIASA, and it is moving toward its ratification.

The International Civil Aviation Organization (ICAO) undertook its first audit of the Solomon Islands in 2006 as part of its Universal Safety Oversight Audit Program (USOAP). Its initial findings were to be presented late 2006 with Solomon Islands then given a month to respond. ICAO also undertook a security audit in March 2007.

There are about 35 airports across Solomon Islands, mostly unpaved. The Honiara International Airport Restoration Project was completed in December 2005. Funded by the Government of Japan, the project restored the pavement of the 2,200-meter long, 45 meter-wide runway, and replaced runway lights. ICAO will examine Solomon Islands' airports as part of the USOAP and security audit mentioned.

The Course of Aviation Development and Reform

In 1962, a regular charter service between the Solomon Islands and PNG was started using a Piper Aztec. A new airline, Megapode Airways, was subsequently set up and began operating from the wartime airstrip at Honiara (Henderson Field). A de Havilland Dove 6 was acquired for regular service to principal ports in the region—the first regular public transport service for the island since World War II. Megapode Airways was purchased in 1968 by Macair, an operator in PNG, and was renamed Solomon Island Airways.

In 1975, a takeover bid of Macair by Talair—an emerging charter operation in the Pacific—was successfully completed. As Macair had just

been given operating rights between Honiara and Kieta, on Bougainville, PNG, Solomon Island Airways became the smallest international airline in the world. Two Dove and two Beech Baron aircraft comprised its fleet at the time, but in 1976 both Doves were retired and a nine-passenger Beech Queen Air 80 and a Britten-Norman Islander were introduced. One Baron was retained.

The Government of Solomon Islands purchased 49% of Solomon Island Airways' shares in 1976, at the same time establishing the right to purchase (within 5 years) the remaining 51% for an agreed price plus a sum representing goodwill, to be negotiated at the time of purchase. By 1984, the government decided to purchase the remaining 51% of the airline. However, agreement on the valuation of the goodwill was not reached until 3 years later, when the sale of Solomon Island Airways was finalized. The airline had a fleet of four aircraft after returning previously leased aircraft to Talair.

A period of reconstruction, reorganization, and long-term planning started. The airlines' fleet was enlarged, and a newly designed livery of blue, yellow, and green (the national colors) was promoted along with a new name, Solomon Airlines. A joint venture with Qantas was established, and joint participation with Air Pacific on two routes emerged—on Air Pacific's Honiara–Brisbane route, and its Nadi (Fiji Islands)–Honiara route.

In 1989, Solomon Airlines began international service in its own right. Using a leased a 737-200, services started from Honiara to Auckland, Nadi, Port Vila (Vanuatu), Port Moresby (PNG), Cairns (Australia) and Brisbane. On all these routes except those to Australia, the seating capacity was shared between Solomon Airlines and the designated carrier of the destination country. A new service to Nuku'alofa (Tonga) was also inaugurated in conjunction with Royal Tongan Airlines, taking over a wet-lease¹ arrangement that Niue Airlines previously operated.

Following Solomon Airlines' suspension from operation in August 2001 by CASA, the airline moved to develop international links using a "virtual-airline" strategy. Under this structure, Solomon Airlines did not own any aircraft for its international routes. Instead, it chartered and/or code-shared²

¹ Aircraft lease with crew.

² The practice where a flight operated by an airline is jointly marketed as a flight for one or more other airlines. Most major airlines have code-sharing partnerships with other airlines, and code sharing is a key feature of airline alliances. The term "code" refers to the identifier used in flight schedules, and under a code-sharing agreement participating airlines can present a common flight number.

aircraft owned by other airlines. International capacity requirements were thus covered by leases of Air Vanuatu's B737-300 twice-weekly service on the Brisbane/Honiara/Port Vila sectors, and Air Nauru's B737-400 weekly service on the Brisbane/Honiara sectors.

Repossession of Air Nauru's B737 in December 2005 saw Solomon Airlines relying more heavily on Air Vanuatu, and highlighted a weakness of the "virtual-airline" structure—i.e., the high degree of dependence on external operators for service provision. Another weakness is that wet-lease arrangements, such as that between Air Vanuatu and Solomon Airlines, are usually expensive. This forced up operating costs and fares. However, high international fares were also part of Solomon Airlines' effort to maintain its services, with international routes subsidizing domestic routes. Many routes were reportedly cancelled because of exceedingly low passenger loads following the fare increase.

In August 2005, Solomon Airlines made dramatic changes to its domestic schedules, cutting back on uneconomical routes as part of efforts to improve its failing financial position. The *Pacific Regional Transport Study*³ had reported in July 2004 that of the airline's 21 domestic routes, only seven were viable.

Although the "virtual-airline" structure was generally regarded as successful, Solomon Airlines recently moved away from it by introducing a B737-300 leased from Europe, which is being operated under the airline's own Air Operator's Certificate. Solomon Airlines regained its Air Operator's Certificate in June 2006, conditional on it maintaining a damp-lease⁴ with Qantas.

Solomon Airlines increased services linking Brisbane and Honiara to five times weekly in December 2006, and flagged the possibility of an Honiara–Sydney service. In the meantime, Our Airline has restarted twice-weekly Brisbane–Honiara services using fifth freedom rights (see Appendix 8) obtained from the Government of Solomon Islands to fly from Nauru to Brisbane via Honiara. The excess capacity arising from these developments will create significant pressure on both airlines, with the likelihood that one or the other will be forced to either rationalize services or withdraw from the route. Brisbane–Honiara is important to both airlines, and any move to abandon these services would impact substantially on revenue and profitability. Resolution of this issue is critical to Our Airline,

³ Australian Agency for International Development (AusAID), 2004.

⁴ Aircraft lease with flight crew, but not cabin crew.

in particular, as it stands as a key impediment to the development of its proposed subregional joint venture (see The Role of Liberalization section in main report).

The Government of Solomon Islands, with support from ADB, RAMSI, and AusAID, has been considering privatizing Solomon Airlines. A study funded by ADB determined that there is value in Solomon Islands' air transport market, and therefore the potential exists for a successful transaction.

Lessons from History and Impediments to Further Development

The development of airline services in Solomon Islands reflects past perceptions that government ownership was required to develop a viable airline. This approach was common in the 1960s and 1970s. In many ways, the experience of Solomon Islands is typical of the dilemma confronting much of the Pacific, namely:

- Limited economic capacity to fund aviation infrastructure;
- Limited capacity to develop and manage regulatory systems, including the monitoring and management of aviation safety and the negotiation of international agreements; and
- Long, thin airline routes that make it difficult to sustain the quality and frequency of airline services required to support communities, tourism, and other needs.

Solomon Islands has thus seen many attempts to establish airlines, with numerous changes of aircraft type, route structures, and corporate structures, and diversion of the capacity needed to provide aviation and other economic infrastructure to a risky airline ventures.

Assessment of Future Prospects

Aviation development in Solomon Islands is likely to continue to face the dilemma posed by limited resources, given the island state's economic structure and performance. Outside support is required in all areas:

infrastructure development and maintenance, regulatory systems, and provision of airline services.

Although Solomon Islands has not developed a robust and sustainable airline system, it moved positively with the development of a “virtual airline” and a commitment to PASO and PIASA. The “virtual-airline” concept is an effective strategy for providing service within the resource and capital constraints typical of the island states. Solomon Airlines showed this can operate profitably, even though the high operating costs of charters can lead to unduly high fares and a possibly detrimental impact on tourism development.

Solomon Airlines’ recent move back into international operations in its own right has the potential to expose it and the government to significant future losses, given steep leasing costs and likely damaging competition from Our Airline. Pacific carriers and their governments often have paid a high price for strategically deficient regional or international expansion. A better, and less risky, alternative may be for Solomon Airlines to return to its “virtual-airline” structure, or to establish a form of joint services provision with Our Airline or another operator.

Appendix 3: Case Study of Tonga, Samoa, and Niue

These three island states are examined in a single case study because of their interrelationship in terms of air services, their structural similarities, and their proximity.

Samoa is the largest of the island groupings, with a population of 180,900 (25% live in the capital, Apia). About 70% of Tonga's population of 101,800 lives on Tongatapu, one of the country's three main island groupings. A sizable population of Tongan expatriates live in the US, New Zealand, and Australia. Estimated at 150,000 overall, half of them live on the US West Coast. Niue is by far the smallest of the three countries, with a declining population of only 1,600 as people continue to migrate. Some 20,000 Niueans live in New Zealand.

Samoa has one of the fastest-growing economies in the Pacific. Gross domestic product (GDP) grew 5% and GDP per capita reached \$1,832 in 2005, but GDP growth was expected to slow to 4% in 2006.¹ The economy is heavily dependent on tourism and agriculture. Subsistence village agriculture employs two thirds of the labor force and generates a major share of exports. Coconut oil, coconut cream, copra, and seafood dominate exports, though the latter is threatened by diminishing fish stocks. Manufacturing concerns mostly the processing of farm products. Tourism is expanding rapidly with strong support from government, accounting for 16–18% of GDP.

Despite progress made in reforming the economy with greater fiscal responsibility, deregulation of the financial sector, and environmental protection, Samoa still depends heavily on family remittances from overseas and on foreign aid to offset its trade deficit.

¹ Central Bank of Samoa.

Tonga registered a 2.5% expansion in GDP in 2005, resulting in per capita GDP of \$2,142. GDP growth was expected to slow to 1.6% in 2006. The country's economic profile is similar to that of Samoa, with 40% of GDP and 75% of export earnings contributed by the agriculture and fisheries sectors. The service sector accounts for 50% of GDP, half of which is associated with government activities. Exports are dominated by bananas, coconuts, squash, vanilla beans, and fishery products. Japan and the US are the principal markets for Tongan exports, accounting for 45% and 33% of the total, respectively. Australia, New Zealand, and the Fiji Islands accounted for 76% of total Tongan imports in 2004.²

Tonga has focused on developing the private sector, particularly for investment. It continues to be hampered by high unemployment levels, rising civil service expenditures, and continuing inflation. As with Samoa, Tonga is heavily dependent on overseas remittances and aid programs. Tourism is also a major generator of hard currency for the island, the second largest after remittances.

Niue's weak economy reflects the combination of geographic isolation, a small population, and relatively few resources. New Zealand maintains support of the island, providing about 50% of the island's GDP through budget support programs, and is a key trading partner. GDP is relatively flat at 0.3% growth,³ and GDP per capita is about \$3,600, reflecting the extremely small population base. The services industry is responsible for some 55% of GDP. The agricultural sector consists mainly of subsistence gardening, though some cash crops are available for export, such as passion fruit, lime, and coconut. Tourism and financial services are promoted by the government as potential sources of economic growth for the future. Niue is still in the process of rebuilding following cyclone Heta, which severely damaged the island's economy in 2004.

Tourism

As noted, tourism represents a significant component of the economies of Tonga, Samoa, and, to a lesser extent, Niue. Notably, each island government has focused on the sector as a key to future growth.

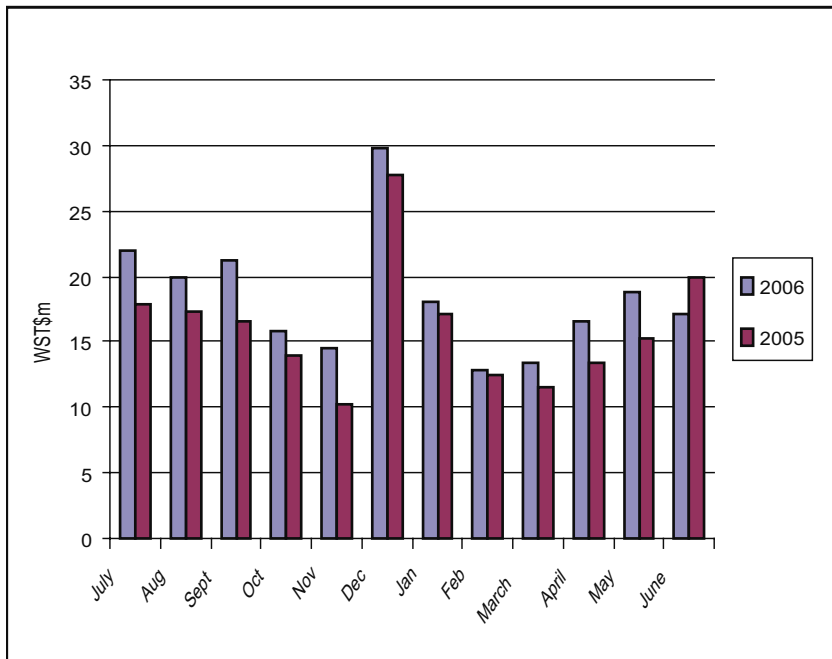
² Tonga Statistics Department.

³ 2000 estimate, *CIA World Factbook*.

During 2005/06, Samoan tourism grew strongly, spurred by the market entry of the LCA Polynesian Blue. Earnings from tourism climbed 14% during the year (Figure A3.1), reflecting both the impetus created by Polynesian Blue and the government's focus on building tourism returns. Between the November 2005 entry of the airline into the market and June 2006, visitor arrivals rose by 18.4% (Figure A3.2), compared with 3.9% average yearly growth in the previous 10 years.

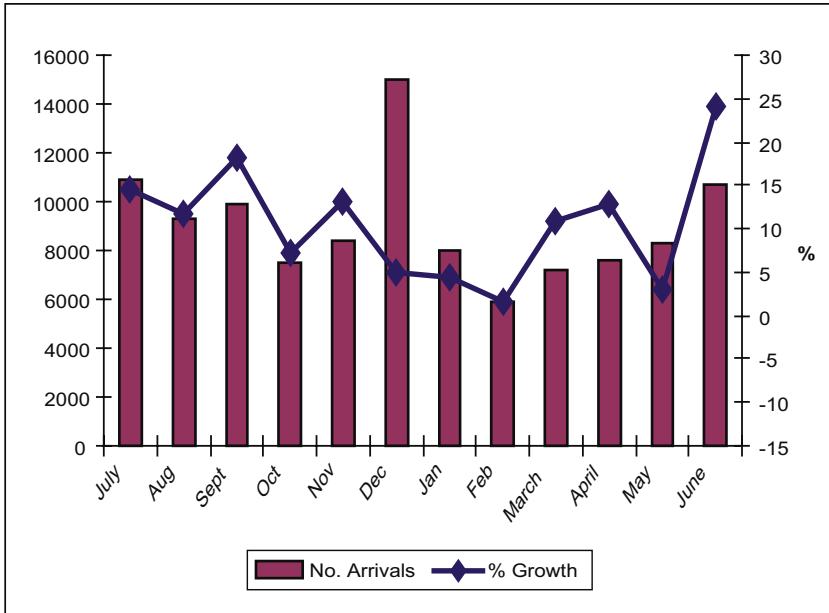
The introduction of cheaper flights to Tonga and Samoa through LCA entry has produced changes in travel patterns, with an upsurge in the number of travelers on short-stay breaks from Australia and New Zealand. Samoa's tourism numbers showed double digit growth in the traditionally quiet months of November, March, and April, suggesting that the availability of lower fares and greater propensity to travel for short breaks are moderating past seasonal patterns by encouraging off and shoulder-season travel.

Figure A3.1: Tourism Receipts for Samoa, 2004/05 vs. 2005/06



Source: Central Bank of Samoa. 2006.

Figure A3.2: Number and Growth in Visitors Arrivals to Samoa, 12 Months–June 2006



% = percent, () = negative.

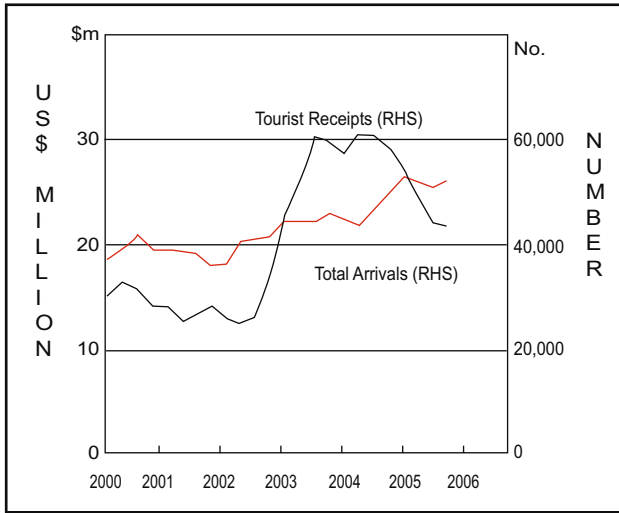
Source: Central Bank of Samoa. 2006.

Arrival trends for Tonga have been volatile. Visitor arrivals fell 14.3% in 2004 after robust increases of 12.9% and 9.6% in the 2 preceding years. This reflected the collapse of Royal Tongan Airlines, underscoring the close nexus between air service provision and tourism growth in the Pacific. As Figure A3.3 shows, visitor arrivals in 2005 increased 5.4% to 52,330, with air arrivals up 1.6%, while cruise ship arrivals rose 24%. Tourism receipts, however, fell 25% that year.⁴ The major source markets for overseas air travelers to Tonga are New Zealand (41%), Australia (21%), and the US (19%).

The influence of LCA entry was felt in the first quarter of 2006. Total air arrivals increased 19%, underpinned by a 58% increase in visitors from Australia, largely in response to the introduction of Pacific Blue services. Tonga's foreign exchange earnings for the 3 months grew by 21% as a direct consequence of the sharp rise in tourism.

⁴ National Reserve Bank of Tonga.

Figure A3.3: Tonga Visitor Arrivals and Tourism Receipts, 2000–2006



Source: National Reserve Bank of Tonga, 2006.

Niue, with its limited air connections, has experienced extremely modest tourism development. In 2006, visitor numbers overall (including leisure, visiting friends and relatives [VFRs], and business-related travelers) fell by 6% to 2,550. However, the impact on tourist numbers of cyclone Heta in 2004 was more dramatic, with only 723 tourists visiting the island that year, half the number in 2003.⁵ The Niue government has moved to strengthen tourism returns through more intensive promotion of the island's ecotourism attributes and planned expansion of accommodation. This is likely to stimulate some growth in arrivals from a low base.

The Aviation Market

Samoa and Tonga maintain air links with a reasonable frequency and capacity to the main markets of Australia, New Zealand, and Fiji Islands. Niue is connected to the New Zealand and Samoan markets. However,

⁵ New Zealand Ministry of Foreign Affairs and Trade.

the structure and extent of air service provision have changed significantly in the past 12 months as a consequence of

- Polynesian Blue's launch as Samoa's NFC and the associated restructure of Polynesian Airlines,
- the Government of Tonga's revision of its one-airline policy to allow domestic competition,
- entry of LCA Pacific Blue in the Tongan market out of Australia and New Zealand,
- an increase in Air New Zealand's Auckland–Tonga services from five to six times weekly, and
- establishment of Air New Zealand as the flag carrier for Niue.

Samoa is currently served domestically by Polynesian Blue, the joint venture with Pacific Blue, and by Pacific Blue services linking Apia with Auckland five times weekly and Sydney three times weekly. Air New Zealand competes on the Auckland sector with a weekly service, and operates once weekly via Apia to Los Angeles. While Polynesian Airlines is now predominantly a domestic carrier, it still operates a 36-seat Dash 8 service between Apia and Tonga, but stopped services to Vava'u (Tonga) and Niue.

Air Pacific provides Tonga and Samoa with linkages to the Fiji Islands market through twice-weekly B737 services.

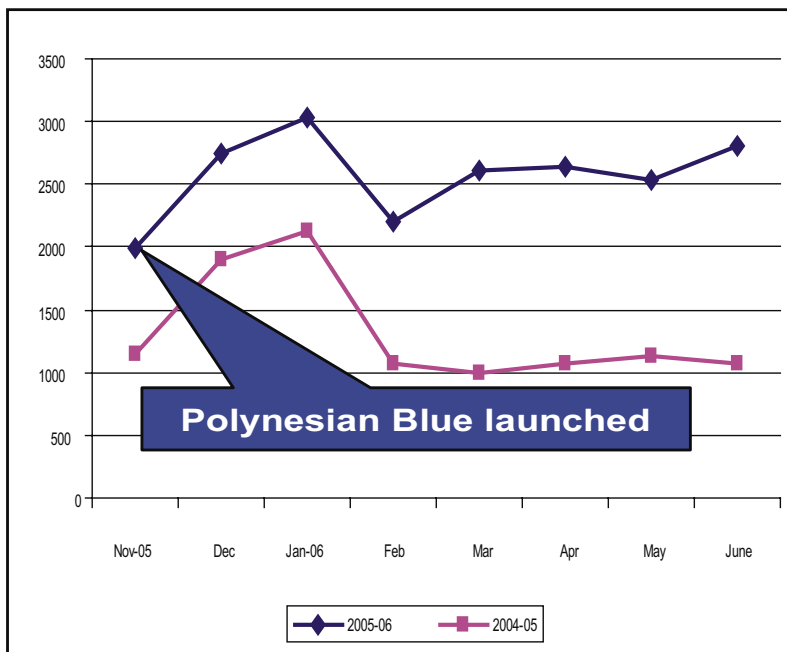
Tonga's domestic market received a boost in December 2005 with the launch of a second domestic operator, Airlines Tonga, which Air Fiji partly owns. However, the other domestic operator, Peau Vava'u Airways, suspended services indefinitely following destruction of its offices in November 2006 during the riots.

Niue's access to air services is extremely limited. Air New Zealand's twice-weekly operation direct to Auckland services the island's passenger and freight market.

The impact of the arrival of Polynesian Blue and its substantially lower fares on passenger numbers between Sydney and Apia may be seen in Figure A3.4. Traffic increased by 95.5% between November 2005 and June 2006,⁶ although seasonal patterns paralleled those of the previous year. According to Polynesian Blue's minority shareholder Virgin Blue, much of the traffic ex-Australia was leisure-based, with a growth of 101%

⁶ Based on Department of Transport and Regional Services monthly city pairs data.

Figure A3.4: Passenger Traffic on Sydney–Apia Route, 2005/06 vs. Previous Corresponding Month



Sources: Bureau of Transport and Rural Economics, Centre for Asia Pacific Aviation. 2006.

in holidaymakers to Samoa for the period, compared with the same 8 months of 2004/05. Load factors averaged 54.6% for the period, reflecting limitations related to the carriage of freight.

Passenger trends in the Samoa–New Zealand market were less buoyant, but still exhibited extremely strong growth. Short-term departures from New Zealand climbed by 30.2%⁷ on Auckland–Apia services between November 2005 and June 2006 as many New Zealanders capitalized on the cheaper fares and favorable exchange rate. Visitor arrivals to New Zealand from Samoa were up by 14.3% compared to the same period the previous year.

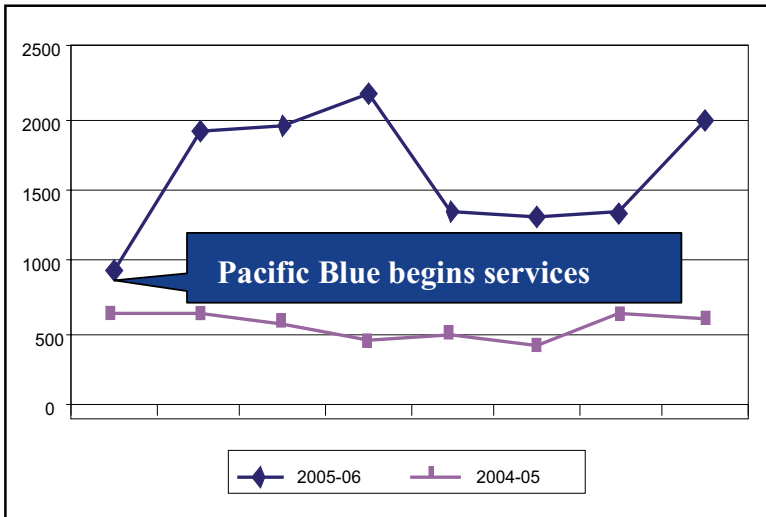
The growth experienced by Tonga following the start of twice-weekly services in October/November 2005 by Virgin Blue subsidiary Pacific

⁷ Statistics New Zealand, External Migration data.

Blue was even more substantial. On the Australia–Tonga route, passenger numbers grew by 195.1% in the initial 8 months of the LCA service (Figure A3.5) despite a low average load factor of 48.3%. However, this should be viewed in context, as Polynesian Airlines was the only operator serving the Tongan route in the previous corresponding period and offered relatively limited capacity for Tonga-originating traffic.

As further evidence of Pacific Blue’s ability to generate growth, short-term departures out of New Zealand to Tonga rose 30.8%⁸ in the 8 months after the airline’s entry in November 2005 with a thrice-weekly service. Visitor arrivals to New Zealand from Tonga were relatively flat, but this was due to unusually weak performance in 1 month (December) out of the 7-month period.

Figure A3.5: Passenger Traffic between Australia and Tonga, 2005/06 vs. Previous Corresponding Month



Sources: Bureau of Transport and Rural Economics, Centre for Asia Pacific Aviation. 2006.

⁸ Statistics New Zealand.

Table A3.1: Trade Data by Value and Percentage for Samoa, Tonga, and Niue, 2004

	Imports		Exports	
	% Total	A\$ (million)	% Total	A\$ (million)
Samoa				
Australia	32.5	33	71.5	85
New Zealand	22.7	23	2.7	3.2
United States	13.5	13.3	19.0	22.5
Total	68.7	101.5	93.2	118.9
Tonga				
Japan	–	–	48.1	20.5
United States	–	–	23.0	9.8
New Zealand	40.5	64.8	9.6	4.1
Australia	10.0	16.0	1.5	0.6
Fiji Islands	26.6	42.6	–	–
Total	77.1	160	82.2	42.7
Niue				
Australia	0.3	0.0	0.9	0.0
New Zealand	97.6	9.5	95.7	0.2
Asia	1.7	0.2	–	–
United States	0.3	0.0	–	–
Total	99.9	9.7	96.6	0.2

– = zero or data unavailable, % = percent, A\$ = Australian dollar.
Sources: Australian Dept. of Foreign Affairs and Trade, New Zealand Ministry of Foreign Affairs and Trade. 2006.

Air New Zealand, given its frequent connections to the major international markets through Auckland, dominates air freight for all three islands. The central role played by New Zealand and Australia in cargo distribution for Samoa, Tonga, and Niue is shown in Table A3.1. The two countries provide 55% of the imports and receive 74% of the exports for Samoa, 98% of imports and 97% of exports for Niue, and 51% of the imports for Tonga. Australia and New Zealand are not dominant in Tongan exports because 48% goes to Japan (sashimi and other fish). However, much of the Japanese-bound seafood is reexported through Auckland or the Fiji

Islands. In addition to servicing the substantial demand that exists in Tonga for the transport of seafood, Air New Zealand carries aquarium products, vegetable products, and local crafts. Air Pacific also provides capacity for the carriage of goods to and from the Fiji Islands.

Seafood is also the primary export product air freighted out of Samoa. Capacity provided by Polynesian Airlines in the past was inadequate, particularly in peak periods when passenger loads were high. Inbound freight to Samoa consists mainly of high-value packages, components, and mail.

Australian trade data for 2005 underline the mono-directional nature of freight between Australia and Tonga and Niue. Exports to these island states exceeded imports by almost two-to-one in tonnage terms, and 21 times by value. Australian trade with Samoa substantially exceeded that with Tonga and Niue, and in contrast to Tonga and Niue, Australian imports from Samoa were greater than its exports to that country, in both weight and value terms.

Aviation Regulation and Airport Development

Samoa maintains aviation safety oversight through its Civil Aviation Authority. It strongly supports—as a founding member and financial guarantor—the establishment of PASO as a means of improving its capacity to comply with International Civil Aviation Organization (ICAO) regulations.

In Tonga, the Ministry of Civil Aviation is responsible for safety regulations and meteorological services. It is assisted by the New Zealand Civil Aviation Authority (NZCAA), which provides inspection services and training to Tonga and supports safety audits. Tonga is also a member of PASO.

In Niue, the Director of Civil Aviation handles aviation policy, including bilateral relations. The NZCAA is responsible for maintaining airport technical and operational standards.

Samoa and Tonga have both issued ratification instruments for their participation in PIASA, a move that could assist development of regional air services to the islands as well as tourism prospects.

Tonga has six airports. In January 2007, a new government-owned public enterprise, Tonga Airports Ltd, assumed management of these

airports as part of reforms designed to instill better commercial discipline and separate airport operation from regulation. The major gateway, Fua'Amotu International Airport in Nuku'Alofa, has a 2,671-meter runway that can handle up to B767 aircraft. It is served by Air Fiji, Air New Zealand, Air Pacific, and Polynesian Airlines. A second smaller international airport, Lupepau'u International Airport, is at Vava'u.

Samoa Airport Authority, a statutory government body, is responsible for the operation of four airports, including Faleolo International Airport (near Apia) and Fagali, Maota, and Asau airports. The international airport has two passenger terminals and a cargo terminal. New Zealand, in 2000, upgraded Faleolo's runway which is now capable of taking aircraft up to B747-400. The refurbishment also included improvements to the terminal, a new control tower, and a fire and rescue station.

Niue's Hanan International Airport underwent substantial improvement in 1995, including extension of the runway to 2,335 meters.

The Course of Aviation Development and Reform

The development of aviation in Niue, Samoa, and Tonga has been characterized in recent years by the crisis-and-resolution cycle typical of Pacific island states. This has been brought about by inherent economic constraints and, in many cases, by poor decisions and practices.

Tonga

The history of the former national carrier, Royal Tongan Airlines (RTA), is one of compromise, ill-founded ambition, and ultimately, collapse. In its early years, RTA leased an aircraft from Solomon Airlines to its supplement domestic services with international services to Auckland.

During the 1990s, RTA maintained a close relationship with Air Pacific, wet-leasing⁹ an aircraft for 4 years under terms profitable for the Tongan carrier. The two airlines then entered into an innovative joint lease arrangement in 1998 by which Air Pacific held two thirds of the aircraft and RTA one third. The aircraft was flown internationally—carrying the liveries

⁹ Aircraft lease with crew.

of both airlines, with each operator using it for an agreed number of days per week. This arrangement was terminated in 1999 following a change in Air Pacific management. Two years of alternative lease arrangements by RTA resulted in \$5.4 million in losses for the airline and a subsequent return to domestic operations.

In 2002, RTA secured a code-sharing¹⁰ arrangement with Air New Zealand that provided international services to Tonga. While this arrangement was financially favorable for Tonga, the island was generally unhappy with Air New Zealand's use of Auckland as a hub for freight (especially fresh fish bound for the US market) and passengers. RTA consequently withdrew from the arrangement and (against the advice of advisors) entered into a leasing arrangement with Royal Brunei for a B757-200. This led to substantial losses, while domestic operations continued to accumulate losses despite an ongoing subsidy from the government. Between 2001 and 2004, RTA lost an estimated \$19.6 million, one third of which related to the leasing of the B757. In April 2004, Royal Brunei repossessed the aircraft for nonpayment of \$21 million in lease charges. One month later, domestic operations were halted when RTA's only domestic aircraft broke down and the airline could not pay for repairs. In June of that year a liquidator was appointed to RTA.

Since the demise of RTA, Tonga has been dependent on external operators for its international services. Pacific Blue entered the Australia–Tonga and New Zealand–Tonga sectors in November 2005, as discussed above. Air Fiji initially took up services between the Fiji Islands and Tonga, but was forced to pull out when Air Pacific announced plans for Suva–Nuku'alofa service. Pacific Blue increased competition on New Zealand sectors and reduced fares to New Zealand and Australia when it entered the Tongan market in October 2005.

The loss of RTA also created a crisis for Tonga's domestic services. This gap in provision was partly filled by the introduction of Peau Vava'u Airways, operating a single DC-3. Another private operator, FlyNui Air also emerged, but its entry was blocked by the government's decision to impose a one-airline policy. The government repealed its policy in 2005 after Peau Vava'u failed to fully honor its obligations under the single

¹⁰ The practice where a flight operated by an airline is jointly marketed as a flight for one or more other airlines. Most major airlines have code-sharing partnerships with other airlines, and code sharing is a key feature of airline alliances. The term "code" refers to the identifier used in flight schedules, and under a code-sharing agreement participating airlines can present a common flight number.

carrier license. A tender process for the second license was subsequently undertaken, and Airlines Tonga Air Fiji won the tender over three other bidders in December 2005. The airline was still operating at the end of 2006.

Tonga intends to eventually scrap its competitive policy on domestic routes and revert to a monopoly situation by selecting one of the two licensed operators. However, Airlines Tonga Air Fiji is currently the only domestic operator after damage to its head office during the riots of November 2006 led to the indefinite suspension of Peau Vava'u services.

Samoa

Air service development in Samoa has been synonymous with national carrier, Polynesian Airlines, for 56 years. Since the government acquired a controlling interest in the carrier in 1971, Polynesian has undergone many incarnations and flirted with collapse on a number of occasions.

In 1984, Polynesian secured a long-term partnership arrangement with Australian domestic operator Ansett, which effectively assumed operational control of Polynesian under a management contract, and proceeded to build its route structure. The relationship ended in 1992 when Ansett gained the rights to establish its own international operation.

Polynesian Airlines underwent rapid, substantial expansion the following year under local management, as services were extended to the US and Tahiti, and five aircraft were acquired. The result was excessive pressure on Polynesian's financial structure and near collapse of the company. The inability of government-owned airlines to make decisions and operate according to sound commercial practices was again demonstrated. Polynesian was then downsized and, in 1995, it entered into a comprehensive marketing, sales, and operational partnership with Air New Zealand. This included code sharing on each other's flights.

In 1999, Polynesian switched to Qantas under a similar alliance. Qantas provided substantial revenue, marketing, and cost benefits to Polynesian, including operational and technical support. This involved Qantas code sharing on one of Polynesian's two B737-800 services to Auckland via Tonga, with consequent linkages into the Qantas network and passenger feed. Polynesian was also hosted by Qantas in its global distribution system, and was a member carrier of the Qantas Frequent Flyer Program.

Despite the alliance, Polynesian accumulated losses of \$30.3 million¹¹ between 2001 and 2004¹² after acquiring a second B737-800 and expanding services. The aircraft was subleased to Qantas, but Qantas withdrew from the sublease as the aircraft was surplus to its needs. No other sublessee could be found, and Polynesian had to return the B737-800 to the lessor prematurely in 2003 at considerable penalty. As a consequence, the government had to inject \$6.9 million (footnote 11) into the airline to maintain its viability and help pay the penalty. Further losses amounting to \$5.4 million (footnote 11) were anticipated by management in the period to 2006.

In these circumstances, the government decided that drastic action was required to ensure the future provision of air services to Samoa. A tender was undertaken to secure an operator for international services. Pacific Blue, Air Pacific, and Air New Zealand competed for the tender, with Pacific Blue emerging successful with its Polynesian Blue proposal. The subsequent restructuring of Polynesian Airlines and formation of Polynesian Blue have produced encouraging initial results. Polynesian Blue returned a pretax profit of \$0.79 million for the November 2005–June 2006 period, against the \$71.4 million provided by the Government of Samoa to support Polynesian Airlines in the previous 10 years.

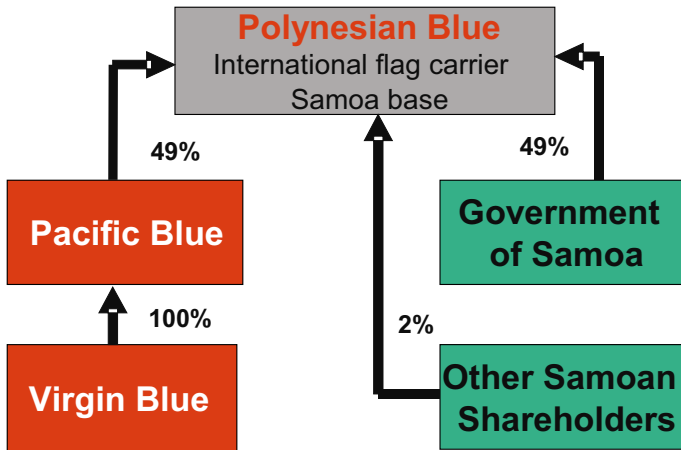
The Polynesian Blue Model

Polynesian Blue represents a “win-win” for the participants, and stands as a potential model for other island nations. Through the tender process, the government secured an experienced operator with solid fleet resources and a business plan designed to return Samoa’s international operations to profitability. For its part, Pacific Blue gained a strategic foothold in the Pacific with access to Samoa’s international rights and exclusivity as the country’s only international jet operator.

Polynesian Blue was established as a Samoan-incorporated joint venture company, with the Government of Samoa subscribing for 49% of the shares for an up-front capital injection of around \$1.7 million. Virgin Blue also assumed 49% (acquisition price not known), with the remaining 2% being taken up by an independent Samoan investor (the Aggie Grey family). This ensured that Polynesian Blue was regarded as Samoan for

¹¹ Converted to \$ at an exchange rate of 1 Samoan tala = \$0.37.

¹² AusAID, 2004.

Figure A3.6: Share Structure of Polynesian Blue

Source: Centre for Asia Pacific Aviation. 2006.

all intents and purposes, therefore not jeopardizing the bilateral rights that Samoa holds. Certain Polynesian Airlines assets from the preexisting jet business were transferred to the new company. The ownership structure of Polynesian Blue is illustrated in Figure A3.6.

Commercial and operational control of Polynesian Blue has been vested in Virgin Blue under a separate management agreement, though the government retains limited input at the management level. Pacific Blue effectively runs the venture, but Samoans are included in management and in cabin crews.

Polynesian Blue currently operates one B737-800 for services out of Apia to Auckland and Sydney. The schedule gives the aircraft the daily utilization essential for its economic viability. Under the arrangement, the airline uses its own livery under a similar low-cost model to that of Pacific Blue and its parent Virgin Blue, employing a one-class configuration and user-pays basis for onboard catering items.

The formation of Polynesian Blue also acted as a catalyst for the long-overdue restructuring of Polynesian Airlines, including a downsizing of its 393-strong workforce. Already 160 of the targeted 198 positions have been cut to bring the employee level down to 195—still high for an airline with only one small aircraft. The scaled-down Polynesian Airlines continues to operate domestic services and links to Tonga from Apia.

The advantages for the Government of Samoa have been multifold:

- International services are to be maintained on a profitable, commercial basis (ending previous losses);
- The need for further subsidies to the airline has been eliminated, assuming targets are met (Polynesian Airlines was costing the government \$6–7 million annually, or around 6% of the island’s expenditure and net lending);
- Responsibility for aircraft provision lies with Virgin Blue. Under the arrangement, sufficient aircraft must be made available to meet the requirements of the business plan (expected to involve up to 4 B737s);
- Subject to performance, Polynesian Blue is expected to provide an annual return to the government of \$1.4 million through dividend payments; and
- Tourism gains a substantial boost through the stimulation of traffic as a consequence of the availability of cheaper fares.

The downside was that the government had to pay \$7 million in penalties associated with the premature cancellation of a lease held with Boeing for the other B737-800 operated by Polynesian, and redundancy payments for employees retrenched through the restructuring program. The government provided further capital support for this mostly domestic operation. The government is also responsible for underwriting any shortfall in revenue below an agreed target for the service (not exercised to date).

Niue

Niue’s lack of its own national airline has left it exposed to developments with external operators. This has given rise to frequent uncertainty over air service provision and intervention with support from the Government of New Zealand.

Polynesian Airlines served as Niue’s initial de facto flag carrier until 1981, when Air Nauru assumed the role. The now-defunct Samoa Air then took over from Air Nauru for a time before the latter returned with a new aircraft in the early 1990s. In 1997, Air Nauru departed and Royal Tongan provided services to Niue via Tonga.

In 2002, Polynesian Airlines resumed direct services between Niue and New Zealand under an arrangement underwritten by the Government of New Zealand. This provided for Polynesian, on a five-year contractual basis, to operate a twice-weekly nonstop return service between Auckland and Niue (reduced to once-weekly after cyclone Heta destroyed Niue's tourism infrastructure). The Government of New Zealand underwrote the service through a guarantee arrangement. This took the form of an initial payment, and contained provisions to provide top-up payments if the agreed minimum commercial bookings were not made (footnote 12). The underwriting package ensured that Polynesian maintained its profit margins. It is understood that the sales threshold was consistently met. This is another interesting model that a number of island nations are considering.

The introduction of Polynesian Blue resulted in the Niue–Auckland jet service being dropped two years before the contractual arrangement with Polynesian Airlines was due to expire. This prompted the Government of New Zealand to approach Air New Zealand to supply services, recognizing the importance of air services to tourism and the Niue economy.

Under the one-year, renewable agreement negotiated between Air New Zealand and the Niue Government, Air New Zealand began operating a B737-300 on a once-weekly, all-economy service in November 2005. NZAID underwrites the arrangement by guaranteeing to compensate Air New Zealand to an agreed level for any losses because of poor patronage. Air New Zealand benefits by increasing utilization of its aircraft, generating additional revenue on an overnight run when the aircraft would otherwise be unlikely to operate.

Polynesian Airlines (now Polynesian Blue) also withdrew from its Apia–Niue service because of low patronage. The decision prompted Reef Shipping, which is associated with the fish processing plant in Niue, to announce its intention to relaunch Reef Air on freight services, linking Niue with Tonga, Samoa, and possibly American Samoa.

Lessons from History and Impediments to Further Development

Inefficient, state-owned aviation operations with high ambitions and questionable strategies proved costly for Samoa and Tonga. In Tonga's

case, it took the collapse of the national carrier to force change and the introduction of a more commercial approach. Samoa was heading down a similar path when the government intervened with a drastic but innovative solution to stem airline losses. The reforms enacted through the establishment of Polynesian Blue had some initial downsides, most notably Polynesian Blue's lack of connectivity with airlines other than Virgin Blue in Australia. However, Virgin Blue is remedying this situation through recent efforts.

The focus on passengers rather than freight carriage may lead to a scarcity of cargo capacity to meet Samoa's needs. Tonga is similarly affected in terms of freight because of its dependence on Pacific Blue for linkages to the important Australian market. Levels of cargo on flights between Australia and Tonga have fallen considerably¹³ in the time Pacific Blue has been operating (compared to tonnage that the defunct Royal Tongan Airline transported with its much larger aircraft). Niue's limited connections to major markets other than New Zealand impose a constraint on tourism development. Its agreement with Air New Zealand, while ensuring no loss of direct links, also provides a commitment for exclusive access.

Assessment of Future Prospects

The establishment of low-cost operations by Pacific Blue and Polynesian Blue has brought tangible benefits to Samoa and Tonga in terms of visitor numbers, particularly from Australia and New Zealand. However, these operations are focused on passenger rather than freight carriage—something that has become more obvious in recent months on the Australia–Tonga route than on Australia–Samoa services.¹⁴ Despite potential shortfalls in freight capacity, the Polynesian Blue model appears to represent a viable and, indeed, preferable alternative to island governments owning and

¹³ According to Australia's Bureau of Transport and Regional Economics (BTRE), freight tonnage between Australia and Tonga fell by 89% between November 2005 and February 2006, compared to the previous corresponding period. Pacific Blue began serving the market in October 2005.

¹⁴ BTRE Freight Statistics show air cargo tonnages on Australia–Tonga services have declined from 12.9 tons to 6.8 tons since Pacific Blue's launch, November 2005–February 2006. By contrast, Australia–Samoa tonnages are virtually the same as in the previous corresponding period.

operating their own national airlines. It effectively transfers the operational risk and responsibility for management and resourcing to the private sector, with the prospect of establishing commercially based services capable of generating positive earnings for a sustained period.

The checkered history of national airlines in Samoa and Tonga (as well as other Pacific islands) underscores the importance of gaining the support of airlines with strong capital structures and expansive fleet resources to underpin local services. It is no coincidence that Polynesian Airlines' most stable and productive periods were achieved when it was in partnership with one or other of the major carriers from Australia and New Zealand. This clearly suggests that any solution to the pervasive problems besetting air services to the islands must involve a partnership, whether through a joint venture or otherwise, with a larger airline grouping. Experience has shown that this generally leads to better and more consistent service provision at more affordable prices, and with optimum benefits for tourism.

Appendix 4: Vanuatu Case Study

Vanuatu is an archipelago of 83 islands. The population is about 213,300 and growing at a rate of about 1.5% per annum. Ni-Vanuatu, or indigenous Melanesians, account for virtually the entire population. Most people live in rural areas or in the small urban centers of the capital, Port Vila (30,000 population), and Luganville.

The economy of Vanuatu is typical of the Pacific islands, with a focus on small-scale agriculture, fishing, and tourism. Gross domestic product (GDP), at \$328 million in 2005,¹ has grown at a rate of 2–3% per annum in recent years. Inflation is low, and the government maintains a small budget surplus. After considerable instability, economic stability has been aided by the Comprehensive Reform Program—established in 1997 with the support of the Asian Development Bank—which serves as a blueprint for national development.

Vanuatu produces copra (the most important cash crop), coconut oil, kava, beef, and timber for export to its major markets of Malaysia; Taipei, China; and Thailand. Imports of machinery and equipment, foodstuffs, and fuel come largely from Australia; Japan; Singapore; and Taipei, China.

Tourism, offshore banking, and other services contribute 62% of GDP,² with 26% coming from agriculture. Tax revenues derive mainly from import duties and a 12.5% value added tax on goods and services. About 65% of the workforce is involved in agriculture, and 30% in services. GDP per capita is about \$1,530 (2005 estimate).

¹ International Monetary Fund estimate.

² CIA World Factbook.

Tourism is the island state's principal foreign exchange earner, generating \$18.6 million annually and employing 4,000 people. It is highly seasonal, and is largely concentrated on the main island of Efate, where there is a surplus of rooms. Outer island tourism is limited by poor infrastructure and the complexity of property title issues, which makes new investment difficult. Strengthened by the entry of Pacific Blue Airline and its low-fare regime, visitor arrivals increased by 20% in 2004 to 60,000, with accelerated growth expected in 2005. Almost all visitors are drawn from two markets, Australia (about 80%), and New Zealand (10%).

The Aviation Market

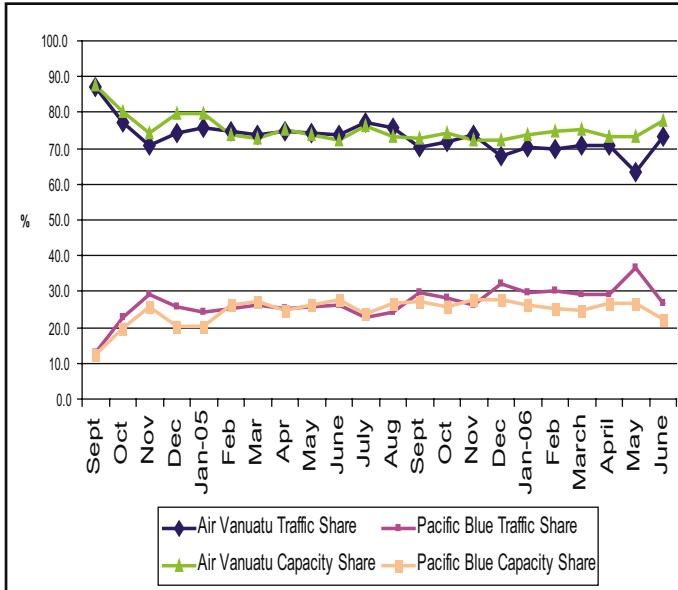
Vanuatu is served by five international airlines—including the national carrier Air Vanuatu—that provide links with the major markets. Air Vanuatu provides links to Sydney, Brisbane, Auckland, Honiara (Solomon Islands), and Nadi (the Fiji Islands). It flies 21 weekly return services with a B737-300 to Brisbane (thrice weekly—including a once-weekly service via Honiara), Sydney (five times weekly), Auckland (three times weekly in peak season), Noumea (New Caledonia—three times weekly), and Nadi (twice weekly).

Pacific Blue serves Brisbane, while Air Pacific serves Nadi and Honiara. Aircalin flies between Port Vila and Noumea. Air New Zealand planned in late 2006 to establish services between Auckland and Vanuatu with a once-weekly service, initially under code-sharing³ arrangements on Air Vanuatu's existing services. This development followed an expansion of the New Zealand–Vanuatu bilateral agreement.

Air Vanuatu airline also owns and operates Vanair, Vanuatu's domestic carrier. Air Vanuatu competes directly on two key international sectors—with Air Pacific's twice-weekly Nadi–Port Vila service, and with Pacific Blue on a twice-weekly B737-800 service between Brisbane and Port Vila. The LCA, Pacific Blue, launched its Brisbane–Vanuatu service in September 2004. Its presence generated substantial growth in the overall market,

³ The practice where a flight operated by an airline is jointly marketed as a flight for one or more other airlines. Most major airlines have code-sharing partnerships with other airlines, and code sharing is a key feature of airline alliances. The term “code” refers to the identifier used in flight schedules; and under a code-sharing agreement, participating airlines can present a common flight number.

Figure A4.1: Airline Shares of Australia–Vanuatu Market Before and After Pacific Blue Entry—September 2004–June 2006



Source: Australian Bureau of Transport and Regional Economics. 2006.

particularly between Australia and Vanuatu. The availability of cheaper fares out of Brisbane boosted passenger traffic by 14.2% during the 22-month period September 2004–June 2006 (Figure A4.1). However, growth slowed considerably in the last 10 months to 7.1%. Pacific Blue captured much of the new growth. The direct impact of the market changes on Air Vanuatu is difficult to gauge, given the complicating factor on performance of its merger with Vanair.

Available passenger data for the 22 months show that Air Vanuatu's share of traffic actually declined by 11.2% during that period, consistent with changes in its share of capacity. Pacific Blue's traffic share accordingly rose from 12.6% in September 2004 to 26.8% in June 2006. Despite the challenge posed by Pacific Blue, Air Vanuatu maintained a relatively solid position in the market, supported by its code-share arrangement with Qantas. Pacific Blue's load factor did exceed that of Air Vanuatu in 17 of the 22 months assessed. The LCA's load factor averaged 58% for the September 2004–June 2006 period, while Air Vanuatu's averaged 52%.

Table A4.1: Trading Partners of Vanuatu, 2004

	Imports		Exports	
	Vatu (million)	%	Vatu (million)	%
Australia	6,022	42.8	349	10.6
New Zealand	1,845	13.1	49	1.5
Fiji Islands	1,214	8.6	–	–
Singapore	884	6.3	–	–
Japan	615	4.4	207	6.3
France	557	4.0	–	–
New Caledonia	186	1.3	150	4.6
European Union	–	–	1300	39.5
Total	14,067	100	3,294	100

– = zero and data unavailable, % = percent.

Source: Vanuatu National Statistics Office. 2006.

Air Vanuatu provides freight links between Vanuatu and the major markets of Australia, New Zealand, New Caledonia, and the Fiji Islands. Pacific Blue also carries some freight on its Australia service, though capacity is limited. As Table A4.1 shows, Australia, New Zealand, and the Fiji Islands together account for nearly 65% of all air freight imports. Importantly, cargo originating from Europe and other parts of Asia is also brought through hubs in Australia, New Zealand, and, to a much lesser extent, the Fiji Islands. This is also the case with Vanuatu's exports, almost 40% of which are bound for the European Community. Australia is also a significant market, taking 10.6% of exports in 2004. Incoming goods and materials exceed outgoing products by more than four to one in value terms. Machinery, food and live animals, manufactured goods, mineral oils, and chemical products dominate imports. Coconut oil, copra, and kava account for 58% of all exports.

Aviation Regulation and Airport Development

Vanuatu's Ministry of Infrastructure and Public Utilities presides over the Directorate of the Civil Aviation Authority (CAA). CAA was originally

intended to be an independent body, responsible only for regulatory oversight. An apparent shortage of human resources led to CAA's being responsible for policy and enforcement as well as regulation.

Notably, Vanuatu is a member country and hosts the headquarters of PASO. PASO aims to harmonize aviation regulatory systems across the Pacific. It provides safety oversight and technical assistance to airlines, airports, and civil aviation authorities across the region.

Airports Vanuatu Limited (AVL), a corporate government entity since 2000, provides airport management, air traffic control services, aviation rescue fire fighting, and aviation security for the three international airports at Port Vila, Espiritu Santo, and Tanna. Twenty-six airfields on the outer islands remain in government ownership and are managed under contract by AVL. The state of the airports is generally reasonable, particularly that of the three international airports. There are also no significant problems with outer island strips.

Over the past five years, A\$25 million had been spent on aviation infrastructure in Vanuatu, including a new cargo terminal at Port Vila. The government recently held tenders for work to upgrade the airports for Norsup, Longana, and Lonorore, to make them suitable for use by Air Vanair's ATR 42 aircraft. The provision of terminal facilities and the sealing of runways have been incorporated in each project. The expansion work is being undertaken with funding (90%) from the *Agence Française de Développement*.

The Course of Aviation Development and Reform

Originally formed as New Hebrides Airways, Air Vanuatu came into being in 1981 after the Republic of Vanuatu gained independence from the UK and France. The airline was placed in full government ownership seven years later, and has remained a state-owned entity despite stated plans to sell a minority shareholding. Efforts to sell shares, however, have not come to fruition largely because of the volatility of the airline's financial performance, and its weak balance sheet. Air Vanuatu returned losses in three of the five years between 1998 and 2002, and again in 2004. In 1999, the airline's B737 suffered hail damage in Sydney that required \$2.3 million in repairs, only half of which was insured. Tourism flows declined as a result of the temporary loss of services.

Losses in 2004 were the result of a number of developments. The airline was merged again with Vanair (see below), the government-owned domestic carrier. It faced the cost of acquiring a second B737, the service of which was ultimately discontinued because of low loads because of a shortage of hotel rooms in Vanuatu. A 46-seat ATR 42 was also acquired, but sat idle for seven months as Vanair management refused to operate it on domestic routes. Additionally, airfares and returns declined as a result of the entry of the LCA, Pacific Blue, into the Australia–Vanuatu sector.

The recent history of Air Vanuatu has revolved around its merger and de-merger with Vanair, the government-owned domestic carrier. In 2000, the Sope Government brought the two airlines together, only for the Natapei Coalition Government to reverse the move two years later. Air Vanuatu again assumed control of Vanair in January 2005, and has since proceeded to rationalize operations of the airline. At the time of the latest takeover, Vanair operations of two Twin Otter and an Islander aircraft were barely viable, with services to only two of its 29 destinations profitable.

Air Vanuatu's financial position remains weak for a variety of reasons, including the merger with Vanair, a brief strike by employees in 2005, the need to lease supplementary aircraft during peak seasons, and heavy aircraft maintenance requirements. The government has committed to continued support for the airline, however, despite the need to extend it large loans in 2005 and 2006.

In 2006, the increased competition from Pacific Blue prompted Air Vanuatu to halve the 20% discount previously offered to Pacific Blue passengers on domestic services in Vanuatu. While the 20% discount is still available to Air Vanuatu passengers, tourism operators on the outer islands especially are concerned that the change will adversely impact visitor growth, which has been driven largely by Pacific Blue. Since its relatively modest entry in September 2004, Pacific Blue has secured a one-third share of the Australia–Vanuatu market. All its services operate through Brisbane, with connections to six other cities in Australia and New Zealand.

Air Vanuatu's code-sharing alliance with Air New Zealand will strengthen its loads on Auckland–Port Vila flights and Vanuatu's tourism marketing presence in the New Zealand market. Other code-sharing arrangements with Qantas and Aircalin have enabled Air Vanuatu to supplement its own operated services and penetrate more deeply into key markets. Other opportunities have emerged, with Vanuatu and New Zealand agreeing to extend their air services pact by allowing four weekly

flights between the two countries. Air Vanuatu's wet-lease⁴ arrangement with Solomon Airlines on the Honiara–Brisbane sector was terminated with Solomon Airlines' decision to establish and expand services on the route in its own right. The wet-lease arrangement had been a win-win for the two airlines. Air Vanuatu had gained financially and increased utilization with its B737, while Solomon Airlines had been able to secure a presence in the key Australian market without committing its own equipment and operational resources. However, wet leases are by nature expensive and the steep cost had been passed on by Solomon Airlines to consumers through higher fares.

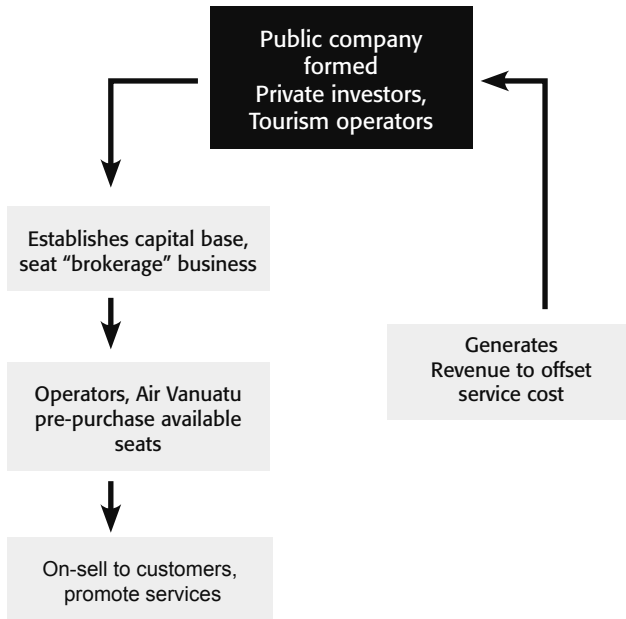
Air Vanuatu's five-year plan includes acquiring a 185-seat B737-800 to replace its existing, smaller capacity B737-300 when the current lease expires in March 2008. This would provide the airline with an additional 50 seats per flight to meet anticipated growth. Board approval has been given the proposal, and lease negotiations are ongoing with two foreign companies. The airline also proposes to replace its Twin Otters with Y12s from the People's Republic of China in an attempt to reduce maintenance costs.

The Risk-Sharing Concept

While Air Vanuatu considers upgrading its B737 to a newer, more efficient model, the tourism industry is examining an alternate risk-sharing approach to support the reintroduction of a nonstop Melbourne service. Melbourne linkages are presently supplied indirectly through Air Vanuatu's commercial relationship with Qantas, and Pacific Blue's flight connections through Brisbane with Virgin Blue. The industry has pressed for some time to reestablish non-stop Port Vila–Melbourne service. Market research has identified the Melbourne market as a potential growth area, but one that is frustrated by lack of direct air service access. In the past, both Air Vanuatu and Pacific Blue have established, and subsequently withdrawn, from the Melbourne–Port Vila route.

The model under consideration is illustrated in Figure A4.2. It would entail formation of a public company supported by tourism interests and other investors. Forward bulk purchase of seats by one or a number of parties would effectively underwrite the establishment of the operation. This would ensure an economically viable aircraft load factor. The

⁴ Aircraft lease with crew.

Figure A4.2: Risk -Sharing Model

Source: Centre for Asia-Pacific Aviation. 2006.

purchasers would on-sell these seats through their own marketing and distribution networks. As an incentive to the potential operator, Vanuatu would support the initiative by undertaking a related destination marketing campaign in Melbourne.

Various options to achieve this are being considered, but the relatively small pool of resort operators in Vanuatu cannot pre-purchase a sufficient number of seats to make such a scheme viable. Given this constraint, one model could involve resort owners subscribing to a fund to establish a seat brokerage business on a commercial or not-for-profit basis. Available seats then could be presold and distributed to a wider base.

The private sector proponents of the venture have sought proposals from prospective operators, with the support of the Vanuatu Tourism Office, the Vanuatu Hotels and Resorts Association, and Airports Vanuatu

Limited. A public company is being formed, with seed capital from a number of investors, and further funding support is being pursued. The operational arrangement is being discussed with a number of potential airline providers.

The potential may exist for such a scheme to be applied elsewhere in the Pacific, or expanded from a route-specific structure to a broader regional application, though this inevitably would add to its complexity.

The possible negative aspects associated with the above model are:

- Tourism interests/investors may be exposed to some risk in participating, given its high dependence on achieving targeted seat sales to fund operating costs;

- Seasonality issues may hamper the ability of the seat “brokers” to secure commitments for forward purchases at viable levels on a year-round basis;

- Tourism operators generally expect to obtain airline seats for packaging with accommodation on a net basis, discounted from the prevailing market rates (the level of discount varies with volume). As such, the available seats may have to be offered at below-market rates, negatively affecting overall returns;

- Pacific Blue continues to apply downward pressure on fare prices in the market, albeit indirectly on services via Brisbane. While Pacific Blue may ultimately take up seats on the Melbourne service, its online fares are increasingly accessed by travelers to mix and match their own flight and accommodation arrangements; and

- Melbourne may not prove sustainable as a source market for Vanuatu, in light of previous decisions by operators to withdraw from the route. Indeed, initial feedback from the market suggests a high expectation that fares will be offered at low rates.

The risk aspect could be moderated if one or a number of airlines take up blocks of seats on each flight to effectively underwrite the operation and reduce the requirement for on-selling. Under such an arrangement, each carrier involved could independently price their allocated seats, and so maintain competitive tension on the Port Vila–Melbourne route. Air Vanuatu may participate through a blocked space arrangement, and other carriers have indicated they may take part. By taking advantage of this service, these operators would have the ability to sell tickets on a route where they are not currently represented.

Lessons from History and Impediments to Further Development

The shortage of inbound seats from the key tourism markets of Australia and New Zealand represents a significant barrier to development in Vanuatu. The New Zealand situation will improve with Air New Zealand's entry to the Vanuatu market. However, capacity growth is also constrained by the 2,600-meter runway of Bauerfield International Airport at Port Vila, which is limited to jets up to B767 size.

For Air Vanuatu, limited available capital and the impact of competition is constraining its expansion options. An expanded schedule is not possible due to the already high use of its existing B737. While the government has considered privatization as a means of importing capital into the airline, this is not a likely prospect given market development constraints.

Assessment of Future Prospects

Air Vanuatu is caught between the demands of the islands' tourism industry for more capacity and routes, strong pricing competition from a rival with a much lower cost base, and the pressures of servicing its aging fleet. The possibility of Pacific Blue establishing Sydney–Port Vila services also overhangs Air Vanuatu's future. Its forward plan appears highly optimistic, given the current state of the airline, and government support through subsidized loans is critical to sustain services.

Air Vanuatu's straitened condition and seeming inability to deliver additional capacity has direct implications for the Vanuatu economy, which is heavily focused on tourism. This situation has moved tourism operators to explore a private sector solution through an innovative risk-sharing approach. While the strategy offers some potential, one weakness may be the involvement of Air Vanuatu.

Meanwhile, the competition provided to Air Vanuatu by Pacific Blue has helped expand the market and improve tourism returns through pressure on fare prices in the Australian market, benefiting consumers and tourism in general. This has imposed commercial discipline on Air Vanuatu, which has been met by overdue attempts to reduce its workforce, improve operating efficiencies, and build on opportunities available through enhanced arrangements with Solomon Islands and New Zealand. The network of code-sharing services with a range of carriers, most recently

Air New Zealand, has enabled Air Vanuatu to develop its presence in the larger markets and access additional capacity. This strategy has served well the airline and Vanuatu as a tourism destination. However, consistent with many other tourism-based islands in the Pacific, the limitations of hotel infrastructure and capital availability constrain Air Vanuatu, inhibiting its ability to fully capitalize on available opportunities.

Greater private sector participation in air service supply, if it can be achieved on a sustainable basis, presents a potentially valuable model for the region. There are still inherent risks, and these may increase substantially if Air Vanuatu again pursues expansion with an unsuitable aircraft type.

Appendix 5: Profile of Air Services in the Pacific

Table A5.1: International Air Services to/from Pacific Islands (including French Protectorates) by Aircraft Type, Weekly Frequency, Weekly Seats, and Cargo Capacity

Country	Airline	Aircraft type	Frequency	No. of Seats	Cargo (tons)
From Australia to					
Fiji Islands	Air Pacific	B737-800	7	1,134	0.0
		B737-700	1	136	0.0
		B747-400	8	3,664	119.2
		B767-300	5	1,280	60.0
Fiji Islands	Pacific Blue	B737-800	10	1,800	0.0
French Polynesia	Air Tahiti Nui	A340-300	6	1,764	252.0
New Caledonia	Aircalin	A320	5	730	0.0
		A330-200	1	271	23.6
New Caledonia	Qantas Airways	B737-800	3	492	0.0
		B767-300	1	229	12.7
PNG	Airlines PNG		2	22	0.0
		Dash 8	7	252	0.0
PNG	Air Niugini	Fokker 100	9	900	0.0
		B767-300	6	1,380	76.2
Samoa	Polynesian Blue	B737-800	3	540	0.0
Solomon Islands	Our Airline	B737-300	2	272	4.0

Solomon Islands	Solomon Airlines	B737-300	5	630	15.0
Tonga	Pacific Blue	B737-800	2	360	0.0
Vanuatu	Air Vanuatu	B737-300	8	1,008	20.0
Vanuatu	Virgin Blue	B737-800	2	360	0.0
Total			93	17,224	582.7
From Australia – Cargo Only					
PNG	Transair	Fairchild SA26/ SA226 /SA277 Merlin/ Metro	4	0	8.0
Solomon Islands	Heavylift	B727F	1	0	20.5
Total			5	0	28.5
From Cook Islands to					
Fiji Islands	Air New Zealand	B737-300	1	136	2.0
French Polynesia	Air New Zealand	B767-300	3	702	45.0
Total			4	838	47.0
From Fiji Islands to					
Cook Islands	Air New Zealand	B737-300	1	136	2.0
Kiribati	Air Pacific	B737-700	1	136	0.0
New Caledonia	Aircalin	A320	2	292	0.0
Samoa	Air Pacific	B737-800	2	324	0.0
From Fiji Islands to					
Tonga	Air Pacific	B737-800	1	162	0.0
Tuvalu	Air Fiji	EMBRAER 120	3	90	16.5
Vanuatu	Air Pacific	B737-700	1	136	0.0
Vanuatu	Air Vanuatu	B737-300	1	126	2.5
Wallis, Futuna Islands	Aircalin	A320	1	146	0.0
Total			15	1,820	21.0

Continued on next page

Table A5.1—Continued

Country	Airline	Aircraft type	Frequency	No. of Seats	Cargo (tons)
From French Polynesia to					
Cook Islands	Air New Zealand	B767-300	3	702	45.0
New Caledonia	Aircalin	A330-200	1	271	23.6
Total			4	973	68.6
From Kiribati to					
Fiji Islands	Air Pacific	B737-700	2	272	0.0
RMI	Air Marshall Islands	Fairchild Dornier 228	1	19	0.3
Nauru	Our Airline	B737-300	2	272	0.0
Total			5	563	0.3
From RMI to					
Kiribati	Air Marshall Islands	Fairchild Dornier 228	1	19	0.3
Nauru	Our Airline	B737-300	2	272	0.0
Total			3	291	0.3
From Nauru to					
Kiribati	Our Airline	B737-300	2	272	0.0
Solomon Islands	Our Airline	B737-300	2	272	0.0
RMI	Our Airline	B737-300	2	272	
Total			6	816	0.0
From New Caledonia to					
Fiji Islands	Aircalin	A320	1	146	0.0
French Polynesia		A330-200	1	271	23.6
Vanuatu		A320	2	292	0.0
Wallis And Futuna Islands		A320	2	292	0.0
Total			6	1,001	23.6

Continued on next page

Table A5.1—Continued

Country	Airline	Aircraft type	Frequency	No. of Seats	Cargo (tons)
From New Zealand to					
Cook Islands	Air New Zealand	A320	5	730	10.0
		B767-300	4	936	60.0
Cook Islands	Pacific Blue	B737-800	2	360	0.0
Fiji Islands	Air New Zealand	A320	5	730	10.0
		B737-300	1	136	2.0
		B767-300	3	702	45.0
		B777-200	1	313	18.0
Fiji Islands	Air Pacific	B737-800	9	1,458	0.0
		B737-700	2	272	0.0
		B747-400	1	458	14.9
		B767-300	2	512	24.0
Fiji Islands	Freedom Air		4	600	0.0
French Polynesia	Air New Zealand	B767-300	1	234	15.0
French Polynesia	Air Tahiti Nui	A340-300	6	1,764	252.0
New Caledonia	Aircalin	A320	1	146	0.0
New Caledonia	Aircalin	A330-200	1	271	23.6
New Caledonia	Air New Zealand	A320	2	292	4.0
Niue	Air New Zealand	B737-300	1	136	2.0
Samoa	Air New Zealand	A320	2	292	4.0
		B767-300	2	468	30.0
Samoa	Polynesian Blue	B737-800	4	720	0.0
Tonga	Air New Zealand	A320	3	438	6.0
		B767-300	2	468	30.0
Tonga	Pacific Blue	B737-800	3	540	0.0

Continued on next page

Table A5.1—Continued

Country	Airline	Aircraft type	Frequency	No. of Seats	Cargo (tons)
Vanuatu	Air Vanuatu	B737-300	3	378	7.5
	Air New Zealand	A320	3	438	6.0
Total			73	13,792	564.0
From PNG to					
Solomon Islands	Air Niugini	Fokker F28	2	150	0.0
Total			2	150	0.0
From Samoa to					
Fiji Islands	Air Pacific	B737-800	2	324	0.0
Tonga	Air New Zealand	B767-300	1	234	15.0
Tonga	Polynesian Airlines	Dash 8	2	74	0.0
Total			5	632	15.0
From Solomon Islands to					
Nauru	Our Airline	B737-300	2	272	4.0
PNG	Air Niugini	Fokker F28	2	150	0.0
Vanuatu	Air Vanuatu	B737-300	1	126	3.0
Total			5	548	7.0
From Tonga to					
Fiji Islands	Air Pacific	B737-800	1	162	0.0
		B737-700	2	272	0.0
Samoa	Air New Zealand	B767-300	1	234	15.0
Samoa	Polynesian Airlines	Dash 8	2	74	0.0
Total			6	742	15.0
From Tuvalu to					
Fiji Islands	Air Fiji	Embraer 120	3	90	16.5
Total			3	90	16.5

Continued on next page

Table A5.1—Continued

Country	Airline	Aircraft type	Frequency	No. of Seats	Cargo (tons)
From Vanuatu to					
Fiji Islands	Air Pacific	B737-800	1	162	3.0
Fiji Islands	Air Vanuatu	B737-300	1	126	2.5
New Caledonia	Aircalin	A320	2	292	0.0
Solomon Islands	Air Pacific	B737-700	1	136	0.0
Total			5	716	5.5
From Wallis And Futuna Islands to					
Fiji Islands	Aircalin	A320	2	292	0.0
New Caledonia	Aircalin	A320	1	146	0.0
Total			3	438	0.0

Note: Service levels as of November 2006.

Source: Centre for Asia Pacific Aviation and Official Airlines Guide. 2006.

Table A.5.2: Domestic Air Services in South Pacific (including French Protectorates) by Aircraft Type, Weekly Frequency, Seats, and Cargo Capacity

Airline	Aircraft type	Frequency	Total No. of seats	Cargo (tons)
Cook Islands				
Air Rarotonga	Embraer 110	39	624	0.0
	Saab 340	36	1,116	0.0
Total		75	1,740	0
Fiji Islands				
Air Fiji	Twin Otter	80	1,200	288.0
	Embraer 110	188	2,820	601.6
	Embraer 120	44	1,320	242.0
Air Pacific	B737-700	3	408	0.0
	B737-800	1	162	0.0
Sun Air Fiji	Britten-Norman Islander	141	1,128	0.0

Continued on next page

Table A5.2—Continued

Airline	Aircraft type	Frequency	Total No. of seats	Cargo (tons)
	Twin Otter	160	2,720	0.0
Total		617	9,758	1132
French Polynesia				
Air Tahiti	ATR 42-500	120	5,760	0.0
	ATR 72	308	20,328	0.0
	Twin Otter	301	5,719	0.0
Total		729	31,807	0
RMI				
Air Marshall Islands	Dash 8	38	1,292	34.2
	Fairchild Dornier 228	38	722	11.4
RMI				
Continental Airlines	B737-800	6	900	12.0
Total		82	2,914	58
New Caledonia				
Air Caledonie	ATR 42/Atr72	178	8,544	0.0
	Fairchild Dornier 228	37	703	0.0
Total		215	9,247	0
PNG				
Airlines PNG	Twin Otter	90	1,710	0.0
	Dash 8	60	2,160	0.0
Airlink Limited	Britten-Norman Islander	38	304	30.4
	Cessna	58	464	0.0
	Embraer 110	176	2,640	246.4
Air Niugini	Dash 8	112	4,032	33.6
	Fokker 100	72	7,200	0.0
	Fokker F28	152	11,400	0.0

Continued on next page

Table A5.2—Continued

Airline	Aircraft type	Frequency	Total No. of seats	Cargo (tons)
Mission Aviation Fellowship	Beechcraft	6	66	0.0
	Twin Otter	100	1,900	0.0
Total		864	31,876	310
Samoa				
Polynesian Airlines	Britten-Norman Islander	18	162	0.0
Total		18	162	0
Solomon Islands				
Solomon Airlines	Britten-Norman Islander	30	270	0.0
	Twin Otter	84	1,512	0.0
	Embraer 110	26	468	0.0
Total		140	2,250	0
Tonga				
Air Fiji	Britten-Norman Trislander	23	414	0.0
	Twin Otter	44	660	158.4
	Embraer 110	19	285	60.8
Total		86	1,359	219
Vanuatu				
Air Vanuatu	Britten-Norman Islander	23	207	0.0
	Twin Otter	158	3,002	0.0
Total		181	3,209	0
Wallis and Futuna Islands				
Air Caledonie International	Twin Otter	16	304	0.0

PNG = Papua New Guinea, RMI = Republic of the Marshall Islands
Source: Centre for Asia Pacific Aviation and Official Airlines Guide. 2006.

Appendix 6: Supplementary Data

Table A6.1: Published Capacity of Boeing Aircraft

	Passengers	Belly-Hold (m ³)	Range (km)
B737-300	149	30	4,175
B737-400	168	39	3,815
B737-500	132	23	4,395
B737-600	132	20	5,649
B737-700	149	27	6,038
B737-800	189	44	5,449
B737-900	189	52	5,084
B757-200	239	43	7,240
B757-200 Freighter	–	238	7,240
B757-300	289	67	6,426
B767-200	280	81	12,300
B767-300	350	106	11,393
B767-400	375	129	10,426
B767 Freighter		284	5,953
B777-200	400	160	14,260
B777-300	400	214	11,030
B747-400	(2-class)	170	13,570
B747 Combi	(3-class)	295	13,360
B747 Freighter		2,332	7,170

– = data unavailable, km = kilometers, m³ = cubic meters
Source: www.boeing.com/commercial/

Table A6.2: Published Capacity of Airbus Aircraft

Model	Passengers	Number of LD3	Range (km)
Single aisle			
A318	107	–	2,750
A319	124	4	3,300
A320	150	7	4,800
A321	185	10	4,150
Twin-engine-wide bodies			
A310-300	220	14–15	8,050
A300-600	266	22–23	7,500
A330-200	253	26–27	12,300
A330-300	295	32–33	10,400
Four-engine-wide bodies			
A340-200	239	18–19	14,800
A340-300	295	32–33	12,000
A340-500	313	30–31	15,750
A340-600	380	42–43	13,900

km = kilometers, LD3 = lower deck 3.
Source: Airbus Industrie. 2006.

Table A6.3: Profile of Airports in the Pacific

	Number of airports	Civilian airports	Number paved
American Samoa	3	3	3
Cook Islands	9	4	1
Fiji Islands	5	5	3
French Polynesia	39	38	33
Guam	1	1	1
Kiribati	5	5	4
Micronesia	8	6	6
Nauru	1	1	1
New Caledonia	11	11	11
Niue	1	1	1
Northern Marianas	3	3	3
PNG	69	68	17
RMI	4	2	1
Samoa	2	2	1
Solomon Islands	12	12	1
Tonga	4	4	1
Tuvalu	1	1	0
Vanuatu	4	4	3
Wallis	2	2	1
Total	184	173	92

PNG = Papua New Guinea, RMI = Republic of the Marshall Islands.

Source: Centre for Asia Pacific Aviation. 2006.

Appendix 7: Pacific Islands Forum Principles on Regional Transport Services

The transport principles agreed upon by Ministers of the Forum Island Countries (FICs) in Apia, Samoa in 2004 are provided below.

These principles recognize that:

- The provision and maintenance of regular, reliable, and competitive air and shipping services are crucial to FICs.
- Changes in the transport sector, including an increasingly competitive market and new international safety and security requirements, have significant implications for aviation and shipping in the Pacific.
- FICs have limited technical capacity.

Pacific Islands Forum Leaders declare the following principles as central to improving the efficiency, effectiveness, and sustainability of air and shipping services.

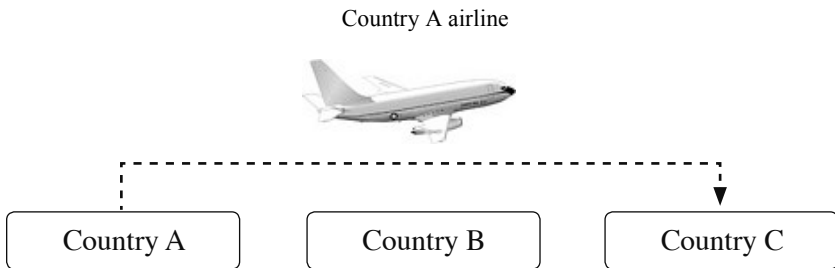
1. Adherence to principles of good governance is crucial to the viability and sustainability of transport services. This includes, but is not limited to:
 - a. Accountability and transparency in financial management, strategic planning, investment decisions, awarding contracts, and board appointments;
 - b. Clear lines of responsibility for shareholders, boards, and management; and
 - c. Accessing and acting upon professional advice, including in relation to decisions on infrastructure.

2. Transport services should, wherever possible, be run on a sustainable commercial basis.
 - a. Where appropriate, this should include corporatization and/or privatization of government-owned services.
 - b. Where transport entities remain in government ownership and are required to perform commercial activities, such entities should be adequately capitalized.
 - c. Service levels should reflect demand and price should reflect the cost of delivery.
 - d. Where subsidies are judged to be necessary to fulfill declared social obligations, these should be open and transparent.
 - e. Where appropriate, legislated monopolies should be removed with a view to increasing competition.
3. A central responsibility of government in the transport sector should be in establishing and administering regulatory systems.
4. Increased efforts should be made to implement regional or subregional solutions to problems in the transport sector through, for example:
 - a. Strategic alliances;
 - b. Liberalization of the economic regulatory environment;
 - c. Agreement by FICs to regional cabotage, where FICs could benefit from more services and greater competition;
 - d. Coordinated approaches to safety and security issues;
 - e. Better coordinated airline schedules; and
 - f. Training and capacity building.
5. Forum member countries need to comply with internationally accepted standards on aviation and maritime security.
6. Development partner support should be provided to FICs to assist the implementation of transport sector reforms, conditional on a demonstrated commitment to good governance and economically sustainable solutions.

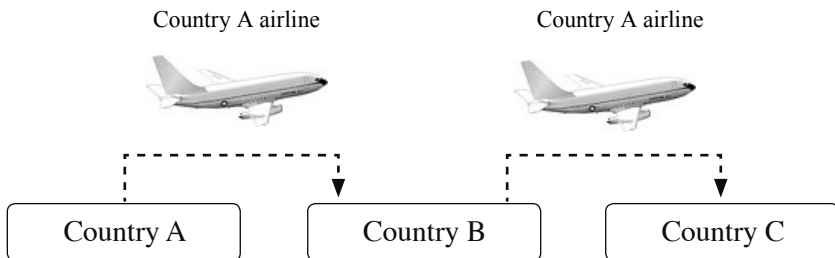
Appendix 8: Freedom of the Air

Definitions of the Aviation Freedoms of the Air are provided below.

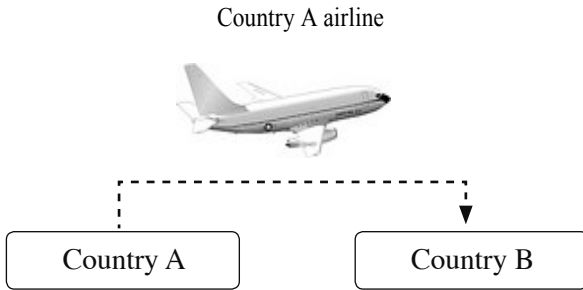
First Freedom: The right to fly across the territory/airspace of another state (country B) without landing.



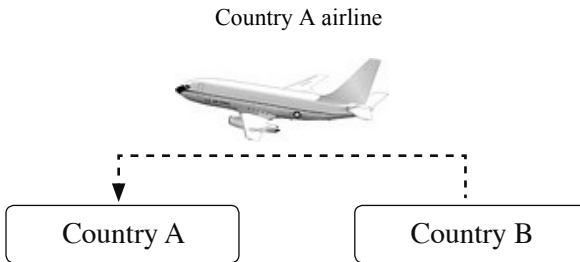
Second Freedom: The right to land in another state for non-traffic purposes (e.g., emergency repairs).



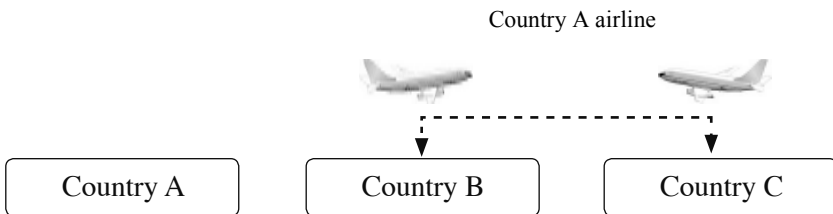
Third Freedom: The right to deliver traffic into another state.



Fourth Freedom: The right to pick up traffic from another state.



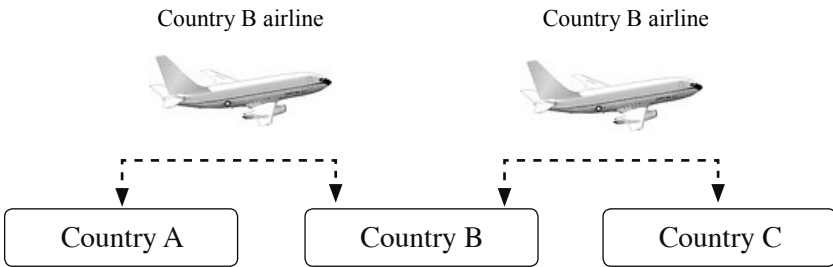
Fifth Freedom: The right to carry traffic between two other states (e.g., a country A flight originating in country A can pick up passengers in country B and take them to country C). Fifth freedom rights can be in the form of either intermediate or beyond rights. For example: country A – country C Air Service Agreement (ASA): Fifth freedom rights between country A and country c enable country A to use country B as an intermediate point.



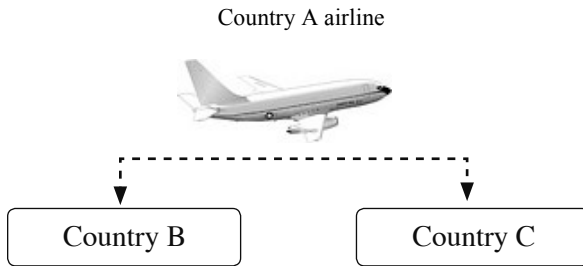
Country A – country B ASA: Fifth freedom rights between country A and country B enable country A to use country C as a beyond point.

Sixth Freedom¹: The right to carry traffic between two other states via the home state, allowing the flight to originate and terminate in foreign states. For example, a country B flight originating in country A can pick up traffic from country A and then take them to country C via country B. This freedom arises out of the combination of the terms of two or more air service agreements, as shown below:

Sixth freedom rights arise through country B having separate air service agreements with both country A and country C, which they use to combine services.



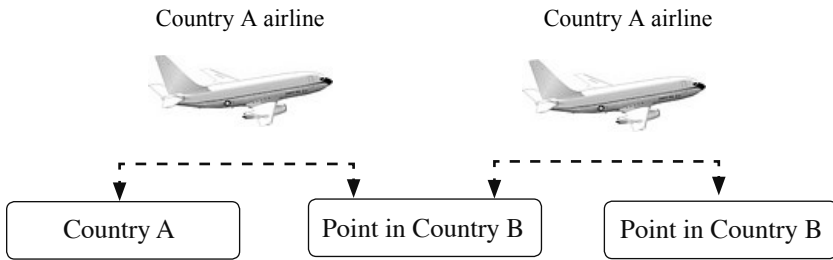
Seventh Freedom (see footnote 1): The right to operate a stand-alone operation between two foreign states by an airline from country A (e.g., country A operates a service from country B to country C, without originating or terminating in country A).



Eighth Freedom (see footnote 1): The right to transport intrastate traffic within a foreign state on a service that either originates or terminates within country A (e.g., A country A flight that originates in country A, then lands

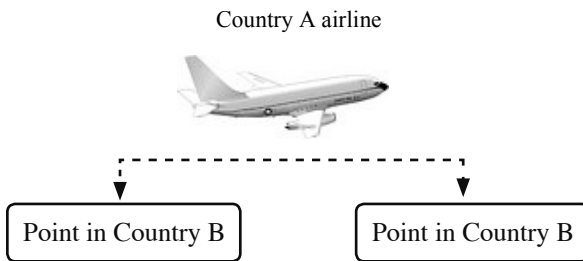
¹ The Chicago Convention does not recognize these freedoms. However, these freedoms can be included in bilateral agreements between nations.

in country B and continues to another point in country B). This freedom is also known as “consecutive cabotage.”



Ninth Freedom (see footnote 1): The right to transport intrastate traffic entirely within the territory of a foreign state (e.g., country A provides a service originating in country B and terminating at another point in country B). This freedom is also known as “stand-alone” cabotage.

The right or privilege of transporting cabotage traffic of the granting state on a service performed entirely within the territory of the granting state (also known as a ninth freedom right or “stand-alone” cabotage).



Appendix 9: Profiles of the Major Airlines in the Pacific

Qantas

The role of Qantas in the Pacific market extends to commercial arrangements—including code sharing¹ and possible aircraft leasing, and to a 46.3% equity holding in Air Pacific. The latter is underwritten by a comprehensive commercial agreement. Air Pacific essentially services the island market on behalf of the Australian carrier. Apart from Noumea, New Caledonia, Qantas does not operate to the islands in its own right. The airline does not see the South Pacific—largely an outbound market for Australians with some business traffic—as a key market, strategically. Its view is that this market is serviced most effectively through a hub (in Nadi, Fiji Islands for Air Pacific), and regional airlines should feed into that hub, perhaps through code shares, if the quality of the onward product is adequate.

This policy encourages regional airlines operating smaller and shorter-range aircraft to operate into the Fiji Islands for on-carriage to Australia and other international points, while providing a measure of protection for Air Pacific. Conversely, Air Pacific brings international traffic into Nadi for dispersal to the other islands.

¹ The practice where a flight operated by an airline is jointly marketed as a flight for one or more other airlines. Most major airlines have code-sharing partnerships with other airlines, and code sharing is a key feature of airline alliances. The term “code” refers to the identifier used in flight schedules; under a code-sharing agreement, participating airlines can present a common flight number.

The unknown quantity for Qantas is where its low-cost subsidiary, Jetstar, will be deployed in the medium-to-long term. Jetstar, already operating on Tasman Sea routes, entered the long-haul international market in November 2006 with services to Asian destinations. Its services may extend further into Asia and the Pacific islands in the future.

Qantas pretax earnings fell by 26.6% in the 12 months ending 30 June 2006, reflecting a A\$1.1 billion rise in costs related to jet fuel. The fuel impost was offset to an extent by further restructuring benefits, and a damages payment from Airbus for delays in deliveries of its A380s.

The latest attempt by Qantas to improve profitability on Tasman Sea routes by aligning with Air New Zealand faltered when the Australian Competition and Consumer Commission rejected the proposal to establish joint services at the draft stage. Both airlines subsequently abandoned the plan.

Air Pacific

As the most expansive and influential Forum Island Country (FIC) international airline, Air Pacific sees itself as vulnerable to changing market conditions. It has been a vital part of the Fiji Islands' tourism strategy in the past, especially in the post-coup periods, and the Government of the Fiji Islands and the tourism industry are accordingly wary of the entry of any new airline.

Air Pacific also acts as a complement to its largest shareholder, Qantas, and that airline's operations in the Pacific and beyond.

Air Pacific's preference is for a hub-and-spoke solution to many of the Pacific's inefficiency problems, with Air Pacific and the Fiji Islands playing a central role. The carrier strongly opposes further liberalization of the regulatory structure, for example, as provided for in the Pacific Island Air Service Agreement (PIASA). That position is, on one hand, consistent with maintaining its hub role. On the other hand, it prevents development of that role so long as the Fiji Islands has restrictive bilateral agreements with its neighbors.

The airline endured a 46% fall in pretax operating earnings for the 2005/06 fiscal year in the face of more intense competition and a 33% increase in fuel costs (fuel rose from 27% to 34% of total expenditures). Air Pacific was also negatively impacted by a decline in tourism to the Fiji

Islands in the March quarter of 2006. The imposition of a hotel turnover tax that pushed up hotel charges, and concerns about the Fiji Islands' stability ahead of the general election were important factors in this decline.

Air Pacific has accelerated plans to realize efficiency and productivity gains to supplement the benefits flowing from fuel surcharges.

In view of competition from LCAs in the airline's markets out of Australia and New Zealand, it is pursuing access to the domestic Fiji Islands market in an effort to strengthen its revenue/profit position and provide greater feed for its lagging international services. Air Pacific took over the routes, aircraft, licenses, premises, and staff of Sun Air from 1 July 2006. However, its entry onto the Fiji Island domestic sector was initially frustrated by an injunction taken out by Air Fiji. This, however, was set aside by the Appeal Court of the Fiji Islands in November 2006.

Domestic services by newly established subsidiary Pacific Sun are now expected to begin between Suva and Kadavu, Taveuni, Savusavu, and Labasa from January 2007, subject to approval by the Air Transport Licensing Board. Pacific Sun will operate Twin Otters and modern ATR42-500 turboprop aircraft. The 44-seat ATR42 will also service other islands from Suva to supplement existing Air Pacific flights from Nadi. Subject to approvals, Pacific Sun will operate twice weekly services to Vanuatu, Tuvalu, and Tonga.

Air Pacific recently ordered five B787-900 aircraft capable of operating nonstop into Asia and Los Angeles with full loads, thus meeting the Fiji Islands' growth requirements to 2020. In February 2006, the airline announced that it would add extra flights to Australia, New Zealand, the US, and Kiribati, increasing network coverage to 17 cities in 11 countries as part of its planned growth program.

Air New Zealand

The very high number of expatriate islanders living in New Zealand largely define the Air New Zealand market in several Pacific states. The airline is consequently a much more aggressive participant in Pacific markets, seen variously as a very active marketer of inbound tourism to its destination countries, and as a tough competitor at the local level.

The airline's approach to the Pacific market has been adjusted to inject profitability into an otherwise loss-making situation. The introduction

region-wide of the Pacific Express brand has thus been seen, with point-to-point services offered featuring narrow-bodied aircraft at very low rates, and complementary use of Freedom Air out of secondary markets in New Zealand. Pacific Express is a very attractive product, consistent with the interests of the FICs in terms of maintaining lower fares and generating price-led growth.

Air New Zealand sought unsuccessfully to secure a regional partnership with Polynesian Airlines. It also considered providing substantial support—including provision of a B737—for the launch of Palau Micronesia Air, but opted to withdraw early last year. Other options may be available for the airline to pursue with other FIC flag carriers, but with a view mainly to substituting Air New Zealand's services for less commercial, loss-making operations (as well as providing some options for domestic airline improvement).

Air New Zealand started a once-weekly service between Auckland and Niue from 4 November 2005 using a 136-seat Boeing 737-300 in an economy class configuration. This followed Polynesian Airlines announcement that they would cancel their services to Niue at the end of October 2005.

Air New Zealand recently announced a restructuring of part of its Pacific operations, with the reintroduction of weekly nonstop services between Rarotonga, Cook Islands, and Los Angeles (a service halted in 2002). This will replace the existing three-times-weekly service via Papeete, Tahiti. Air New Zealand services between Auckland and Tahiti will be maintained. The airline has also entered into a code-sharing arrangement with Air Tahiti Nui on this route.

As with most other airlines, Air New Zealand's financial performance suffered as a result of high jet fuel prices. In the year to June 2006, pretax earnings were down 36% and net profit down 47% on the corresponding period of the preceding year. However, the airline remained in a relatively strong position, with 54.7% gearing and cash reserves of New Zealand dollar (NZ\$) 1.15 billion.

Increasing cost pressures on Air New Zealand has prompted a review of nonperforming routes. As a consequence, the airline has withdrawn from services to Singapore and restructured its Japan services. The airline is also reviewing other marginal international routes, including services to Tahiti.

Freedom Air

Like Qantas, Air New Zealand is experimenting with a wholly owned, low-cost subsidiary: Freedom Air. Freedom was allowed to enter the Fiji Islands market from New Zealand regional centers out of secondary New Zealand airports, such as Hamilton and Palmerston North (although this is evolving to services also from major gateways such as Wellington and Christchurch).

Freedom is being brought under the umbrella of Air New Zealand's Tasman Express and Pacific Express products, with the aim of re-fleeting the airline with A320s. The airline's B737-300s are less efficient in terms of direct operating costs, but Freedom has a lower overhead structure than its parent.

These developments make clear that the status quo is unlikely to be maintained, as carriers vie for supremacy.

The French Connection: Air Tahiti Nui and Aircalin

Air Tahiti Nui, with enhanced links to Australia and New Zealand, is a viable potential partner for island operators. The airline maintains a well-tuned international network feeding through Papeete, and has the apparent support of French interests to continue building its Airbus fleet (it presently has five A340-300s) and service system. Air Tahiti Nui currently operates three flights weekly to Auckland, two to Sydney, and provides connections through Papeete from Japan, France, and the US. While its fleet structure does not lend itself to direct services to the thinner Pacific markets, there is potential for the carrier to establish mutually beneficial relationships with other smaller operators.

Noumea-based Aircalin is also in a good position to capitalize on the Pacific market. The airline operates an A320 and two long-haul A330s, and has already established partnerships with other major airlines in Australia and New Zealand. Aircalin maintains a code-sharing relationship with Qantas and services operated by both carriers to Australia from New Caledonia, and with Air New Zealand on Noumea–Auckland. There are also links between Noumea and the Fiji Islands and Noumea–Papeete.

Pacific Blue

Virgin Blue's international arm, Pacific Blue, has become an important presence in the Pacific market with services connecting Australia and/or New Zealand with four islands (five if "sister" carrier Polynesian Blue is included). The combination of a low-cost mentality and an aggressive strategic outlook has positioned the carrier for future growth, albeit at a relatively controlled pace, due in part to the limited availability of new aircraft.

As a relatively new entrant on well-trodden paths, Virgin is seeking to develop a form of consensual partnership with the national flag carriers of smaller states. It is taking a cautious approach to avoid appearing too threatening to potential future target destinations. Pacific Blue may take up New Zealand domestic services by 2008/09 and has earmarked up to four aircraft for its Samoa-based Polynesian Blue joint venture.

Services to the Cook Islands, Fiji Islands, Tonga, and Vanuatu have been established in a slow, deliberate manner to mitigate risk and build goodwill. The Polynesian Blue operation in Samoa is an example of the carrier's cooperative strategy for the Pacific, and could well serve as a template for other equity-based relationships.

In October 2005 Polynesian Blue launched the first flight of Polynesian Blue from Auckland International Airport, bound for Samoa. The airline offers direct flights from both Auckland and Sydney to Samoa. Pacific Blue Airlines operate the Polynesian Blue flights using B737 aircraft.

Virgin Blue partnership strategy has since developed significantly with the introduction of interlining relationships with Malaysia Airlines and Hawaiian Airlines. The arrangement with Hawaiian will enable passengers to book a single ticket through from anywhere in the Virgin Blue network to destinations covered by the US carrier.

Parent Virgin Blue's pretax earnings rose by 16% for the nine months to 30 June 2006, despite a 23% increase in fuel costs and one-off expenses associated with the establishment of the group's frequent flyer program, Velocity. However, 8.5% revenue growth and stronger passenger volumes partially offset the added expenditure.

In an interesting recent development, Virgin Blue has ordered eleven 98-114 seat Embraer 190 regional jets, with a range of 4,260 %, and three smaller 80-seat Embraer 170s, which will service Australia, New Zealand, and the Pacific islands. The availability of a smaller jet than the B737-700/800, with good route economics, expands the options available for development of services to islands with thinner traffic flows.

REFERENCES

- Airbus Industrie. 2006. *Airbus Industrie Website*. Toulouse: Airbus Industrie.
- Air New Zealand. 2006. *Annual Report 2006*. Auckland: Air New Zealand.
- Air Pacific. 2006. *Annual Report 2005. Announcement of 2005/06 Financial Results*. Nadi: Air Pacific.
- Asian Development Bank (ADB). 2004. *Key Indicators*. Manila.
- . 2005. *Key Indicators*. Manila.
- . 2006. *Asian Development Outlook*. Manila.
- Association of Asia Pacific Airlines (AAPA). 2006. *2005 Annual Statistics*. Kuala Lumpur: AAPA.
- Australian Agency for International Development (AusAID). 2004. *Pacific Regional Transport Study. Country Reports*. Canberra: AusAID/ Government of Australia.
- Australian Bureau of Statistics. 2006. *International Trade in Goods and Services*. Canberra: Government of Australia.
- . 2006. *Overseas Arrivals and Departures*. Canberra: Government of Australia.
- Australian Department of Foreign Affairs and Trade. 2006. *Fact Sheets for Samoa, Tonga and Niue*. Canberra: Government of Australia.
- The Boeing Company. 2006. Boeing Commercial Website. Chicago: The Boeing Company.
- Bureau of Transport and Regional Economics, Australian Department of Transport and Regional Services. 2006. *Air Transport Statistics*. Canberra: Government of Australia.
- Central Bank of Samoa. 2005. *Monetary Policy Statement for the Financial Year 2005/06. Visitor Arrivals*. Apia: Central Bank of Samoa.
- Central Bank of Solomon Islands. 2006. *Annual Report 2005*. Honiara: Central Bank of Solomon Islands.

- Centre for Asia Pacific Aviation. 2001. *Sashimi Air Freight Study*. Honiara: The Forum Fisheries Agency.
- Central Intelligence Agency. 2006. *The World Factbook*. Washington DC: Government of the United States.
- ExpertFlyer.com. 2006. *ExpertFlyer website*. New York: Expert Travel Services.
- Fiji Bureau of Statistics. 2006. *Key Statistics*. Suva: Government of the Fiji Islands.
- Fiji Visitors Bureau. 2005. *Visitor Arrival Statistics*. Suva. Fiji Visitors Bureau.
- Government of Nauru. 2006. *Media Release. New Plane for Air Nauru*. Nauru: Government of Nauru.
- Government of Niue. 2006. Premier's Department Media Release. Alofi: Government of Niue.
- Government of Solomon Islands. 2006. *Press Release. 10-year Aviation Plan Presented*. Honiara: Government of Solomon Islands.
- . 2006. *Budget Strategy and Outlook 2006*. Honiara: Government of Solomon Islands.
- International Air Transport Association (IATA). 2006a. *IATA/SRS Database. Historic Earnings of Airlines. Global Freight Growth*. Geneva: IATA.
- . 2006b. *The Air Cargo Tariff Website (TACT Online)* Geneva: IATA.
- International Civil Aviation Organization (ICAO). 2005. *Annual Report: World Air Transport Statistics*. Montreal: ICAO.
- . 2006. *Annual Report. World Air Transport Statistics*. Montreal: ICAO.
- International Monetary Fund (IMF). 2006. *Outlook Database*. Washington, DC: IMF.
- McGregor and Company. 2005a. *Impact Assessment of Pacific Island Air Services Agreement*. Canberra: AusAID (for the Pacific Islands Forum Secretariat).
- . 2005b. *Development of a Privatisation Strategy for Solomon Airlines. Stage 2 Report*. Manila: Asian Development Bank.
- National Reserve Bank of Tonga. 2006, 2005, 2004, 2003. *Quarterly Bulletins*. Nuku'alofa: Government of Tonga.
- New Zealand Ministry of Foreign Affairs and Trade. 2006a. *Samoa Country Paper*. Wellington: Government of New Zealand.
- . 2006b. *Vanuatu Country Paper*. Wellington: Government of New Zealand.

- . 2006c. *Tonga Country Paper*. Wellington: Government of New Zealand.
- . 2006d. *Niue Country Paper*. Wellington: Government of New Zealand.
- New Zealand Agency for International Development. 2006. *Currents Magazine, Press Releases*. Wellington: Government of New Zealand.
- Official Airlines Guide (OAG). 2006. *Database*. Bedfordshire: OAG.
- Pacific Asia Travel Association (PATA). 2005. *Travel Statistics*. Bangkok: PATA.
- Pacific Islands Forum Secretariat. 2006. *PIASA: On the Wings of Regional Cooperation*. Suva: Pacific Islands Forum Secretariat.
- Secretariat of the Pacific Community. 2006. *Pacific Regional Information System. Database*. Noumea: SPC.
- Platts. 2006. *Movement in Jet Fuel and World Oil Prices, 2003–2006*. Geneva: International Air Transport Association.
- Qantas Airways. 2006. *Annual Report 2006*. Mascot: Qantas Airways.
- Reserve Bank of Fiji. 2006. *Revised Economic Projections*. Suva: Reserve Bank of Fiji.
- Secretariat of the Pacific Community (SPC) Demography/Population Programme. 2004. *Current Pacific Population Dynamics and Recent Trends*. Nouméa: SPC.
- SPC. 2006. *Statistical Summary 2005*. Nouméa: SPC.
- Solomon Airlines. 2006. *Solomon Airlines Website*. Honiara: Solomon Airlines.
- South Pacific Tourism Organisation (SPTO). 2006. *2005 Annual Report*. Suva: SPTO.
- Statistics New Zealand. 2006. *Overseas Trade (Imports and Exports) Statistics*. Wellington. Government of New Zealand.
- . 2006. *External Migration data*. Wellington. Government of New Zealand.
- Statistics Niue. 2006. *Migration and Tourism Statistics*. Alofi: Statistics Niue.
- Vanuatu National Statistics Office. 2006. *Visitor Arrivals; Total Imports/Exports*. Port-Vila: Government of Vanuatu.
- Virgin Blue Airlines. 2006. *Annual Report 2006*. Brisbane: Virgin Blue Airlines.
- . 2006. *Presentation: Virgin Blue Financial Results for the Nine Months to 30 June*. Brisbane: Virgin Blue Airlines.

World Bank. 2006. *World Development Indicators 2006 Database*. Washington, DC: World Bank.

World Travel and Tourism Council (WTTC). 2006. *Travel and Tourism Economic Research*. London: WTTC.

About Oceanic Voyages: Aviation in the Pacific

International aviation services are crucial to trade, growth, and development in the Pacific region. Improved access provided by international aviation from every other region in the world to an increasing number of islands is opening new opportunities. Tourism contributes substantially to income and employment in many Pacific countries, usually in areas outside of the main urban centers, and enables air freight services for valuable but perishable commodities that would otherwise not be marketable. Although some features of the Pacific region make provision of international aviation services a challenge, there have also been some notable successes that offer key lessons for future development. Case studies of national aviation sector experience show the value of operating on commercial principles, attracting international and private-sector capital investment, assigning risk where it can best be managed, and liberalizing market access. Integration of the regional market for transport services, combined with harmonized but less restrictive regulations, would facilitate a greater range of services at more competitive prices. Pacific island country governments have the ability to create effective operating environments. When they do so, experience shows that operators will respond with efficient service provision.

About the Asian Development Bank

ADB aims to improve the welfare of the people in the Asia and Pacific region, particularly the nearly 1.9 billion who live on less than \$2 a day. Despite many success stories, the region remains home to two thirds of the world's poor. ADB is a multilateral development finance institution owned by 67 members, 48 from the region and 19 from other parts of the globe. ADB's vision is a region free of poverty. Its mission is to help its developing member countries reduce poverty and improve their quality of life.

ADB's main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance. ADB's annual lending volume is typically about \$6 billion, with technical assistance usually totaling about \$180 million a year.

ADB's headquarters is in Manila. It has 26 offices around the world and more than 2,000 employees from over 50 countries.

Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
www.adb.org
Publication Stock No. 090807



Printed in the Philippines