Fiji Land Transport Authority

Fiji Bus Industry Review

Final Report

Prepared by

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Transport Consultants

ORIONCONSULTINGASSOCIATES

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The views in this report are those of the authors and do not necessarily reflect the views of the Fiji Land Transport Authority for whom the report was prepared

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Preface and acknowledgements

The team of Orion Consulting Associates, Paul Starkey and Dr Sion Haworth, would like to thank the members of the Technical Working Group (TWG) and the Fiji Bus Operators Association (FBOA) who provided exemplary cooperation. The Director and Staff of the Transport Planning Unit, supported by the Deputy Secretary and Permanent Secretary, gave the Consultants their invaluable assistance, encouragement, knowledge and advice. The team of the Land Transport Authority (LTA) and members of the Fiji Bus Operators Association similarly provided technical and financial information and willingly shared their experiences. The staff of the Consumer Council of Fiji (CCF) enthusiastically collaborated with the study, assisting with the small survey and providing a challenging and refining perspective. Constructive feedback is extremely important and several members of the TWG, FBOA and CCF took time to provide their comments on the earlier drafts of this report. Many government departments, a university and several non-governmental organisations gave up their time to assist in this review and shared many valuable ideas. Numerous other people cooperated in this study, including the police, bus drivers and passengers and the operators of taxis, minivans, minibuses and carriers. To all the people listed as contacts in the Annexes and to all who shared information and ideas, the Consultants offer a very big 'thank you' and acknowledge the contributions they have made to this study.

Paul Starkey and Sion Haworth
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Executive Summary

Introduction

The Land Transport Authority (LTA) contracted Orion Consulting Associates BV to undertake a review of the Fiji Bus Industry. Paul Starkey (Team Leader) and Dr Sion Haworth worked in Fiji for four weeks in December 2008 and January 2009. They collaborated with LTA, the Transport Planning Unit (TPU), the Fiji Bus Operators Association (FBOA), the Consumer Council of Fiji (CCF) and other organisations. They consulted with many stakeholders, saw bus operations in Viti Levu and Vanua Levu, undertook a small passenger survey, facilitated a workshop, prepared two draft reports and considered information and comments from several sources.

Overview of bus industry

Fiji has a history of good bus services with affordable, safe, regular and dependable buses reaching 95% of the population. Private companies run bus services with low levels of subsidy. Passengers considered bus services beneficial, safe and affordable but they also wanted clean, safe, modern and comfortable buses. Bus passengers sometimes used minibuses to save time. The good, reliable timetabled services at controlled fares have developed over many years due to conscientious operators and effective regulation for routes, prices, safety and competition. The bus industry was protected from excessive competition, but now faces increasing competition from legal and illegal minibuses (mainly operating on tar roads) and carriers (light trucks that carry goods and people on poor roads). Deteriorating road conditions increase operating costs and make some routes unviable. Operating costs have risen faster than income, resulting in an aging fleet that has compromised passenger safety. The industry is at a critical stage, and could collapse due to the low profits, deteriorating roads and competition from carriers and minibuses. If this were to happen, the people of Fiji would lose an affordable bus service and the Government would lose revenue. The LTA would have great problems of regulation, safety, congestion, service standards and price controls in a transport industry dominated by many small vehicles. Fiji should use the present window of opportunity to retain and modernise its bus industry with improved practices and technologies, combined with effective regulation of buses and other land transport services.

The legal and regulatory framework

The Consultants reviewed the LTA Act. This empowers LTA to regulate buses in numerous ways including bus standards, inspection, safety, emissions, routes, timetables and fares. The LTA Act is comprehensive, but weak on emission control. The Consultants reviewed Road Route Licenses (RRLs). There are 188 main RRLs issued to 66 companies, which provide excellent network coverage in urban and rural areas. Bus fares are comparable to other countries. Rural roads have 2 km fare stages giving higher fares than urban roads (3 km stages). LTA is responsible for setting fares based on operating costs but the Government often intervenes for social/political reasons. A new, clear policy statement is needed.

Buses are punctual and service levels are good. Bus quality is variable, with many old vehicles (30% over 20 years). Windowless designs remain popular despite the old-fashioned image. Some buses are in poor condition with difficult access stairs, narrow aisles, crowded passenger space and damaged seats. Old Leyland buses are retained because they are robust on poor roads. The fleet needs modernising and unsafe vehicles removed. Revocation should be based on condition not age. Old chasses with new bodies can be safe. Six monthly inspections of buses over 25 years would balance safety concerns with realistic inspection regimes. Smoky emissions must be reduced. A joint working group should develop realistic standards for Fiji and a timetable for adoption. Self-regulation should be promoted and assured by a new statutory body.

Bus operating costs have been rising over the last 30 years with fuel increasingly important. While fuel costs have peaked, the price of tyres, spares and chasses will continue to rise, accelerated by the 2009 devaluation. LTA has a cost index model but this tracks changes not real costs. LTA should develop operating cost models for different working environments.

Despite significant Government investment, the quality of the road network is deteriorating. This is increasing operating costs. Rural routes are worst affected. Many problems are due to inadequate basic maintenance in keeping drains clear. This is primarily a problem of management. Further investment in rural road maintenance needs to be complemented by improved road management systems.

LTA is responsible for regulating minibuses, carriers, taxis and minivans. Regulation of these is inadequate and many operators offer illegal transport services that are damaging bus services. LTA reduced illegal carrier operations in Vanua Levu by strict enforcement.

Financial issues, concessions and fares

The Government has had no clear policy or strategy on financial assistance to the bus industry. Various concessions have been provided worth FJD 6-8 million a year. Government VAT income on bus tickets has been FJD 6.5 million a year (gross). Bus Operator Grants worth FJD 2.8 million in 2006 and 2007 have stopped. Customs concessions exist to encourage fleet renewal and reduce the costs of bus tyres and other inputs. Bus companies receive 18c per litre rebate on fuel in return for concessionary fares for school children. This agreement is particularly beneficial to bus companies without school routes. This subsidy is unfocussed and the Consultants propose targeted concessions in return for low fares for schoolchildren. A fuel rebate in return for concessionary fares for old and disabled people was discontinued. The Consultants suggest FBOA members provide concessionary fares for OAPs as an interim measure of goodwill. FBOA should then make clear financial proposals and the Government should refund the low actual cost of this social service. In 2008, the Government agreed a temporary subsidy of 21.9% of turnover to offset increasing diesel costs and prevent fares rising. If fully paid, this cost FJD 7.0 million over the six month subsidy period (which was FJD 6500 per bus). This proved effective at protecting the public and maintaining a key industry. No evidence was seen of abuses of any subsidies.

The bus industry faces revenue losses operating school routes (FJD 1.2 million) and rural services on gravel roads. Examples are given of 22 routes, with combined annual losses of FJD 8.1 million. In 2008, industry subsidies of FJD 12.5 million covered losses of FJD 11.6 million, with average operating costs of FJD 60,000 against FJD 59,000 income per bus. Operating costs are increasing and are highest on poor rural roads. With the scrapping of the 2008 temporary subsidy, the bus industry urgently needs more income from subsidies, higher fare and/or reductions in operating costs. Long term blanket subsidies are undesirable as they encourage inefficiency and dependency. Targeted subsidies are effective at assisting services that are unprofitable but socially necessary.

Based on a diesel price of FJD 1.57 per litre, the bus industry needs FJD 10.5 million extra in 2009 to remain viable and sustainable. This could come from some combination of fare increases, targeted subsidies (school routes, rural routes), changes to VAT, reduced fraud losses and increased passenger numbers through innovative ticketing. Five strategy options are presented. For the long term, the Consultants favour targeted and tendered subsidies for rural routes and school services, with reduction of fraud and innovative ticketing. In the short term, the Consultants suggest maintaining the fuel subsidy, permitting a flat 10 cent rise on all tickets, special payments for rural routes and improved ticketing and fraud prevention. Prior to adopting transparent least-cost gross cost tendering for subsidies for school and rural routes, interim payments would be made on ‘agreed offer’ basis to operators of loss-making routes. All interventions should be combined with improved road maintenance and enforcement of regulations against illegal competition from minibuses and carriers. The Government must quickly decide its preferred strategy and implement this speedily.

Inefficiencies in the bus industry

Fraud by bus drivers and checkers may account for 9% of total revenue or FJD 3.5 million per year. A campaign to make passengers demand tickets has not worked due to lack of enforcement. New ticket machines would help. Fuel use could be improved by good driving, better road conditions, switching off engines and adopting more efficient engines. Mechanical skills and servicing levels are acceptable but fleet diversity (due to other economic factors) increases the cost of stocking spares. It is difficult to obtain efficient use of bus resources throughout the day due to peaked demand and strong directional flows of passengers. Some rural bus services are inefficient because buses are garaged in towns. The bus industry would be more efficient with better roads and less illegal competition by minibuses and carriers.

The Consultants recommend moves to ticket machines and prepaid ticketing to reduce fraud, stimulate demand, simplify pricing and improve management planning. Bus companies and the proposed Public Transport Improvement Board should cooperate to develop integrated systems with zonal validity. Examples are given of *SaverSeven* and *BulaSaver* ticketing options.

Future directions for the bus industry

LTA cost models provide guidance on appropriate fare levels. They predicted cost changes in 2007. Examples of cost model usage are provided. Specific cost models should be developed for different operating environments. Cost models do not provide incentives for cost cutting and so a tendering system with transparent bidding is recommended. An immediate 10-cent rise on all tickets is recommended as a simple, affordable and acceptable means of providing a 4-5% rise in operators' incomes. Fares can then be held while work takes place on agreeing concessions or subsidies to allow the industry to be profitable and renew its fleet in a sustainable way. There should be tendering for school routes and refunds based on ticket sales to school children on ordinary routes. There should be subsidies available for rural routes, preferably agreed through lowest-cost gross-cost tendering. At the same time action should be taken to improve roads. A simplified fare structure is proposed and illustrated based on fewer, longer stages and rounded figures. Rural routes could have the same fare stages provided road condition were improved.

Rural transport hubs could be developed with conventional buses operating on the link to the town, and smaller buses or carriers operating on the roads between the villages and the hubs. This would greatly improve rural intra-connectivity while overcoming the existing problem of poor roads disrupting bus services. Service frequency should be better on all roads and visits to local clinics, stores and government services should be easier, with women benefiting greatly. Examples are provided with illustrations. Pilot initiatives should be planned with bus companies arranging all the connecting services. The LTA should assist with the acquisition or leasing of appropriate vehicles in order to prove the model capable of stimulating better rural transport and connectivity. LTA would have to enforce the prevention of illegal competing services. Suggestions are also made for the redevelopment of Suva bus station.

A major campaign should be undertaken to reduce fraud with new ticket machines and public awareness campaigns linked to better inspection and enforcement of excess fares. Electronic ticketing and saver tickets should be introduced. There is no immediate need for industry consolidation or use of smaller buses.

Illegal and/or unfair competition from minibuses and carriers is increasing. These vehicles are often unsafe and uninsured and working outside the tax system. LTA has the powers to stop predatory competition and has demonstrated that real enforcement works. In other countries, regulated and timetabled bus services have not survived in open competition with unregulated carriers and minibuses. In Fiji, where rural buses have been withdrawn, the resulting service standards by carriers have been worse and more expensive than the buses. If LTA does not resolve the existing situation, it will have severe problems trying to regulate larger numbers of minibuses and carriers, with problems of market oversupply, congestion at terminals, falling safety standards and less revenue for the Government. The LTA should therefore promote fair competition, including comparable safety standards for both vehicles and driving behaviour. LTA should rigorously enforce regulations against illegal operations. The Consultants provide the terms of reference for a study of carriers, minibuses and taxis to help identify key issues and provide policy guidance on competing and complementary land transport services and their self-regulation.

The Consultants provide a planning chart as an initial road map of the interrelated actions to be taken. They propose the Technical Working Group should continue to meet to coordinate the various actions, including the creation of a new statutory authority to stimulate self-regulation within the public transport industry (bus services, minibuses, carriers and taxis). The Consultants provide a draft Act to establish an independent Public Transport Improvement Board. This would be mainly funded by industry licensing that would include criteria designed to improve safety, emissions and service quality. Its Board would include representatives of the transport industry, the Ministry of Transport, the LTA, consumer representatives (CCF) and other stakeholders.

Guidelines are provided for the launch of the Forum for Transport and Development in Fiji as a network to link key stakeholders. Forum working groups should tackle many of the sensitive and complex issues, including ticketing options, emissions, rural hubs and transport integration. One Forum working group should help the TWG prepare the terms of reference and licensing criteria for the Public Transport Improvement Board. The Forum could be launched at a workshop called to discuss this report and to inform the follow-on study on other forms of public transport.

Acronyms, abbreviations and exchange rates

ADB	Asia Development Bank
AM	Ante meridiem: before noon
BOS	Bus operators' subsidy
BV	Besloten Vennootschap (Dutch) Limited Company
c	cent
Cell	Cellular phone / mobile phone
Co	Company
CAAFI	Civil Aviation Authority of the Fiji Islands
CCF	Consumer Council of Fiji
CEO	Chief Executive Officer
CPG	CPG Consultants is the legal name of a Singapore-based company
CTA	Central Traffic Authority
Dec	December
DFID	Department for International Development (UK)
DS	Deputy Secretary
ECREA	Ecumenical Centre for Research, Education and Advocacy (Fiji NGO)
eg	exempli gratia: for example
EPA	Environmental Protection Agency
FBOA	Fiji Bus Operators Association
FIRCA	Fiji Islands Revenue and Customs Authority
FJD	Fiji Dollar. *FJD 1 = USD 0.57 in January 2009. FJD 1 = USD 0.52 in October 2009.*
FNTSP	Fiji National Transport Sector Plan
FNPF	Fiji National Provident Fund
GDP	Gross domestic product
GHD	Gutteridge, Haskins and Davey Pty (consultancy company)
Jan	January
ie	id est: that is to say
IFRTD	International Forum for Rural Transport and Development
IRAP	Integrated Rural Accessibility Planning
ISBN	International Standard Book Number
km	kilometre
LTA	Land Transport Authority
Ltd	Limited
MD	Managing Director
MWT	Ministry of Works and Transport (within Ministry for Works, Transport and Public Utilities)
na	not available
NGO	Non-governmental organisation
OAP	Old age pensioner
OCA	Orion Consulting Associates BV
OHS	Operational health and safety
PIB	Prices and Incomes Board
PLA	Principal Licensing Authority
ppm	parts per million
PSV	Public service vehicle
PWD	Public Works Department
RRL	Road Route Licences
SSATP	Sub-Saharan Africa Transport Policy Program
TCB	Transport Control Board
Tel	Telephone
TPAF	Training Productivity Authority of Fiji
TPU	Transport Planning Unit
TWG	Technical Working Group
UK	United Kingdom (of Great Britain and Northern Ireland)
USD	United States Dollar
USEPA	United States Environmental Protection Agency
VAT	Value added tax
VEP	VAT exclusive price
VIP	VAT inclusive price

1. Introduction

After a public call for tenders, the contract was awarded in November 2008 to Orion Consulting Associates BV (hereinafter called OCA), a consultancy company registered in the Netherlands. OCA proposed Paul Starkey (Team Leader) and Dr Sion Haworth to undertake the assignment. Both specialists are international transport consultants with very relevant experience.

The Consultants started to undertake the review of the bus industry in Fiji on 8 December 2008 and worked for two weeks. To supervise the study, a Technical Working Group (TWG) had been formed comprising the Ministry of Works and Transport, the LTA, the Ministry of Finance and National Planning and the Fiji Islands Revenue and Customs Authority (FIRCA). The Consultants observed bus industry operations and practices and consulted with colleagues from the TWG, the FBOA, the Consumer Council of Fiji (CCF), non-governmental organisations, members of the public and other stakeholders. On December 19, a workshop was arranged and was attended by various bus industry stakeholders including Government departments, the regulator, operators and consumer interest groups. The Consultants presented their initial observations and key issues were discussed. The Consultants then worked in Viti Levu and Vanua Levu from 12-31 January 2009, meeting many stakeholders and observing bus operating conditions and practices in parts of the Northern Region, Suva and several other locations. The names of some stakeholders contacted are provided in Section 12 and the Consultants' itinerary is summarised in Section 15. On 27 January 2009, the Consultants presented their findings and recommendations at a meeting of the Technical Working Group to which various stakeholders including FBOA had been invited.

The Consultants submitted their Draft Report in February 2009. Comments on this were prepared by the members of the Technical Working Group and the FBOA in April and May 2009. The Consultants then prepared a Draft Final Report which was submitted in June 2009. Members of the TWG submitted various comments between July and September 2009. The Consultants then finalised this report, taking into consideration the various observations and suggestions received.

2. Overview of the bus industry in Fiji

2.1. Historically an excellent bus service

The Consultants have seen public transport systems in very many countries in the world (both rich and poor) and consider that the bus industry in Fiji provides one of the best examples of effective bus services anywhere. The Consultants are not aware of any country of comparable income and wealth (GDP) that has such affordable, frequent and reliable bus services in both urban and rural areas. In rich countries there may be better quality buses and very good services in towns and on intercity routes, but good services seldom reach all areas of the countryside or carry such a high percentage of the population. Perhaps 95% of the people of Fiji have easy access to reliable bus services which is remarkable for a country with a significant rural population. Based on its prices, its overall safety record, its dependable and predictable services, its comprehensive routing in urban and rural areas and its low cost to the public purse, the Consultants believe that the bus industry is something that the Government and people of Fiji should appreciate and value.

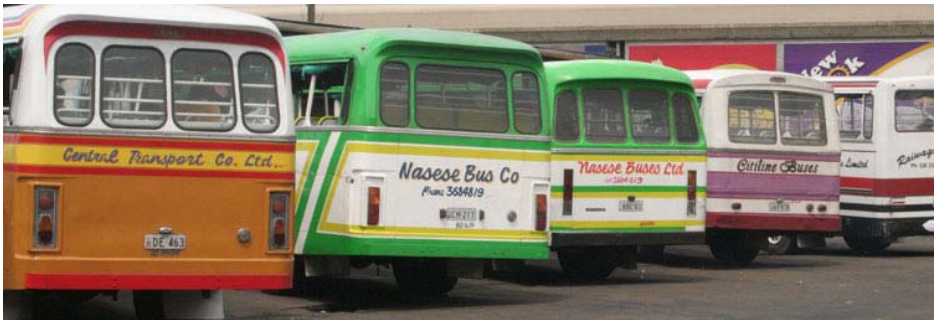


Figure 1: Buses at Suva bus station illustrating a range of private bus companies

The buses in Fiji are generally safe and covered by insurance. Most passengers travel on seats with reasonable personal space and comfort. Buses do not normally operate with unsafe loading levels. In this respect, Fiji buses are more similar to services in developed countries (such as Australia, New Zealand, Singapore and Europe) than those of developing countries. In many countries in the Pacific (Papua New Guinea, Solomon Islands) and South Asia (Cambodia, India, Indonesia, Nepal, Sri Lanka, Timor Leste) public transport services are often extremely crowded inside with people hanging on to the sides and/or riding on their luggage racks. The standards of driving of Fiji buses are comparable with rich, developed countries, and much higher than the standards seen in many Pacific and Asian countries.

The Fiji bus industry is run by the private sector and bus operators pay VAT and taxes. The cost to the Government of the excellent Fiji bus services is minimal. In 2007, for example the income from VAT provided to the Government from bus tickets was around FJD 6.5 million, which was greater than the cost of the fuel rebate. Most of the concessions and rebates offered to the bus industry have been for social purposes (the transport of school children and old people) or to facilitate fleet renewal. The recent 2009 subsidy was probably a one-off event that succeeded in protecting the Fiji travelling public from the sudden rise in world fuel prices. If the various stakeholders agree a cost-indexed system of fare pricing (as proposed in this report), it is likely that the bus industry can continue to provide a great service to the Government and people of Fiji at a fair and affordable cost in the years ahead (assuming the problems of regulation and competition are also addressed).

2.2. Public perceptions of the bus industry

The bus services in Fiji are a social good and the people of Fiji are generally very proud of their buses. Interviews and a small passenger survey have confirmed this. Men, women and children regard buses as affordable and safe and good for the people of Fiji. In the bus passenger survey that is summarised in Section 7 of this report, people thought the best features of the bus services were that they were safe (34%), affordable (32%) and had a good level of service (26%). Forty-five percent of people interviewed thought that existing prices were acceptable and only 16% thought prices were much too high.

Figure 2: Buses at Suva bus station illustrating a modern bus and a smoky bus

Although people value buses, the bus industry has an old-fashioned image that needs to be improved. People want better bus quality, safety and cleanliness (including reduced black smoke emissions). In the passenger survey, about 60% of respondents thought the bus industry could be improved best through cleaner, improved and modern buses with more comfortable seats. Another 18% of passengers wanted improved operational service and reliability. Passengers thought they would be willing to pay higher fares if there were improvements in buses (safer, more comfortable and less smoky) and bus frequency. While most (60%) passengers surveyed did not want to pay more to save 20 minutes in their journey time, 40% said they were prepared to pay more to save time (and were willing to pay 21 cents more, on average). Quicker journey time is a major reason for passengers opting for minibuses as an alternative to buses. In the survey, people said they used minibuses because they were faster (82%) or more convenient (9%). Further details of passenger perceptions are provided in a series of tables in Section 7 of this report.

2.3. Complementary and competing forms of transport

Urban and rural buses are the main forms of road public transport in Fiji. There are several other forms of public transport that may compete with the bus industry or which may provide complementary services and they include:

- Minibuses or minivans (carrying 12-18 people)
- Taxis (carrying 4 passengers): saloon cars regulated to operate in (or around) towns

- People carriers (5-8 seater vehicles) sometimes known as minivans or 'matchbox' taxis that are unregulated but which operate as taxis on poor roads in peri-urban areas
- 'Carriers' (pickups or light trucks) that carry both goods and people on poor roads.

Minibuses are a relatively recent form of public transport in Fiji. Minibus numbers are increasing and they are taking custom away from the bus industry. Legal minibuses (with yellow plates) are licensed by LTA to operate on specific inter-urban routes, notably on Viti Levu on the Suva-Nausori Roads, the Queen's and King's Roads. There are also illegal minibuses (with white plates) operating quite openly along these and other routes. They stop their operations for a few hours when they are informed of LTA road checks.

Carriers are freight-carrying pickups and light trucks that also carry passengers. They may have simple bench seats at either side of the load platform. Their natural 'niche' is on rural roads that are unsuitable for buses, and in such circumstances they provide invaluable transport services that are complementary to the bus routes. However as carriers travel legally from villages to the towns, they reach bus routes and continue to pick up passengers along the roadside of the bus route. When they do this, they compete directly with buses.

Taxis are regulated to operate from taxi bays in and around towns with meter-based fares. They provide point-to-point transport of people and their goods and are mainly complementary to buses. There can be competition, when taxis pick up commuters at bus stops and match the bus fares. Unlicensed people carriers (matchbox taxis or minivans) work outside the existing regulatory framework as high-clearance, high capacity taxis. They mainly operate on and around the rough suburban roads of the Suva-Nausori corridor and the Lautoka area. While they do poach bus and taxi passengers, their present illegal operations are mainly complementary to existing bus and taxis operations. Most people believe that if they were legalised they would compete much more with both buses and conventional taxis.

Further information on these complementary and competing forms of public transport and their influences on the bus industry are given in Sections 3.8 and 6.5. A proposal to review the operations of minibuses, carriers and taxis is provided in Section 8.

2.4. A crisis in the bus industry

The bus industry is facing several major constraints. The deteriorating condition of the roads is putting up operating costs and making some routes impassable or unviable. Bus industry income has not been keeping pace with rising operating costs, and the result has been an aging fleet with implications for bus efficiency and safety. The industry also faces increasing competition from both legal and illegal minibuses and carriers.

The fact that Fiji has got such good bus services is down to a combination of conscientious operators and many years of effective regulation for routes, prices, safety and competition. In return for providing reliable, timetabled services at controlled fares, the bus industry has been protected from excessive competition. Unfortunately, there are signs that this effective regulation is breaking down, and increasing numbers of minibuses and carriers are competing directly with buses.

Experience from within Fiji and in many other countries suggests that regulated bus services cannot complete in a free market with unregulated minibuses and carriers. Many countries have lost their scheduled bus services by allowing a free market in transport services. While the bus industry is well-regulated, many of the competing minibuses and carriers are actually illegal, uninsured, unsafe and non-tax paying. These competing means of transport are benefiting from lax regulation and from corruption. The Fiji bus services are now very vulnerable and the whole industry could collapse within a few years, if the Government fails to provide the necessary regulation needed to sustain it. This would be a tragedy for Fiji, its people and its Government. Not only would the people of Fiji lose a valuable bus service, but also the LTA would be faced with a transport service industry dominated by minibuses and carriers that would lead to much greater problems of regulation, safety, congestion and service standards.

The Fiji Bus Industry is therefore at a crucial time with low profits, deteriorating roads and increasing competition from other forms of transport. There is now a window of opportunity to re-invigorate and modernise the bus industry with improved practices. If nothing is done, the Fiji bus industry may deteriorate quite rapidly, losing enviable bus services and leaving passengers with higher fares and lower standards of service and safety. A decline in the bus industry would leave the LTA with much greater

problems of regulation and the Government with less revenue. In the following sections of this report, suggestions will be made to improve the bus industry. These recommendations will have to be combined with the effective regulation of buses and all land transport services.

2.5. Cultural issues

The consultants, the bus operators and all institutional stakeholders involved in this study agree that racial issues should not influence the review of the Fiji Bus Industry. However, it would not be correct to totally ignore certain cultural issues and perceptions in Fiji that have historically been related to ethnicity. Most of the bus owners and drivers are Indo-Fijians and this may influence some people's perceptions (eg, there may be an unsympathetic attitude to the bus industry in some media) and some decision making (eg, overnight location of buses and drivers). Many (but not all) of the competing modes of transport, including minibuses, carriers, 'matchboxes' and taxis are operated by Indigenous Fijians. This may influence perceptions, policy and enforcement, as there may be a desire to support the economic enterprises of Indigenous Fijians. One of the biggest issues facing the Fiji Bus Industry is the question of fair competition between different transport services linked to appropriate regulation and reliable enforcement. Unfortunately, on many routes the owners and operators of the competing services (buses, carriers, and minibuses) are of different cultural (racial) backgrounds. This might influence transport operations and the various processes of regulation and enforcement. However, the Consultants will address transport issues in this report from an objective professional perspective without racial bias.

3. The Legal and Regulatory Framework

3.1. The LTA Act

3.1.1. Short History

In 1912, the Motor Traffic Ordinance provided for the regulation of motor vehicles and their drivers. The Authority for regulation and fee collection was the Inspector General of Constabulary, as Principal Licensing Authority. There were no restrictions on movement or categories of vehicles types. The Vehicle Ordinance, 1918, brought in the wheel tax, an annual fee allowing vehicles to run on public roads. The Motor Traffic Ordinance, 1926, defined public vehicles as vehicles plying for conveyance of passengers. The Traffic Ordinance, 1946, consolidated earlier regulations. It provided definitions of public service vehicles and it constituted the Transport Control Board.

The Traffic Ordinance (Act) 1965 (Cap. 152) set out the functions of the Central Traffic Authority (CTA), the Transport Control Board (TCB) and the Principal Licensing Authority (PLA) for the 'convenience of public'. Under the Act, the CTA was to make regulations (under section 86), the TCB was to issue road service licenses for scheduled bus operations and specific conditions and the PLA was to issue taxi and hire car permits (and excess permits for carriers) and specify conditions. The Act was later considered too general, with a lot of discretion in interpretation and overlapping functions of statutory bodies. In 1998, the Land Transport Act established the Land Transport Authority in order to regulate the registration and use of vehicles, the licensing of drivers of vehicles and the enforcement of traffic laws.

3.1.2. LTA Act

Section 7 of the Land Transport Act (Act No 35 of 1998) defines the composition of the Board of the Land Transport Authority, being the Chairman and five other members appointed by the Minister responsible for land transport. The members are expected to have some experience of the transport industry. In addition, the Permanent Secretary (to the Minister above) is a member of the Board. Current members of the LTA board include Padam Lala (Chairman, businessman), Simon Narayan (shipping), Josefa Vosanibola (engineer and traffic consultant) and Anand Kumar (Permanent Secretary).

Section 8 of the Act sets out the functions of the authority, which can be summarised as:

a) Devise and carry out measures for the coordination, improvement and economic operation of passenger and goods transport by road
b) Ensure that provision meets public needs
c) Register vehicles, license drivers, set standards consistent with road safety
d) Develop with highway authorities traffic management strategies consistent with road safety
e) Develop and implement enforcement strategies in conjunction with Commissioner of Police
f) Anything to improve the above.

The powers of the Authority (Section 9 of the Act) are to:

a) Regulate and control means of land transport
b) To do all things which can improve road transport and to coordinate it
c) Appoint authorised officers for all purposes of the Act
d) To do everything necessary to carry out provisions of Act.

Under Section 18 of the Act, the Board may appoint a Chief Executive who is to be responsible to the Authority for the management and implementation of policy. Under Section 19, the Authority can appoint staff and fix wages. In addition, it may agree with the Public Services Commission to second staff from Government service.

Section 24 of the Act determines the funds and resources of the Authority to be:

a) income from property and investments vested with the Authority
b) fees and fixed penalties paid to the Authority
c) money borrowed for the purpose of carrying out functions; and
d) money appropriated by Parliament to the Authority.

The LTA should have expected a fair degree of financial autonomy as a result of item b) above (income from fees and penalties). However, it appears that fees and fixed penalties are now directed to the Government's Consolidated Account, and hence the Authority relies, in large measure, on a financial allocation from Government. LTA argues that this is one reason for the relatively high number of posts not filled, insufficient inspectors and generally low morale in the organisation.

Under Section 26 of the Act, the LTA has financial authority to incur payments on any expenses and costs incurred in pursuant of its purposes under the Act.

3.1.3. Main technical areas covered by the Act

Section 53 registers a commercial vehicle as a public service vehicle. Section 56 licenses drivers and Section 61(5) declares that an omnibus or minibus is deemed to be a licensed public service vehicle for the purposes of driving tests and examinations.

Section 63 determines that an omnibus is a vehicle to convey not fewer than 12 persons, and a minibus is a vehicle to convey not fewer than eight and no more than 15 persons. Section 65(2) determines that the Authority can issue a minibus permit that allows it to ply from a base to and from another place, whilst Section 65(3) determines that a Road Route Licence (RRL) is a road service for passengers at separate fares with two categories of service:

(i) stage service: scheduled service along a specified route with stopping points
(ii) express service: scheduled service between terminating points with limited stops.

The Road Route Licenses carry with them an obligation to charge fares in accordance with fares fixed by the LTA.

The Act is augmented by the Land Transport (Public Service Vehicles) Regulations 2000, which sets out the rules for Road Route Licences (RRLs). Section 3, as amended in 2003, provides that applications for RRLs must give the proposed timetable for road permits with specific route to follow and fares to be charged, as well as vehicle types, and, in the case of minibus permits, the proposed type of operation, route to be followed, fares, and approved stands. Section 3(8) determines that any amendment to timetable, route or type of vehicle needs the approval of the LTA.

Section 5(1) of the regulations provides that in determining an application for an RRL the authority will have regard, inter alia, to the following:

- needs of public
- desirability of ensuring that services to passengers are enhanced or maintained
- effect of route on other public service vehicle operators
- suitability of applicant
- suitability of the proposed route
- type of vehicle proposed.

Bus routes are determined by the LTA Board. RRLs are granted to operators following an application which addresses the requirements above. RRLs expire every 10 years and operators can renew their licence by re-applying based on the same requirements. RRLs must be approved by the LTA Board.

RRLs can be cancelled by the LTA if an operator breaches the conditions under which the RRL was granted. In practice, no RRL has ever been cancelled.

Section 7(4) of the regulations state that a ticket must be issued. Section 10(3) states that road permits are for minimum of five years, and a maximum of ten years. Section 10(5) provides that a permit is cancelled if route is not operated for three months.

Sections 52(38),(39) and (40) provide for bus emergency exits that can be opened from inside or outside the vehicle. As amended in 2006, Section 53(1) of the regulations added that a carrier must have an emergency exit to the rear of the passenger space on the left side of the vehicles and an access at the rear.

The regulations cover in great detail the interior design of buses, including seat spacing, aisle widths, non-slip floors and step heights. In general, these are very sensible, if a little prescriptive. However, Section 24 details the height of each un-depressed seat cushion. This means that nearly all buses are forced to provide upholstered seats, usually with a cloth cover, sometimes plastic.

3.1.4. Strengths and weaknesses of the Act and its enforcement

The LTA Act is comprehensive and detailed. Its primary objective is to ensure that public road transport in Fiji meets the needs of passengers for safe travel at a fair cost. There is no over-arching provision to ensure the financial stability of the public transport industry, but specific clauses provide for the Authority to consider public service vehicle permits and route licenses in the light of their effect on other public transport operators.

Bus, taxi and other public transport operators routinely object to new market entrants. Whilst this can be perceived as self interest, the LTA needs to have a clearer focus on the need to preserve and enhance a vibrant public transport industry that meets passenger needs, safely and affordably, not just today, but in the long-term.

To meet its objectives, and to protect passengers from unsafe and uninsured transport operations, the LTA Act needs to be equitably enforced across of the public transport industry.

The Act is weak on regulating noxious emissions from vehicles. Amendments should be prepared, in consultation with the transport industry. In order to do this, the LTA needs to familiarise itself with possible options for cleaner fuels and lower emission engines that are appropriate and affordable for Fiji.

3.2. Safety and accidents

3.2.1. Safety regulations

Accident records have been reviewed. In general, buses in Fiji are quite safe, given the large number of passenger kilometres travelled each year. Accident rates for minibuses are higher than those of buses, and fatality rates for minibuses are even higher. Nevertheless, memories of the tragic fire on the Raiwaqa bus in August 2008 linger in the people's minds. The public feel strongly that safety in buses should be improved, and emergency exits must be available. The LTA needs to properly enforce this on buses.

The Land Transport (Vehicles Registration and Construction) Regulations 2000 controls the safety and roadworthiness of buses. The various parts include:

Part 6:	vehicle construction
Part 7:	general safety provisions
Part 8:	lights and reflectors
Part 9:	brakes, tyres, wheels
Part 10:	fuel and exhaust systems
Part 11:	vehicle dimensions and loads.

Section 99 of the regulations deals with inspection of vehicles. An authorised inspector is one employed by the authority to inspect vehicles or who holds a vehicle inspector's permit or a certificate issued by an authorised inspector. In addition, there can be a self-inspection agency that can be authorised by the authority to inspect its own vehicles.

Under Section 105 (Powers of police), if the police think there is a deficiency they can take the vehicle away for further inspection. They may issue a defect order (section 106) that requires that the use of the vehicle is discontinued immediately or within 24 hours.

3.2.2. Public submissions on bus safety

In September 2008, the Minister for Works and Transport issued a statement on bus safety, explaining that the LTA had been directed to review bus safety. This was to include consideration of the following safety measures:

- Introduction of a revocation age for buses
- Introduce six-month tests for buses over ten years
- Introduce fire compliance certification with testing
- Regulation and enforcement of bus emergency exits
- Regulation and enforcement of maintenance and repair audits
- Regulation and enforcement of fire extinguishers
- Ban the carriage of dangerous goods in buses
- Regulation and enforcement of first aid kits and related driver training
- Other measures, regulation, compliance and standards to ensure public safety.

More details of the Minister's statement and list of possible safety regulations are provided in Appendix Section 11.1. Submissions from the public were requested and three were received as reported in Appendix Section 11.2. The most detailed comments were contained in long documents carefully-prepared by the Consumer Council of Fiji (see Section 11.2.1) and the Fiji Bus Operators Association (see Section 11.2.2).

The Consumer Council of Fiji (CCF) pointed out that travelling by bus was one of the safest means of transport, but there had been fatal and non-fatal accidents in recent years. It was essential that the bus industry demonstrated a clear safety culture, with appropriate vehicle standards and trained staff. The Consumer Council of Fiji agreed with most of the Minister's proposals and suggested:

- There should be an upper age limit for imported buses
- The bus industry should use existing fiscal incentives to purchase new buses
- Local bus body fabrication using truck chasses should be banned or strictly controlled for safety
- All buses should have easily accessible emergency exit doors and windows
- Buses should have two doors, one for entry and one for exit
- Dangerous goods (flammable materials) should be banned from buses
- All buses should have six-month tests, not just buses over ten years
- All buses should be fitted with fire extinguishers (fines for non-compliance)
- All buses to have first aid kits and all drivers trained in their use
- All bus companies to have regular safety audits (with penalties for failures)
- Bus companies should be responsible, and be held responsible, for bus safety.
- LTA should enforce compliance relating to fire resistant materials
- Bus records should be improved to allow external safety audits
- Bus brake standards should include dual circuits and/or anti-lock systems (ABS)
- Introduce accreditation system for bus operators
- Develop a code of practice for buses
- Limit route licenses to six years to stimulate the bus industry
- Consider public interest and quality of the operator when considering route licenses
- Review regulatory requirements and update fine levels to encourage compliance
- Increase the third party insurance cover on buses (currently FJD 40,000 per bus).

The Fiji Bus Operators Association (FBOA) welcomed the initiative on bus safety, but stressed the need to consult with all stakeholders, including the bus operators, prior to changes in the regulatory framework. They made the following points

- Bus travel is generally very safe and is the safest mode of public transport
- Poor road conditions and rising operating costs is adversely affecting the bus fleet
- FBOA has a history of collaborating with the regulatory authorities to provide safe and economical public transport.

Concerning the proposed amended regulations, the FBOA pointed out there was very little need for new legislation as in most cases there were already appropriate rules that could be applied more rigorously. For example:

- LTA should use the power it already has (Regulation 50) to remove unsafe vehicles. There is no need for revocation based on age, but on fitness for purpose.
- LTA should enforce Regulation 52 that requires emergency exits and the industry and the regulator should work together to agree new appropriate vehicle designs
- Regulation 23 (1)(o) already prohibits dangerous articles. A public awareness campaign should put the onus on the public not to carry inflammable goods on buses.
- The FBOA does not support six monthly testing for all buses. LTA already has the authority to issue bus fitness certificates for 6 months for suspect vehicles.
- LTA should enforce carrying fire extinguishers and related aspects of bus design.
- LTA should enforce carrying first aid equipment and arrange appropriate training.
- LTA carries out vehicle auditing and there is no need for additional regulation.
- Truck chasses can be safely used to make buses. There is no need to ban them as the LTA already has the power to refuse a licence any vehicle using a truck chassis that is a safety risk.

The FBOA made the following additional observations and recommendations:

- Bus safety can be increased by improving road conditions.
- Buses and all public transport vehicles should be strictly regulated for safety, including minibuses and carriers.
- Public awareness of safety issues and correct behaviour on buses should be increased
- Third Party insurance cover should be increased to FJD 100,000 per passenger.

The Consultants were impressed by the constructive and thoughtful public submissions. We have tried to address all the concerns raised and have incorporated several of the suggestions into this report. For example, the recommendations made by both the Bus Operators Association and the Consumer Council to increase insurance levels have been included in this report (see Section 3.2.5). Other topics addressed (but not necessarily in agreement with all parties) are the issues of bus age and inspections (see Section 3.5). The need for a 'level playing field' in safety regulation across the transport industry is an important issue that needs to be addressed (see Section 6.5). The useful suggestion that there should be separate entry and exit doors has not been made into a specific recommendation as it would have major structural and operational implications for one-person operated buses. However, this and other ideas should be carried forward for discussion and possible action within the proposed Forum, Working Groups and Public Transport Improvement Board which will include representatives of the LTA, FBOA and CCF.

3.2.3. Enforcement of safety regulations

The existing safety regulations are comprehensive in attempting to ensure a well maintained and safe bus fleet. Their implementation relies on LTA having sufficient qualified and experienced inspectors. There are 12 LTA inspection centres, and three private operations.

The consultants inspected a random sample of around 50 buses operating in Viti Levu and Vanua Levu, under working and repair conditions. Operating buses all had lights and brakes in good working order. Virtually all tyres inspected had the minimum tread requirement. All buses met the general construction regulations. No overloaded bus was observed. By way of contrast, many of the minibuses, carriers and taxis observed had poor tyres, defective lights and unsafe loads.

The consultants observed that bus chasses were rust treated annually on virtually all buses. The only corroded chasses observed (that were potentially unsafe) were seen in buses already taken off the road.

On some buses the interior design did not allow for the aisle width prescribed in the regulations. In some buses passenger rails obstruct easy movement within the bus. These do not make buses unsafe, but operators are encouraged to provide an improved passenger environment when fleet renewal permits.

Not all buses yet have an emergency exit in conformity with the regulations. LTA and the operators should take immediate steps to rectify this.

The Consultants endorse the following recommendations on safety that were proposed in the context of the public consultation on safety in the bus industry (see Section 3.2.2).

- Regulation 52 already specifies the requirements for emergency exits and so there is no need for further regulation. Existing regulations have not necessarily been enforced, and the industry and the LTA should work together for appropriate designs for new vehicle bodies and affordable options for existing vehicles.

- Measures to ban flammable cargo (already covered by Regulation 23(1)(o) prohibiting dangerous articles) should be implemented. A public awareness campaign is needed to educate the public. While operators should endeavour to enforce, drivers cannot be expected to inspect all loads and the onus should be on the public not to carry dangerous goods on buses.
- All public service vehicles should carry fire extinguishers and Regulation 52(35) already provides the necessary regulatory framework. The LTA and the operators should agree on the appropriate equipment to be carried. Similarly, existing regulations cover the inclusion of fire resistant bus body designs.
- Buses should carry first aid equipment and the LTA should include first aid training in existing defensive driving courses.
- Safety regulation should be applied to all public transport vehicles including minibuses, carriers, minivans and taxis.
- The Third Party insurance cover limit should increase from FJD 4000 to 100,000 per passenger.

3.2.4. Accidents

Table 1 lists serious accidents recorded by the police involving motorised vehicles in Fiji in 2007.

Table 1: Serious accidents involving motor vehicles in Fiji in 2007

	Seriousness of injuries sustained			
Traffic type	*Fatal*	*Hospitalised*	*Not-hospitalised*	*Total*
Pedestrian	15	65	152	232
Car	27	54	119	200
Pickup	4	22	58	84
Bus	1	11	63	75
Minibus	4	15	35	54
Motorcycle	0	0	5	5
Heavy goods vehicle	0	1	3	4
Bicycle	1	0	2	3
Tractor	0	0	1	1
Other	7	13	41	61
Unknown	0	3	0	3
TOTAL	**59**	**184**	**479**	**722**

Source: Fiji Police

There were 63 accidents involving buses in 2007, one of which caused a fatality. At the time of this review, data were not available for 2008 but a serious fire on a Raiwaqa bus killed 12 people in August 2008. At the time of this review, the inquiry report on that fire had been completed by the LTA but had not been made publicly available. Further examples of bus accidents are provided in Table 34 and Table 35 in Section 14 (page 88).

A comparison of accident rates involving buses and minibuses is shown in Figure 3. This suggests that minibuses are almost twice as likely as buses to be involved in serious accidents. Minibuses are ten times more likely to be involved in fatal accidents than are buses.

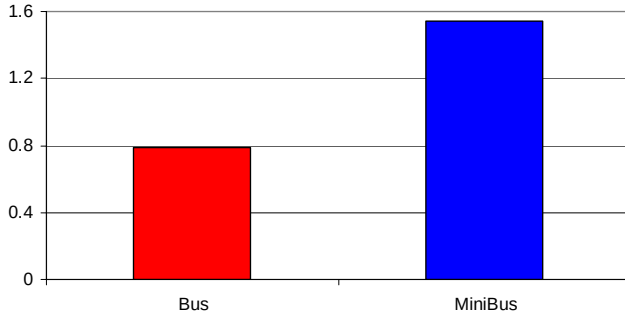


Figure 3: Serious accident rates per million vehicle kilometres

Source: Consultants' estimates

3.2.5. Insurance

Buses are legally bound to carry third party insurance (under the Insurance Act). The value of the cover provided is currently, FJD 4000 a person or FJD 40,000 per bus. This is not considered sufficient to counter a legal claim for serious injury or death. As a result, many bus operators take out separate and more comprehensive cover to address risks to third party persons, workers and property. This adds to operating costs. At the same time minibuses (that may be competing with buses) do not have any legal obligation for insurance over and above private third-party. This increases the perception of unfair competition between the highly-regulated bus industry and the lightly regulated minibuses.

The Consultants agree with the recommendations made by the Fiji Bus Operators Association and Consumer Council of Fiji that insurance cover should be increased. They accept the suggestion of raising it from FJD 4000 to FJD 100,000 per passenger (see Section 3.2.2). There should also be appropriate regulated and enforced insurance cover for passengers in minibuses, taxis, people carriers (matchboxes) and carriers (see also Section 3.2.2).

3.3. Review of current route licences

There are 188 main Road Route Licenses (RRLs) issued to 66 bus companies. These are all listed in Table 36 (in the Annexes). Most RRLs comprise a number of routes to be operated and their timetables. The coverage across the country of existing RRLs is extremely comprehensive. There are very few towns, suburbs or villages that do not have access to a bus service. In some ways the network coverage is too detailed. Typical world standards consider adequate bus provision to be 400 m from a bus stop in urban areas, and 1 km from a bus route in rural areas. Under these criteria, 95% of the population in Fiji is well served by RRLs. As noted in Section 2.1, this puts Fiji among the best-served countries in the world for buses, and perhaps the highest for its GDP.

The condition of the roads is critical to the real level of accessibility enjoyed by people. Poor quality roads offer an uncomfortable ride in both urban and rural areas. Very poor quality roads mean that conventional buses simply cannot operate with confidence. Unpaved rural road conditions have worsened over the last ten years on many routes. Some operators are now unable to service their RRLs on difficult roads. When this happens, the gap is partly filled by light trucks (carriers) that are able to operate on poor roads. This will result in higher fares for passengers, less comfort, less safety and less regular and reliable services. Unfortunately, the provision of alternative services may reduce the pressure on the Government to maintain and re-habilitate these roads. It is feared that conventional bus services may be permanently lost from some areas, to the detriment of rural people.

A further consequence of the extremely high network coverage is that bus owners have few opportunities to re-deploy vehicles in new areas should they have to withdraw from their existing routes. There are only a few growth areas (eg, Nasinu) where additional services are warranted or where there are gaps in services.

There are calls by operators for some routes to be allowed to run through Suva without terminating. For some passengers this would save time and fares, but the main advantage would be to operators, in terms of reduced operating costs. As the majority of passengers might well still require boarding/alighting near the Suva bus stand, new bus stops would have to be identified that did not interfere with general traffic.

3.4. Bus fares

3.4.1. Bus fare legislation

The legislation for setting bus fares in the Act appears to place the responsibility for fare setting on the LTA. However, the LTA does not appear to enjoy full autonomy in this area. As in most countries where fares are regulated and set in the public interest, the level of fares is politically sensitive and Governments may become involved in pricing decisions. In the past, Governments have tended to resist fare rises. Therefore, instead of regular, small rises, fares in Fiji have often risen in jumps (eg, 10% in August 2001 and March 2008).

A general principle needs to be established: either bus fares are intended to cover operating costs (in which case they should rise with cost index models) or fares are set for social reasons (in which case the Government has a responsibility to pay for the financial costs of fare decisions). This crucial policy position is lacking and this is discussed Section 3.4.4.

3.4.2. Fuel and oil prices

Between 2005 and 2008 the world oil price rose dramatically compared to its historic level. Figure 4 shows the crude oil price (West Texas Intermediate) and the regulated price of diesel in Fiji. All diesel fuel in Fiji is imported and therefore fully subject to the vagaries of the world prices of crude oil. As a price regulator the Government was forced to raise the price of diesel from FJD 1.42 in March 2006 to FJD 1.95 in May 2008, a rise of 37%. However, as Figure 4 shows, consumers in Fiji were sheltered from the world price of oil through this local price regulation. By the end of 2008, the price of diesel in Fiji was the same, relative to the price of crude oil, as it had been in 2001. In 2009, the price of oil began to rise again. Diesel prices in Fiji (which are now linked to oil prices, with a two-month lag) have started to rise.

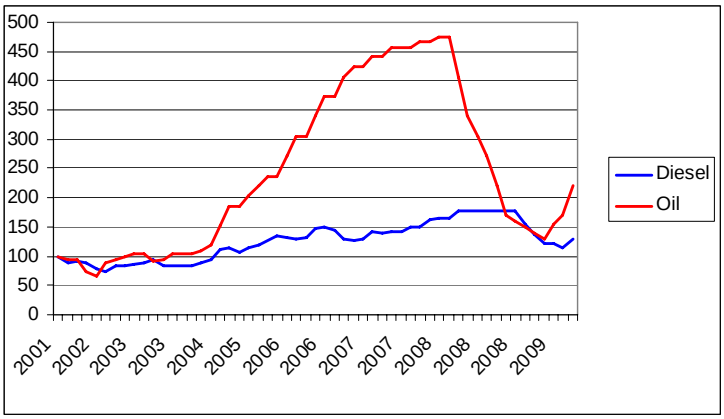


Figure 4: Relative prices of world crude oil and diesel in Fiji (2001 = 100)

Figure 5 shows the relative prices of diesel and bus fares in Fiji over the same period. Between 2001 and February 2009, the pump price of diesel rose by 56%, whereas bus fares rose by only 21%. Between 2005 and 2008 bus fares fell significantly behind the relative price of diesel. The early part of 2009 has shown a recovery in this position. Bus operators contend that the cost of diesel is a major component of their operating costs.

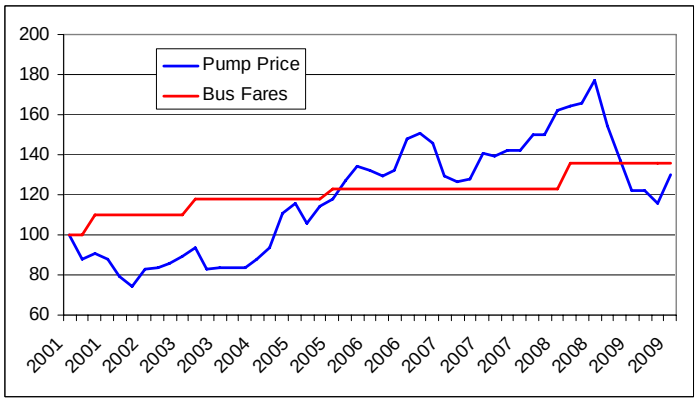


Figure 5: Relative prices of diesel and bus fares in Fiji (2001 = 100)

Most governments and bus authorities take the view that fares should be the primary means of funding bus operations and that any supplementary funding should be used for marginal services, such as school routes. The Consultants agree with this philosophy provided bus services are sustainable and continually improving. Consumers should pay for the services so long as they are safe, accessible, reliable and affordable. This means that fares will need to rise, but rises should not be simply a function of diesel costs. Fares could be calculated in a holistic way, taking into account the need for a modern, efficient and sustainable bus service. This should involve appropriate cost-index models and also the adoption of cost-reducing technologies and management systems. Within this approach we have put forward a number of initiatives to modernise fares and ticketing (see Section 5 of this report). These could have the effect of not just cushioning fare rises for regular travellers, but could also lead to lower fares in real terms in the future.

3.4.3. Bus fare levels

Bus fares in Fiji are broadly in line with other countries, taking into account income levels. However, the majority of bus passengers in Fiji regard fares as reasonable and cheap. The main problem is the fare structure. This is relatively refined which leads to a large number of fare stages and therefore a need for many differently priced tickets. In addition, fare stages in rural areas are compressed (2 km instead of 3 km). This causes fares per km to increase to compensate operators for the higher operating costs on rural roads. This has the unintended effect of making bus fares higher (pro-rata) for rural people, who, by and large, have a lower ability to pay.

The past percentage fare rises have tended to favour shorter journeys, as increases have been rounded down. Fares that are currently 0.50c, 0.70c, 0.75c, and 0.85c are probably under-priced relative to the higher fare stages. This has increased the disparity suffered by rural people, who tend to take longer journeys. Passengers on wage of FJD 100 per week who pay 0.85c for journeys to and from work spend 8.5% of their wage on transport. This is reasonable. Passengers on the same wage who have to pay FJD 1.50 per trip (for 18 km) would be paying a less affordable 15% of their wage on transport.

Our recommendations include a radical revision of the fare stages, to reduce the number of stages, and in line with world practice to move towards flatter fares on a zonal basis. At the same time, this revision can be used to implement the Government policy (as yet unclear) on the issue of social versus economic fare levels, for the community as a whole and for special geographical areas or passenger groups

Pending this review, we recommend an immediate 10 cent rise on all bus tickets. This would have the effect of bringing the lower fares, back to their relative financial position. It would lead to a small percentage increase on higher (rural) fares. For example, the 0.85c fare would rise by about 12%, whereas the FJD 2.75 fare would rise by less than 4%. This modest and affordable rise would have a significant and beneficial effect on operators' revenues (that would rise by 4-5%) and has been included among the strategies for improving the economic position of the bus industry (see Section 4.5.2).

3.4.4. Subsidiary legislation for bus fare determination

The above analyses relating to fuel cost and fares has illustrated the conflict of interest between the Government and bus operators regarding bus fares. The Government (and consumers) naturally want to keep fare prices down, while the bus operators naturally want fares to rise in line with their operating costs so they can maintain profitability and renew their fleets.

For this reason it is worth considering options for legislation that clarify the functions and responsibilities of the parties involved. The current legislation provides for the LTA to set fares, based on clauses contained in prior legislation subsumed in the LTA Act. However, there is no background against which the LTA should set fares or what it should take into account in fare setting. The prevailing logic has been to minimise fares while allowing the operators some unquantified form of profit margin. Up until very recently this formula had worked, but a change is required to reflect the political and economic reality. Any new formula should take the following as a starting point:

> *"The LTA shall, annually, recommend to the Government fares for stage carriage services. In determining fare levels the LTA shall take into account the economic and social constraints of the country and passengers, as well as the need to sustain a viable, modern and efficient bus service for all parts of the nation."*

Allied to this ought to be a rider that places a duty on the LTA to consult consumer, passenger and industry representatives in making its recommendations.

Underlying this approach it the idea that LTA is *competent* to make a recommendation on fares, and that the Government will, unless there are severe extenuating circumstances, act on the recommendation.

3.5. Quality of bus services

Service levels for passengers are very good and many passengers have commented favourably on this. RRLs contain timetables to which operators do their best to adhere. Punctuality is one of the hallmarks of a professional and well-operated bus industry. As noted in Section 2, based on space, loading levels, comfort and frequency, the bus services in Fiji are exceptional for a middle-income country. The

Government and country should be proud of this, and ensure that policies and regulations allow future generations of Fijians to benefit also.

Within an existing RRL, there ought to be room for a dialogue between the operator and the LTA to alter timetables to respond to changes. For example, there has been an increase of population in Nasinu and a decrease in Raiwaqa. Changes that involve passenger benefits or appropriate time changes could be agreed and advertised accordingly. Changes that would lead to a worse service for passengers should be the subject of consultation prior to an LTA Board decision.

Many passengers have commented adversely on the condition of buses. This includes the quality of bodywork, seating (often damaged and old), the restrictive width of the aisle and the general environment within the bus. There is a perception that the industry is not modern or passenger-friendly. More than half the buses in Fiji do not have glass windows. This open design that is generally popular and appropriate for the climate (buses with glass-window but without air conditioning feel less comfortable). However, the long-standing windowless design adds to the perception that buses are old.

Some operators have made attempts to improve the external design and the internal comfort. Some inter-city services offer air-conditioning, comfortable seats and large glass windows. Some 'shuttle' services use smaller buses with more spacious and comfortable seats than the traditional 60-seater buses. It is acknowledged that such 'modern' designs may not be appropriate for short-distance commuter routes or long-distance routes on poor roads. However, the Consultants feel that operators have to do more to make their industry appear more modern and user-friendly. Passengers should be made to feel welcome and comfortable, and it is not always necessary to squeeze the maximum capacity from the available body. For example, it may be possible to obtain more efficient use of seats and to improve the ease of manoeuvring within the vehicle by provision of a small luggage area towards the front of the interior for passengers' medium-sized baggage.

On many routes, passengers are no longer a captive market: competition from taxis, minibuses and carriers exists and is unlikely to go away. Buses have to compete at all levels with other transport, including image and comfort as well as the conventional strengths of capacity, reliability and ticket price to attract passengers. The Consultants do not feel that these issues need to be regulated, but the operators must move with times and improve their image as well as their services.

3.5.1. Age of buses

In September 2008, a Government Press Release stated that it was a 'national concern that approximately more than fifty percent of omnibuses are over twenty years in construction age' (Transport 2008d). Table 2 lists the percentage of buses in the fleet by age group. This suggests that 30% of buses are over 20 years old and that 56% are less than 16 years old.

Most buses are not imported as complete units but as chasses (new or second hand) onto which a body is constructed within Fiji. The official age of the bus is the age of the chassis. Chasses themselves may have exceptionally long lives. They have no moving parts and only severe fatigue from continued, exceptional shocks would cause failure. Most buses over ten years old will have had engines and gearboxes replaced and some crankshafts and axles as well. As the buses get older, their bodies are repaired and/or replaced. Hence the component parts of the buses in Table 2 tend to have ages less than the bus age.

Table 2: Buses by age group

Age (years)	*Percentage of buses*
< 3	7
3 – 5	6
6 – 10	16
11 – 15	27
16 – 20	14
21 – 25	9
25 +	21

Source: Consultants' calculations from LTA data

There have been some suggestions that buses over 20 years old should be banned in the interests of safety. The Consultants agree that unsafe and high emission vehicles should be banned but vehicle safety and age are not the same. As noted above, older buses have often been completely rebuilt and there is no

hard evidence to suggest that buses over 20 years are intrinsically more dangerous than buses over ten years. Key safety features are already scrutinised by the annual LTA fitness inspection and can also be verified in roadside checks. Safety is primarily an issue of effective regulation, not vehicle age. Banning buses over 20 years old would remove 30% of the fleet. If this were to happen, financial constraints and limited local coach-building capacity would make it difficult to replace such a large number of buses, and the effect on passengers would be drastic. For these reasons, the Consultants favour improved regulation and enforcement for buses of all ages, and not a ban on vehicles based simply on age.

The issue of safety has resulted in the Government banning the import of bus chasses more than eight years old. This did not really address the main issue of ensuring the efficient maintenance, testing and regulation of buses.

Operators have been investing in new vehicles and 13% of the fleet is less than 5 year old. However, fleet renewal is difficult under current pricing and operating conditions and some operators are struggling with the financial consequences of recent investments. The Consultants are proposing funding arrangements for the bus industry (through fares and targeted concessions) that will assist the process of fleet renewal (see Section 4.5).

Fitness tests on buses are annual, in common with all other vehicles in Fiji. Such a frequency strikes balance between public interest and demands on the resources of the LTA. Increasing the frequency of inspections is not guaranteed to have any effect on safety or efficiency, given that operating conditions can just as easily affect bus quality in the intervening period. However, given the age profile of the fleet, it is recommended that six-monthly inspections are brought in for buses over 25 years old. This would not stretch the inspection resources of the LTA significantly, but would be a clear pro-safety measure that would also encourage bus operators to renew their fleets.

3.5.2. Emissions, smoke and noise pollution

Black smoke can be caused by a number of factors including:

- inadequate maintenance of fuel injection equipment
- incorrectly adjusted maximum delivery stop in the governor
- restricted air filter system
- high back pressure in the exhaust system.

Only a minority of buses in Fiji are very smoky and many smoky vehicles on the roads of Fiji are not buses. Nevertheless, smoky buses are seriously damaging the image and reputation of the industry. A loud exhaust roar that clearly advertises the presence of the offending vehicle often exacerbates the impression given by the smoky bus. Old Leyland buses, legendary for their robustness and reliability, seem particularly susceptible to giving off smoke and noise pollution. Many people interviewed, including government officials, consumer organisations and bus passengers felt that smoky buses characterised the industry. In their comments on the Draft Final Report, the Consumer Council of Fiji referred to a ‘detailed study on vehicle emission’ that was conducted by Andrew Campbell in July 2004 under TA2850-FIJ: Road Safety Reform and Safety Improvement. Unfortunately the Consultants had not been shown a copy of this report by any of the stakeholders involved in this review and so cannot comment on this.

The negative image of smoky buses is often portrayed in newspapers and other media. In the survey of bus passengers, 40% of respondents wanted newer and cleaner buses, while 22% said they would be prepared to pay for higher fares if the buses were less smoky (see Section 7).

Figure 6: Smoky Leyland bus

In many developing countries in Asia, including China, India, Sri Lanka and Bangladesh, smoky buses are common. Fiji is a medium-income country that compares itself with richer countries such as Australia and New Zealand. The government and members of the public wish to see high standards of pollution control. The bus operators should recognise the perceived problems and act themselves with self-regulation to reduce noise and smoke pollution. At the same time, the LTA

needs to more strictly enforce existing emission regulations. The LTA must ensure it is properly staffed (in quantity and quality) to regulate effectively in the interests of the public. The LTA Act includes emission standards and the LTA does test buses for smoke emission as part of the annual testing. The LTA also mounts roadside tests to identify offending vehicles.

The United States Environmental Protection Agency allows a maximum sulphur level in diesel of 500 ppm. In Fiji it is currently 5000 ppm. We recommend that Fiji adopts a maximum of 500 ppm.

While good regulation is required, the smoky engines may be a symptom of general under-investment due to the low profitability of bus operations, particularly on rural routes. If the real problem is low profitability, then sanctions such as fines or taking buses off the road will be counter-productive and drain more money from the industry. It is necessary to deal with the whole issue of fleet management and renewal.

In the circumstances, the Consultants propose that, in the first instance, a Joint Working Group be established comprising LTA, bus operators, consumer representatives and other relevant stakeholders to agree reasonable emission standards for Fiji and a timetable for their adoption. The Consultants suggest that the Working Group operates within the context of the Forum for Transport and Development, recommended here in Section 6.6.1 (with further details in Annex Section 10).

Due to the existing problems of regulation and self-regulation within the bus industry, the Consultants propose that this Joint Working Group should develop the terms of reference for a new statutory body, the Public Transport Improvement Board. The rationale for this is discussed in Section 6.6.2 and a draft Enabling Act is provided in Annex Section 9.

The Joint Working Group (and subsequently the proposed Public Transport Improvement Board) should develop a road map for engine replacement to meet modern emission standards. The Working Group would have to consider the existing fleets, the price and availability of suitable replacement engines and the prevailing market conditions (fares and profits). The Group may also have to consider whether financial incentives to achieve the desired changes are warranted. The necessary amendments should then be made to the LTA Act, and the existing and amended legislation should be effectively implemented by the LTA. The outcome should be bus operators themselves fully complying with emission regulations, with strict enforcement by LTA in the event of non-compliance. This should lead to consensual removal of smoky buses from the roads of Fiji and other quality improvements.

3.6. Bus operating costs

3.6.1. Fuel and other costs

Bus operating costs have been rising in recent years, to the acute distress of some operators. In 2008, the operators' main concern was the cost of fuel and this culminated in a bus strike. As the Government regulated the both fuel prices and the fares, there was a genuine grievance, which could not be put down to market risk. However, by focusing on the costs of fuel, the operators failed to stress that the real danger to their industry was the increase in the price of tyres and spare parts which have been rising steadily for the past five years. As noted in Section 3.4.2, fuel prices can fall, and have fallen, whereas the prices of tyres have been increasing at more than 10% per year, and are these prices are unlikely to fall. In 2008, the prices rises were against the backdrop of an increase in value of the Fiji Dollar against the US Dollar. In 2009, the devaluation of the Fiji Dollar has caused even greater increases in the costs of new buses, spares and tyres. This is at a time when deteriorating road conditions are increasing the need for replacement parts and tyres, as well as causing increased fuel consumption.

A review of operators' accounts has revealed increases in operating costs, on a per bus basis, from around FJD 51,000 in 2005 to FJD 60,000 in 2008 (including depreciation).

Table 3: Average operating costs and fuel contribution from 2005 to 2008

Year	*Operating cost per bus (FJD)*	*% of operating cost due to fuel (excluding rebates)*
2005	51,371	34%
2006	56,396	27%
2007	56,294	38%
2008 (estimated)	60,334	42%

Source: Bus operators' audited accounts and consultants' estimates

Figure 7 shows how the various components of operating costs have altered over the past 30 years. The proportion made up by the cost of fuel has risen from 17% in 1976 to 42% in 2008. The proportions taken by wages and repairs have declined substantially over the same period. Of particular concern seems to be the fact that the amount being spent on repairs is being squeezed. Operators are increasingly likely to 'make do' with substandard items and run buses to a point of break down instead of garaging them for early repairs. Passengers and operators reported that bus breakdowns along the road had become more frequent, and this may be linked to the higher cost of spares, the deteriorating roads and the resulting squeeze on operational profitability.

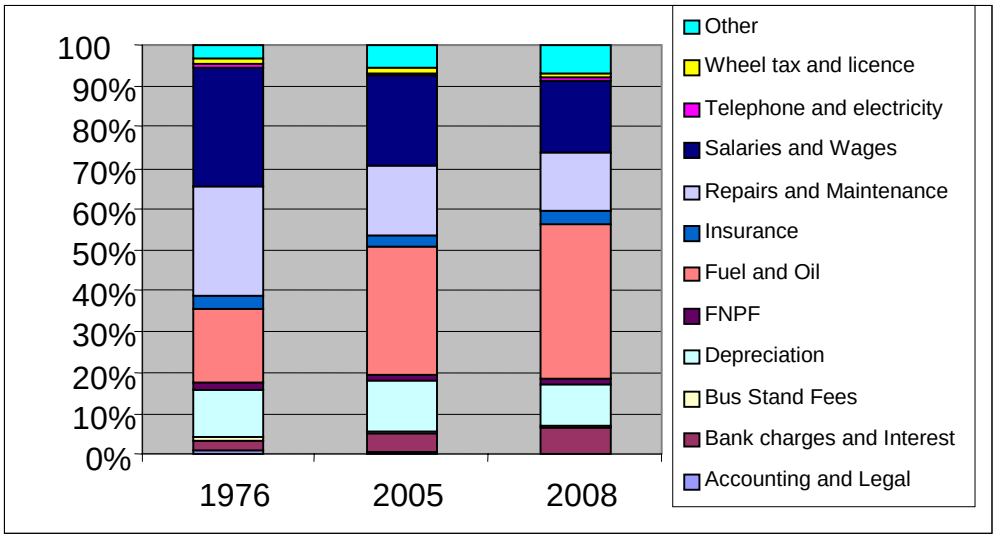


Figure 7: Bus operating costs and component elements

Source: Transport, 1976, Bus operators' audited accounts and consultants' estimates

3.6.2. LTA's role in verifying running costs

The percentages represented by fuel, repairs and parts vary considerably from operator to operator. Rural operating costs are generally higher, and the operating costs on Vanua Levu are greater than Viti Levu. It would not be accurate or equitable for the LTA to adopt a single cost-index model across the whole industry. Cost-index models must be matched to the operating environment.

LTA has developed one Cost-Index Model in order to develop a formula for devising fare increases. However, the model is *index* based (ie, costs are related to the year before, as opposed to real costs) and so LTA does not have experience in verifying actual running costs. Nor does it have a legal remit to do this at the moment. In most countries, it is not the job of the regulator to verify operating costs. Where transport authorities procure bus services, their best information on running costs comes from aggregated tender returns, not from disaggregated estimates. However, it would assist the LTA in implementing its proposed mission (section v) if it had its own information on bus running costs and their components. The Consultants anticipate that this report should provide the starting point for this.

3.7. Assessment of the road network

3.7.1. Quality of the road network

The main roads on Viti Levu connecting the major towns (Suva, Nadi, Lautoka, Nausori, Sigatoka, Tavua and Ba) are broadly in 'fair' condition, apart from one important section of the King's Road. However, the potholes and poor sections increase journey times and operating costs and adversely affect bus operations. Most suburban roads where bus services operate are in 'fair' condition, and interventions on these roads are needed now to ensure that the condition remains tolerable. Roads that penetrate the interior of Viti Levu are largely unpaved (gravel) and in poor condition. In many cases the surface later of gravel has been eroded and the roads have not been graded or re-gravelled. The roads in the Northern Division (Vanua Levu) are generally worse. It is generally agreed that the quality of road network has been deteriorating in recent years. In response to the Draft Final Report, the representative of the Ministry of Finance highlighted the significant investment the Government is now making in road construction and maintenance. Bus operators and passengers will welcome this. The crucial test will be whether most bus routes do improve. To date, the general deteriorating trend has yet to be reversed.

Figure 8: Examples of potholes in Nadi and Queen's Road

3.7.2. Affects of the road network on urban, inter-urban and rural services

The poor roads create very high operating costs for conventional buses and some roads are periodically impassable, especially during the rains. Sometimes bus operators cannot run their registered services on the poor rural roads and this creates niches for other forms of public transport. Operators have had to suspend some services due to the state of the roads.

Figure 9: Examples of road problems faced by bus operating companies

From left: Poorly drained road near Suva. Eroding culvert near Savusavu. Rough road, near Lautoka

The issue of road maintenance, particularly on rural roads, does not just affect the bus industry; it affects pedestrians and all modes of transport. Improved road maintenance is needed for social, economic and connectivity reasons. Where this allows conventional bus services to operate, the social and economic benefits for local residents are very high. However, under existing road maintenance arrangements, roads are deteriorating and more and more rural bus services have to be suspended. Only a concentrated and significant effort to improve rural roads, with regular maintenance and rehabilitation will ensure that rural bus services can be resumed and continue to operate.

3.7.3. Inadequate road maintenance

The bus industry will contribute towards the new Road User Charge with funds earmarked for road maintenance. Unless this fund has a dramatic effect on rural road conditions, the net result is likely to be a net financial cost to the industry. There are around 2600 km of rural roads, and the full cost of routine maintenance on these should not exceed FJD 4.5 million annually. This is far less than the constrained budget estimate for periodic maintenance and reconstruction on the sealed road network for 2007, estimated to be around FJD 94 million.

Bus companies operating routes on gravel roads have frequently contacted the relevant offices of the Ministry of Works and Transport to report road problems that need attention and that prevent their buses from operating efficiently. They reported that they were often frustrated by the lack of effective response. The crucial rural roads of Fiji are often being left to deteriorate due to the lack of very simple and inexpensive maintenance. Often water is left to cause damage on a road when it could easily run off if one person with a shovel were to clear a drain or culvert. This is illustrated in Figure 10.

The situation suggests some serious management problems within the Ministry of Works and Transport. Some local excuses given were that maintenance work had been contracted out (who was responsible for the supervision and quality control in that contract?) and that the Ministry lacked transport resources to inspect the roads (a supervisor could see such simple problems by walking, cycling or taking a bus: a labourer with a shovel could travel in the same way). Certainly the Department for National Roads has many constraints in terms of resources, weather extremes and some serious engineering problems, but there should be no excuse for failure to maintain roads due to lack of basic supervision. On-going Government investment in road maintenance needs to be complemented by improved road management.

Figure 10: Example of road deterioration due to poor drain maintenance, Savusavu

3.8. Affect of other transport operators on the bus industry

3.8.1. Competition, complementary and regulation

One of the main issues emerging from this bus industry review is the influence on the bus industry of other forms of public transport that may provide complementary services but which also may compete directly with bus services. As noted in Section 2.3, the main forms of public transport outside the bus industry are:

- Minibuses (carrying 12-18 people) operating along designated routes
- Taxis (carrying 4 passengers) on a point to point basis around urban areas
- People-carriers, minivans or 'matchboxes' (5-8 seater) acting as illegal taxis
- Carriers (pickups or light trucks) that carry both goods and people on rural roads.

The LTA is responsible for regulating all land transport services and so regulates all these services. There are legal and appropriate roles from minibuses, taxis and carriers but there are also illegal operators and illegal practices. The people carriers are currently not a legally acknowledged category of public transport but the LTA still has regulatory responsibilities to address the problem of illegal public transport operators and practices. The bus industry accepts that there will be competition, but it strongly objects to what it sees as unfair competition and illegal or unethical practices (eg, picking up passengers at bus stops). Moreover the regulated standard for safety and insurance cover are different across the industry, with buses having the highest and most costly standards. The whole debate on regulating alternative forms of public transport is complicated by the existence of illegal operators, alleged corrupt practices, suggestions of cronyism or cultural biases and the inevitable conflicting interests of competing modes of transport and their passenger requirements. Some of the issues will be highlighted in the subsequent sections, but the Consultants recommend that the issue of complementary and competing forms of transport are so important that they require a specific follow-up study (see Section 6.5 and Section 8).

3.8.2. Minibuses

Minibuses (and minivans) are a relatively recent form of public transport in Fiji. Legal minibuses (with yellow plates) are licensed by LTA to operate on specific inter-urban routes, notably on the Suva-Nausori Roads, and along the Queen's and King's Road on Viti Levu. It is claimed (and observed) that the licensed vehicles do not always operate on their licensed routes, as they may move to more popular and profitable routes. In addition to the regulated minibuses (with yellow plates), there are large numbers of illegal minibuses operating with white plates. Some of these have applied for yellow-plate licenses, but few have been issued in the past year. Many minibuses are owner-operated. Some drivers rent the minibuses from owners who have bought them specifically for leasing out for income-generation. Such owners may have more than one minibus, but large fleets are not common. The operators generally link together in associations, and there are many mini-bus associations that coordinate operations on one or more route. One of the main functions of associations is to control the queuing for passengers at the terminals. The associations accept both legal and illegal minibuses, and some associations have more white-plate vehicles than yellow-plate ones.

There is direct competition between buses and minibuses on several routes, particularly on the Queen's, King's and Prince's Roads. The competition has been increasing in recent years, and much of this competition is made up from unregulated (white plate) minibuses.

Passengers opt for minibuses because they leave promptly (on busy routes and at peak times) and drive more quickly, giving shorter journey times. The new Toyota Hiace minibuses are more comfortable than most buses, but older, crowded minibuses are considered less comfortable. Shortage of passenger places

in rush hours causes people to accept crowded conditions. Minibuses have regulated fares, slightly more expensive than bus fares, but minibus operators frequently vary the fares, lowering their prices to attract bus passengers and raising them in the evenings when there are few competing bus services.

Figure 11: Illegal (left) and licensed (centre, right) minibuses at Sigatoka minibus stand

3.8.3. Carriers

Carriers are freight-carrying pickups and light trucks that also carry passengers. They may have bench seats at either side of the load platform, but passengers are also carried on the load platform, sitting on freight, luggage or the floor. Some carriers are owned by the village communities where they are based or by local businessmen. Their natural 'niche' is on rural roads that are unsuitable for buses, and in such circumstances they provide invaluable transport services. In this way many carrier operations are complementary to bus services. Many carriers operate daily services between villages and urban markets (including Suva) carrying only local people and their produce. These are complementary services.

Figure 12: Pickup carrier (left) and truck carrier (right) on the Vunidawa-Suva corridor

The bus companies suggest that most carriers also pick up passengers along the roadside, and so compete directly (and unfairly) with the buses. The Consultants observed this practice and saw carriers clearly operating as passenger transport services along bus routes in direct competition with buses. It is generally agreed that in much of Vanua Levu and some rural routes in Viti Levu, carriers are increasingly operating on bus routes. Through their timing (passing ahead of the timetabled bus) and negotiable pricing they are able to take away passengers from the bus companies. For waiting passengers, it is very tempting to take the offer of transport by carrier: the carriers frequently match or undercut the bus fares, and they arrive before the buses. Although passengers prefer the greater comfort of buses, they make rational decisions to travel earlier and cheaper by the carriers that run ahead of buses.

The LTA has the power to stop carriers competing with buses and can revoke their licenses. In a rare example of this, the LTA intervened against carriers on the road from Seaqaqa to Labasa in Vanua Levu. Illegal carriers were warned that there would be a 'three strikes and out' policy that would be strictly enforced, with the licenses being revoked for persistently offending vehicles. The carriers continued to operate until three carriers were deregistered for six months. Once it was clear that the LTA was serious about enforcing the regulations, all other carriers stopped operating illegally on this road. This clearly showed that the illegal operations of carriers can be controlled by LTA, if it is determined to do so. In this case, it depended on one particular LTA officer being convinced that rigid enforcement was necessary.

3.8.4. Taxis and people carriers

Taxis are regulated to operate from taxi bays on regulated meter-based fares in and around towns. They are not restricted to routes, and they mainly provide point-to-point transport of people and their personal goods. In this way they are mainly complementary to buses. However there is some competition, as some taxis carry commuters and even intercity passengers along bus routes, often matching the bus fares. Taxis are not subject to quantity or quality regulation. As a result taxis are plentiful in the main cities and towns, although vehicle quality is relatively poor.

Figure 13: Mini vans queuing in Nasinu (left) and taxis waiting at Savusavu (right)

People carrier taxis (matchbox taxis or minivans) are not licensed and therefore operate illegally. They are most commonly found in the Suva-Nausori corridor and in the Lautoka area. Around Nasinu, many are based around supermarkets and stores. They not only transport shoppers, they also link the main bus routes to residential areas with poor roads that are not served by buses or taxis. They therefore operate as high capacity, high clearance taxis. Although this is technically illegal, many people consider such services 'reasonable' and the drivers want to be licensed and recognised. However, some minivan taxis operate on the main King's Road, picking up passengers from bus stops. It is widely believed that if they were legalised, many more would start to operate away from their existing niche, and compete more with buses and taxis.

4. Financial issues, concessions and fares

4.1. Concessions provided to the bus industry

In recent years, there has been no clear single policy concerning concessions to the bus industry. Rather, a number of separate concessions to the bus industry have been put in place over time, without reference to any overall policy on Government support to the industry. There is no primary legislation that provides for Government to provide concessions. Therefore the Government has from time to time used its discretionary powers under primarily financial legislation, tax, excise and VAT laws.

The Fiji Island Revenue and Customs Authority (FIRCA) monitors the amounts of concessions provided to the bus industry. It does not assess their effectiveness in achieving the economic and social objectives that they are intended to meet. Until 2008, the taxes on imported buses were as shown in Table 4.

Table 4: Taxes on bus importation prior to 2008

Item	*Fiscal*	*Import Excise*	*VAT*
New chassis for bus	0%	0%	12.5%
New bus engine	0%	0%	12.5%
Identifiable fixtures and components (including tyres)	5%		
New bus	27%	15%	12.5%

In the 2008 Budget, fiscal duty and import excise rates were amended as shown in Table 5.

Table 5: Taxes on bus importation from 2008

Bus Type	*Fiscal Duty*			*Import Excise Duty*
	Number of Seats			
	10-15	*16-23*	*23 +*	
Used and reconditioned	FJD 10,400	FJD 12,400	FJD 16,500	-
New buses	5%	5%	5%	5%

The 2008 budget raised the fiscal duty on tyres from 5% to 27%. It also reinstated the fiscal duty on diesel to 18 cents per litre (from 9 cents). The 2009 budget increased the age limit on imported buses to eight years (from six years). In addition, all fiscal and excise duties from ticket machines and ticket machine parts were removed.

The Government has provided an 18-cent per litre rebate on fuel. Until March 2008, the Government also gave a rebate on fuel called the Bus Grant (20/10/5c). The historic cost of the 18 cents per litre fuel rebate is shown in Table 6

Table 6: Revenue impact of the 18 cent per litre rebate on fuel for buses

Year	*FJD*
2003	2,606,000
2004	2,554,000
2005	2,735,000
2006	5,465,000
2007	3,307,000
2008 (estimate)	5,528,000

Source: FIRCA and consultants' estimates (rounded)

The revenue impacts (lost revenue to the Government) of the existing concessions are set out in Table 7. The figures for the fuel rebate in 2006 and 2007 in Table 7 appear inconsistent and so we have used the estimated figure for 2008 as the basis for calculations.

Table 7: Revenue impact of Government concessions to the bus industry (FJD)

Concession	*2006*	*2007*	*2008*	
			Jan to May (FIRCA)	*All 2008 (estimates)*
Fuel Rebate	5,465,000	3,307,000	2,614,000	5,528,000
Tyre Rebate	156,000	88,000	26,000	26,000
Total Rebate	**5,621,000**	**3,395,000**	**2,640,000**	**5,554,000**
Bus grant 20/10/5c	2,500,000	2,880,000	67,000 [(1)]	67,000 [(1)]
Total	**8,121,000**	**6,275,000**	**2,707,000**	**5,621,000**

Source: FIRCA and consultants' estimates (rounded). [(1)] Full cost of bus grant in 2008

VAT is charged on bus fares (output tax) and on a range of items that fall under operators' expenditure headings (input tax). In their VAT returns, operators deduct their input VAT from the output VAT they have charged, and submit the net VAT due to the Government. For 2007, it is estimated that the gross VAT from bus fares was around FJD 6.5 million.

4.2. Concessionary fares

4.2.1. School children

There is no legal requirement for buses to carry the young or old people at lower than full fares, although the LTA Act does state that babes in arms may be carried free. Agreements for concessionary fares have been made as Memoranda of Understanding between the Government and the FBOA.

The agreement that bus operators should carry school students at 50% of the adult fare was agreed in return for buses being exempt from the fiscal duty on fuel. This was introduced at 9% and later increased to 18%. Bus operators have never paid this duty, and hence the grant (in the form of a rebate on fuel purchased), never represented an increase in income, merely the avoidance of an increase in operating costs.

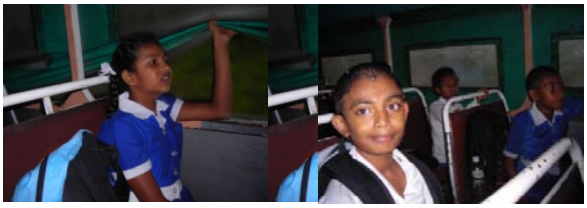


Figure 14: Passengers on a school bus route

Table 37 (on page 93 in Appendix Section 14) provides a list of the 66 bus companies that operate 198 RRLs and 136 school routes. From this table it is clear that 24 of the 66 companies do not operate any school routes. These still benefit from not having to pay fiscal duty on fuel. Of those companies who do operate school services, there are severe imbalances in the number of services each company runs, compared to their overall portfolio of routes. The Consultants have performed calculations that reveal that, for companies running many school routes, the rebate on fuel is more than outweighed by the loss in full fare revenue from school students. The companies with many school routes that are most likely to be adversely suffering as a result of the imbalances are Citiline, Dawasamu, Dee Cees, Empire, George and Nakasi. Major beneficiaries are Pacific and Sunbeam.

As a grant for carrying school students at half fare, the fiscal duty rebate is highly unfocussed. We recommend that the Government scrap the system, and bring in explicit payments to operators required to carry school students. Government may then set the fare level for school students at any level it wishes (eg, free-of-charge), and simply pay bus companies the gross operating cost for school services (through competitive charter-type contracts for school routes and agreed payments for school pupils carried on normal routes.)

4.2.2. Senior citizens and disabled

In March 2006, the Government introduced a 20 cent rebate on fuel, in return for operators carrying senior citizens (over 65 years) and the disabled (loosely defined) at 50% of full fare. This was later reduced to 10 cents, and then to 5 cents. In March 2008, the Government terminated the agreement. Most operators responded by charging senior citizens full fare. The Consultants consider such a response was inappropriate. The additional income generated was likely to have been minimal compared to the poor public relations that the move generated. Aside from that, operators are driving customers to cheaper forms of transport.

The Consultants consider that the Government does have a responsibility to develop a policy for the costs of transport of the elderly and the disabled. This should result in transparent and targeted payments to bus companies for the social services performed. In the meantime, the bus companies can also assist, not as a legal obligation, but as a good will-gesture to their customers and their families by providing transport for the elderly and disabled at half fare. Bus operators should then, from ticket sales, assess the level of losses incurred through this, and present this to Government as a single coherent package. The cost to the Government of providing concessionary fares to the elderly is likely to very small.

4.2.3. Subsidies

In July 2008 the Government determined that bus operators be granted a subsidy amounting to 21.9% of turnover. This was agreed in order to recompense the industry for the high fuel price and to prevent the requested fare rise.

The subsidy was terminated at the end of December 2008. The estimated turnover of the industry in 2008 is FJD 63.8 million. Therefore, the total value of the subsidy for the period July to December 2008 is estimated to be FJD 7.0 million, provided it was fully paid.

4.2.4. Subsidy and concession issues

The main issues facing the bus industry are revenue losses from school and rural routes, and the inability to renew the fleet on a sustainable basis. If targeted subsidies are found to pay for the loss making services on social and economic grounds, then remaining services should make a reasonable profit that will allow some re-investment in new buses. If Government wishes to encourage this further, then concessions in the form of lower duties are entirely appropriate, and practised in many countries.

4.3. Concessions, subsidies and financial losses

4.3.1. Losses on school routes

The losses from school route can be described in two ways:

- the loss incurred because pupils pay half rather than full fare, or
- the opportunity income derived from operating the school bus on a full-fare-paying route for the period it is engaged on school duties.

The result is the same because the fares lost from school students equal the amount that could be gained from carrying the same number of passengers at full fare. We examined a sample of school routes and found that the annual losses per school bus per km operated, due to half fares are in the range FJD 200-220. The annual losses to the industry as a whole are in the range FJD 1.1 million to FJD 1.3 million depending on the length of school routes, with a central value of around FJD 1.2 million.

4.3.2. Losses on rural routes

Table 8 lists examples of loss making routes in Fiji with some of the suggested reasons for their lack of profitability. The losses from unprofitable rural routes are derived from estimates of actual costs and revenues on sample routes. The annual loss identified from the sample routes is around FJD 368,000 per route per year. It is therefore estimated that the total losses to the industry of the 22 routes identified in Table 8 are of the order of FJD 8.1 million.

Table 8: Examples of some loss-making routes in Fiji

Operator	*RRL*	*Origin*	*Destination*	*Likely reasons*
Citiline	12/6/02	Suva	Rewa St	Abstraction by taxis, population decline
Citiline	12/6/02	Suva	Raiwaqa	Abstraction by taxis, population decline
Central	12/6/8	Suva	Toorak	Abstraction by taxis
Flying Prince	12/1/3	Vaileka	Burelevu	Abstraction by carriers, poor road condition
Estol	12/7/60	Noco	Nausori	Abstraction by illegal minibuses, poor roads
Waiqele	12/23/96	Labasa	Batinikama	Abstraction by illegal carriers, poor roads
Waiqele	12/23/5	Labasa	Coqoru	Abstraction by illegal carriers, poor roads
Island	12/7/3	Suva	Nausori	Abstraction by minibuses
Lautoka	12/15/5	Ba	Visaru	Low loading, poor road conditions
Lautoka	12/16/20	Ba	Lautoka	Low loading, poor road conditions
Sunbeam	12/9/5	Suva	Vatukoula	Low loadings
Dee Cees	12/7/25	Suva	Baulevu	Poor roads, abstraction from illegal transport
Dee Cees	12/7/25	Lakena	Nausori	Poor roads, abstraction from illegal transport
Tacirua	12/7/99	Naqelewai	Suva	Poor roads, abstraction from illegal carriers
Tacirua	12/7/99	Lomaivuna	Suva	Poor roads, abstraction from illegal carriers
Tacirua	12/7/99	Vatukarasa	Suva	Poor roads, abstraction from illegal carriers
M R Khan	12/8/16	Wailoko	Lautoka	Farmers moved out
M R Khan	12/8/16	Waimalise	Nadi	Farmers moved out
Parmod	12/23/7	Labasa	Nasolo/ Vatubogi	Out-migration, poor roads, abstraction from illegal operators
Parmod	12/23/50	Labasa	Visoqo/ Navetau	Out-migration, poor roads, abstraction from illegal operators
Parmod	12/23/20	Labasa	Nasawani/ Nasarwaqa	Out-migration, poor roads, abstraction from illegal operators
Shore Buses	12/16/14	Suva	Delainavesi	Low loadings, off-peak frequency too high, poor roads

Options for reducing bus operating costs on the above economic routes include:

- **Improved road maintenance.** Continued lack of appropriate maintenance on the unpaved rural road network is adversely affect bus operations. It is also leading to reduced accessibility in rural areas. Even carriers and other vehicles may find some roads impassable in the future if this situation continues.
- **Enforce regulations on illegal passenger services**. Many bus routes are facing competition from illegal operators (carriers and/or minibuses without route licenses) poaching waiting passengers from the bus stops.
- **Reduce off-peak frequencies.** In a few cases, the overall losses are mainly due to low loads on the off-peak runs. Reducing the number of off-peak runs could bring the route back into profitability, although savings may prove relatively small.
- **Change operating vehicles**. If loading levels are low, it may be possible to withdraw large buses in favour of vehicles with lower operating costs (such as midibuses, minibuses or carriers). The fares should be regulated at the same level as bus fares to ensure passengers are not adversely affected financially.
- **Develop hub and spoke systems.** Use large buses on main routes with linking feeder services (possibly carriers) operating on the more remote stretches. This is discussed in Section 6.2.1.

4.3.3. Comparison of concessions, subsidies and losses in 2008

In 2008, the bus industry received the fuel rebate and the subsidy concessions as shown in Table 9.

Table 9: Estimated Government support to the bus industry in 2008

Support	*FJD million*
Fuel rebate	5.5
Subsidy	7.0
Total	**12.5**

Table 10 shows the estimated value of losses in 2008 and the impact of the concessions on this. This shows that the fuel rebate more than compensated for losses incurred on school routes. Even though the

subsidy was insufficient to cover losses on rural routes, overall the bus industry marginally benefited from the Government concessions in 2008. The figures in Table 10 are based on the assumptions that the fuel rebate estimates are correct and the subsidy figure was paid in full to the bus operators.

Table 10: Comparison of losses and concessions in 2008

Routes	*Losses (FJD millions)*	*Concession/Subsidy (FJD millions)*	*Difference (FJD millions)*
School routes	3.5	5.5	2.0
Rural routes	8.1	7.0	-1.1
Total	**11.6**	**12.5**	**0.9**

4.4. Financial health of the industry

4.4.1. Bus operating costs

Table 3 and Table 11 show that average bus operating costs rose from FJD 51,000 to FJD 60,000 per year in the period 2005 to 2008. The average masks wide variations (FJD 35,000-65,000), mainly associated with the type of service.

Rural services cost more to operate, due to the greater fuel use, and excessive wear on tyres and other parts (springs, clutches, gearboxes, etc) due to poor road conditions. Urban and suburban services have relatively high operating costs due to close proximity of bus stops and the desire of passengers to be picked and set down between bus stops. The practice of stopping and restarting between bus stops increases fuel use and it causes wear on clutches and gearboxes. There is no evidence to suggest that operating costs for school services differ from other bus services operating in the area.

The lowest operating costs are found on longer inter-urban and express routes, where stops are fewer and road conditions tend to be better.

Operating costs for 2008 were exceptionally high due to the fuel price. On average fuel was 25% more expensive in 2008, than in 2007. This increased operating costs by about 9% over the same period, making the cost range FJD 38,000 to FJD 65,000 annually.

Annual incomes per bus for the same period were in the range FJD 41,000 to FJD 62,000 depending on type of service run. Fares rose in March 2008, giving a potential 8% growth in income for the year. Annual bus incomes should have been in the range FJD 44,000 to FJD 67,000. However, there was some passenger resistance to the fare rise, and the average income was FJD 59,000 per bus.

Table 11: Average income, costs and profit per bus 2005 to 2008 (excluding subsidy)

Year	*Income per bus (FJD)*	*Operating cost per bus (FJD)*	*Profit per bus (FJD)*
2005	52,294	51,371	923
2006	57,223	56,396	827
2007	57,579	56,294	1,285
2008 (estimated)	58,946	60,334	-1,388

Table 11 summarises the average operating cost, income and profit per bus in the past four years. This shows that the overall profitability of the industry has not been great and has been declining. Profit levels have been reducing over the last three years and few operators are making a return on turnover of more than 10%. At such levels of returns, operators are reluctant to invest in new vehicles. In 2008, the industry as a whole became loss-making with many operators making losses or very small profits. Some operators who had recently invested in new vehicles were struggling to make interest repayments from their small profit levels. This situation was confirmed by the operators and the Fiji Development Bank.

The industry losses for 2008 will be seen in the company returns. Total losses (excluding the subsidy) are expected to be in order the order of FJD 1.5 million. This underlines the validity and importance of the 2008 subsidy, given the situation at the time.

4.4.2. Effectiveness of subsidies

In July 2008, the Government determined to provide bus companies with a subsidy of 21.9% of turnover to help the industry deal with the high fuel cost. This removed pressure for an increase in fares. The

subsidy grants were contingent on audited accounts being supplied to the LTA. Not all bus companies applied for the grant. If the grant had been given to all bus companies for the period July to December 2008, the total value would have been around FJD 7.0 million, or about FJD 6500 per bus. This injection should significantly alter the financial shape of the industry, allowing for both profit taking and fleet renewal. However, it appears that the monthly grants were being paid some three to four months in arrears. This has not helped operators, some of whom have needed to reschedule their loan repayments.

Blanket subsidies are generally not good for the public transport industry. They encourage inefficiency and can mask irregularities, such as fraud. Once bus services are subsidised, there is a danger that if fare levels do not keep pace with increases in operating costs, then the subsidy requirements will increase.

Once a Government has operated a subsidy system for some time, it is hard to stop it. This is because of the resulting national shock, either through sudden changes in fares or the impact on the structure of the industry due to inadequate investment. Conventional wisdom suggests that if a subsidy is removed, operators will be forced to reduce expenditure. Fleet maintenance and replacement will begin to suffer almost immediately. Vehicle availability and service reliability will inevitably deteriorate, and the level of service will fall. This leaves a shortfall in the supply, which other providers (including minibuses and carriers) will try to exploit, usually at a lower level of service (often without insurance or safety standards). When bus services are withdrawn, the alternative providers may then exploit their new monopoly position, through higher fares.

Table 12 summarises the Consultants' evaluation of various concession options. The Consultants recommended that the 21.9% bus subsidy be ended on 31 December 2008, as had been envisaged. In January 2009 the diesel fuel price dropped to about FJD 1.70 per litre. This should result in a 5% decrease in average operating costs.

Table 12: Summary of some concession options and their evaluation

Type of concession	*Evaluation*
Providing general or targeted concessions/subsidies to the bus industry	General subsidies promote inefficiency and waste Targeted subsidies for school routes and unprofitable routes under tendered arrangements are appropriate
Short-term intervention subsidies (2008 model for subsidy of bus operations)	Short-term (6 months) subsidy proved extremely valuable to industry. Allowed for losses to be avoided and potential investment in fleet renewal
Long-term Government subsidies (2008 model for subsidy of bus operations)	Long-term use of subsidy to be avoided.

4.4.3. Possible abuse of subsidies

There is no evidence that subsidies are substantially abused. However, there is always potential for abuse of blanket subsidies, which is another reason not to use them. The main potential for abuse of the fuel rebate occurs if a bus company is part of a wider transport operation. Owners could make claims for rebates based on fuel consumed by vehicles other than buses. If this were to occur, the abuse is likely to be marginal. If it were to be significant, it should be easy to spot by comparing operators' returns.

The bus operators' subsidy (BOS) was subject to audited accounts being presented. We have examined the accounts of all the operators who submitted them in pursuit of the subsidy. Although there are differences in the way that accounts are presented, the overall reports present a fair picture of the industry. Of course, accountants may present information in ways that present a pessimistic result, or inflate turnover, but we doubt that this is occurring in any systematic way. However, it is a good reason for not continuing with this kind of subsidy.

4.5. Options for fare structure and subsidies

4.5.1. Assumptions

The current world oil price is USD 70 per barrel (October 2009). The general world economic prognosis suggests fuel prices will remain fairly stable with a gradually increasing price. It has therefore been assumed that the average oil price in 2009 will be around USD 70 per barrel. Fuel prices in Fiji are now linked by a formula to world oil prices at the prevailing exchange rates with a lag of about two months. In our financial models, we have assumed that the average price of diesel in Fiji for 2009 will be FJD 1.57 in Viti Levu. The prices of spare parts and tyres are assumed to rise by 25% over the year,

reflecting the facts that these are nearly all imported and there has been a 20% devaluation of the Fiji Dollar. The price of new buses is assumed to rise by 20%. The estimated financial position of the bus industry for 2009 is summarised Table 13.

Table 13: Estimated financial position of the bus industry in 2009

	Overall estimates for industry (FJD million)	*Industry-wide estimate per bus (FJD)*	*Required for fleet renewal (FJD million)*	*Required per bus for fleet renewal (FJD)*
Income	60.6	56,000	70.9	65,500
Expenditure	64.3	59,500	64.3	59,500
Profit	**-3.7**	**-3,500**	**6.6**	**6,000**

The overall industry-wide estimates in Table 13 have included a small write-down for depreciation, at a similar rate to that of 2008. This means that the industry may make a small cash profit, but this would turn into a loss if fleet renewal was even at the low rate of 2008 (which was only about 20% of the level required for long-term fleet renewal). On the basis of these estimates, the industry would stagger on with an increasingly aging fleet. There would be a real risk of the industry entering a serious downward spiral with an aging fleet, financial and service decline and customer dissatisfaction with reductions in passengers and bus company income and deteriorating bus quality and safety.

This would be unacceptable for all stakeholders. We therefore recommend that the Government intervenes to assist the industry to provide the level of service it requires at fare levels it considers affordable. The columns in Table 13 that mention fleet renewal have a higher depreciation level estimated to allow for a reasonable rate of bus replacement based on a 20-year bus life. For this, the bus industry requires an additional FJD 10.5 million for the year to be sustainable. This would have to come from higher fares, reduced fraud losses and/or some forms of concession.

Options for economic models for possible interventions are presented below. The economic models have been developed with the objective of making the industry sustainable. For this objective to be met the overall average income per bus will have to increase in order to:

- avoid of financial loss
- allow sufficient profit/depreciation for fleet renewal.

The existing losses could most easily be offset by one or more of the following:

- Fare increases
- General subsidy (not recommended)
- Targeted subsidies
- Changes to VAT
- Reductions in fraud.

In the following models fleet renewal is based on a 20-year bus life, in order to reduce the average bus age, improve bus quality and modernise the industry. Therefore, an allowance for depreciation of FJD 6.4 million has been made which was broadly similar to the estimated figure for 2008. This is insufficient for the full fleet replacement target, and additional funds for fleet renewal will have to come from profits or payments for loss making routes.

4.5.2. Economic model options

Based on the present financial situation (Table 13) and the need for profitability and fleet renewal, it has been assumed that the value of the total intervention in 2009 should be FJD 10.5 million, to deal with losses from rural routes and school children, and to allow for fleet renewal. Among the main options for achieving this level of intervention are:

- Modest fare increases
- Targeted payments/concessions for school routes
- Targeted subsidies for loss-making rural routes
- Possible changes to VAT charges
- Fraud reduction
- Increase patronage and revenue through innovative ticketing.

The envisaged economic impact on the bus industry of these options is illustrated in Table 14.

Table 14: Summary of potential interventions in 2009

Option	*Intervention*	*Scale of intervention*	*Impact on revenue (FJD million)* (1)
1	Fare rise	10 cents on each bus ticket	2.4
2	Maintain fuel subsidy	18 cents per litre	5.5
3	Explicit payment for school student concessionary fares	Full repayment	3.3
4	Explicit payment for loss-making rural routes	Full repayment	8.1
5	Remove VAT from bus fares	Full rebate	6.5
6a	Reduce fraud	Reduce by 30% in first year	1.1 (2)
6b	Reduce fraud	Reduce by 50% in first year	1.8 (3)
7	Innovative ticketing	20% passengers on pre-paid tickets	0.0 (4)

(1) Scenario based on diesel at FJD 1.57 per litre
(2) Full year effect, based on 30% reduction: takes into account need for expenditure such as ticket machines
(3) Full year effect, based on 50% reduction: takes into account need for expenditure such as ticket machines
(4) Full year effect in early years; includes capital expenditure; can result in reductions in operating costs and fraud

In Table 14, options 2 and 3 can be considered mutually exclusive (the fuel subsidy would be retained or it would be replaced by an explicit subsidy for school children). Option 4 (general small fare increase) may not be popular in the current economic climate in Fiji. However, customers are likely to accept this and, as discussed in Section 3.4.3, the Consultants believe this should be considered a serious option. It is difficult to predict the impact of the campaign to reduce fraud, but estimates have been given for reductions by 30% and by 50%.

Table 15 groups the various options given in Table 14 into possible strategies for intervention.

Table 15: Values of different financial strategies for the bus industry

Intervention options	*Financial value of strategy (FJD million)*				
	1	*2*	*3*	*4*	*5*
1 Fare rise	-			2.4	
2 Maintain fuel subsidy	5.5	-	-	5.5	-
3 Payment for concessionary fares	-	3.3	3.3	-	3.3
4 Payment for rural routes	3.2	5.4	6.1	1.5	
5 VAT on bus fares reduced to 0%	-	-	-	-	6.5
6,7 Reduce fraud and innovate ticketing	1.8	1.8	1.1	1.1	1.7
Total value of strategy	**10.5**	**10.5**	**10.5**	**10.5**	**10.5**

In order to ensure there is a sustainable bus system that meets the needs of passengers, we recommend that measures are taken in line with the strategies proposed in Table 15, bearing in mind that other combinations of interventions would be possible and could be discussed within Government and the bus industry. In all models it is assumed that bus fares should rise in line with the indices in an agreed cost-index model. Annual price adjustments would be assumed, unless price indices increased or decreased more than the agreed margins. In Table 15 the different estimates for reduction in fraud are illustrative and the actual amounts saved are not likely to depend on which strategy is selected.

Strategy 5 involves bus fares being zero-rated for VAT while maintaining existing fares to passengers. In the short term, this should remove the need for any additional subsidies or concessions to the industry as a whole. Zero rates of VAT apply to public transport in many countries, including the UK. Furthermore, competition would be made fairer as competing minibuses and carriers do not charge VAT.

However, under Strategy 5 operators would be asked to continue to cross-subsidise loss-making rural routes with other profitable routes. This requirement is not conducive to a clear and transparent strategy (even though some existing operators would be happy to continue with the present system). Furthermore, in Strategy 5, the zero-rating for VAT of bus fares across the industry would benefit all operators but would not address the special financial problems faced by operators with more than the average number of rural routes (including operators in Vanua Levu). To address this issue, there would need to be some redistribution of resources between operators. One variation that could be further considered would be to zero-rate VAT only for rural routes, if this were practicable. This partial reduction in VAT would have to be complemented by another intervention, such as a fare rise. An alternative approach would be to

hypothecate the revenue from VAT on bus fares and to use this VAT amount to subsidise the loss making routes. In such a scenario VAT would be applied as normal, and the bus industry would submit it to the Government as usual. However, the Government would use this revenue to subsidise socially necessary rural services and so the VAT revenue would come back to the industry.

Strategy 2 is the recommended long-term option. Under this, subsidies would be abolished and the Government would pay operators to provide socially desirable routes under a tendering system. However, it is recognised that it will take time for such a tendering system to be planned and implemented. Therefore, for the short term, Strategies 1 and 4 are more likely to be appropriate.

Strategy 1 (no fare increase) and Strategy 4 (10 cents a ticket increase) could be implemented speedily, with the existing fuel rebate continuing. As noted in Section 3.4.3, the Consultants support the idea of a fare increase (Strategy 4). However, under both these strategies it is essential that the Government commits to provide funds for supporting loss-making rural routes. It should be prepared to commit FJD 1.5 to 3.7 million (the final figure depending on fare increases, fuel rebate value, fraud reduction and the processes of rural route support or tendering). If the Government does not agree to support rural routes, there is a very real possibility that some bus routes will be withdrawn and the public will suffer.

At the time of finalising this report (October 2009), the operators would have already sustained most of the FJD 3.7 million loss for 2009 predicted in Table 13. There may need to be further action to deal with these losses.

4.5.3. Tendering options

If there are to be targeted subsidies on school routes and rural routes (and also if there is to be a redistribution system within the bus industry) there would be advantages of establishing net-cost tendering for school and loss-making rural routes. The operators would bid for rural routes on a least subsidy basis, keeping the bus fare revenue and therefore taking the revenue risk. This would give the opportunity for the tendering authority to specify all the conditions of the operation in the public interest, including, for example, fare levels. This means that individual fare levels could be set for each route, or RRL, to reflect the varying abilities of passengers to pay, across the country. For example, fares could be lower on Vanua Levu, where the economy is weaker and passengers' disposable income is lower.

A possible problem with the tendering process is that there might be few bidders. It is conceivable that there would be a single bidder in some circumstances, simply because the incumbent has the key benefit of depot location. There is also a risk of collusion.

A tendering process would take some time to establish, whereas there is an immediate need for subsidies to rural routes and to school bus operators. In this case we recommend an 'offer' based system in the short-term. Under this process the following steps would be taken:

1. The tendering authority makes a calculation of the gross cost of operating a required service, along with the expected revenue. Gross costs include all the items, including depreciation, listed in Table 38 (page 94). The authority calculates the expected subsidy required. If the operating period is more than one year (as it should be) then the authority may allow for cost escalations.
2. The authority provides an 'offer' to the incumbent operator on the basis of the above calculation.
3. The operator has one week in which to accept the offer or make a counter offer, with justifications
4. The authority may accept the counter offer if it is considered reasonable.
5. If the authority does not accept the counter offer, it may publish a revised offer, which should not exceed the operators counter offer, in national newspapers. Any operator can then bid at or below the revised offer price to run the route. The lowest acceptable bid wins.

4.6. Options for improving industry profitability

4.6.1. Rerouting options

Bus routes in Fiji are well established and meet passenger needs very well. Adequate systems exist for modifying routes to improve the public service. In section 6.2.1 examples are given of how some rural routes might be improved by developing rural transport hubs. Given a choice of service, the vast majority of passengers opt for having a bus route. When a timetabled bus route exists, it provides an attractive opportunity for other forms of transport to compete, particularly at times just before a

timetabled movement, when passengers are waiting. Illegal carriers are the chief exponents of this kind of competition. If a bus service is withdrawn due to illegal competition making it unviable, experience shows that carriers withdraw from the route, leaving passengers stranded.

4.6.2. Removing illegal competition

One extremely important measure needed to improve the financial state of the bus industry, and sustain the best service for passengers, is to enforce the regulations to prevent illegal carrier and minibus operations. As described in Section 3.8.3, the LTA has demonstrated that it is possible to reduce or eliminate illegal operations, if there is a determination to do so. The consultants strongly recommend that the LTA acts in a consistent and determined manner, and takes illegal operators off the road (revocation of licenses for six months) so that everyone learns to respect the law in this regard. This crucial recommendation is also included in Section 5.5.3.

4.6.3. Other options

We recommend that operators take the following measures to improve the attractiveness and financial health of their operations:

- Introduce ticket machines, that automatically record passengers and revenue and automatically issue tickets;
- Move to pre-paid weekly travel cards valid across a geographical range of operators
- Take steps to improve the interior environment of buses
- Move towards two rows of two-seats on appropriate services
- Introduce computerised revenue protection and maintenance regimes
- Work with the proposed Public Transport Improvement Board to promote self-regulation.

5. Inefficiencies in the Bus Industry

5.1. Driver fraud

Fraud by bus drivers and checkers is the single biggest financial loss being suffered by the industry today. We estimate that the loss to the industry, if all drivers are involved (see box) is worth around 9% of total revenue. More conservatively we calculate the losses to be of the order of FJD 2.7million to FJD 4.5 million per year.

Figure 15: Bus notice that warns passengers of the need to be in possession of a valid ticket

Operators are aware of the problem, but have been unable to make an appropriate response. In a recent initiative supported by the FBOA, the LTA and the Consumer Council of Fiji, passengers have been encouraged to demand a ticket as a receipt for the fare paid. Posters in buses (see Figure 15) made it clear that the onus was on the passenger to demand a ticket, and that they were liable for a spot fine of FJD 50 or a maximum fine of FJD 500 if they did not have a valid ticket. To date this campaign has had little effect, mainly because there has been no attempt at enforcement. Most paying passengers would not risk a FJD 50 fine, if they thought there was a real risk of their being fined for lack of a ticket.

The bus operators argue that since holding a ticket is a legal requirement, it is for the LTA to enforce this on passengers. Whilst this may be true, the operators appear to be ducking their own responsibilities. Operators have a moral duty to protect their revenue, when it is the public's money. This is reinforced when operators are receiving a direct Government subsidy. Indeed, the order of magnitude of the fraud is similar to the level of subsidy. It could be argued that the Government subsidy is going directly into the pockets of drivers.

Most passengers still do not demand a ticket and most drivers still do not issue one without being asked. Our survey revealed that only 10% of paying passengers received a ticket. The Consultants often travelled by buses but did not feel any pubic pressure to ask for a ticket (and drivers seldom offered them).

Bus driver fraud

Simple theft
The driver does not issue tickets to all passengers. This is extremely common (the Consultants observed drivers who issued no tickets at all, despite the clear LTA warning notice on the windscreen). Without a full record of cash taken, the driver can destroy some tickets, and pocket the equivalent cash. He has to be careful because owners use checkers and know roughly how much cash to expect. However, drivers can easily steal 5% of revenue without arousing suspicions. If they take any more, games of 'give and take' are likely to be played between the drivers and the owners.

Peer pressure
Bus driver fraud is most effective (and difficult to eliminate) when all drivers are involved. When all drivers are fraudulent, it is hard for the employer to pick out examples of good practice. Peer pressure on new drivers (together with financial incentives) ensures that they rapidly become part of the system, or risk being ostracised.

Trusties
Employers often identify drivers whom they think they can trust and use their cash returns as a benchmark. But trusties are almost always part of the driver network. They will reduce their cash returns to protect other drivers, but not so much as to affect their trusted status. When they know checks are on, for a few days drivers may meet the new benchmark, then things go back to normal.

Colluding with the checker
When the checker enters the bus he makes a note of the top remaining ticket numbers. He then deliberately under-records the number of passengers on the bus. The driver can later destroy tickets to the value of the under-counting. Drivers usually pay around FJD 1 for each favour like this. Checkers can make FJD 10 to FJD 15 extra per day. Drivers can make more.

Beating the checker
Just before departing the terminus, the checkers notes remaining tickets numbers and correctly records the number of passengers. When the checker leaves, the driver slowly departs the stand, preferably a few minutes before the timetabled departure time. The driver then runs very slowly out of the terminus, slowing or stopping wherever possible. He knows that passengers for his bus will still be arriving and will see the departing bus and board after the checker has left. If the driver does not issue tickets to those additional passengers he can pocket the cash. In just a few minutes a driver can easily make FJD 10.

Sack me then
Driving buses in Fiji is not easy, and there is a constant shortage of drivers. Even qualified PSV drivers have to be specially trained by bus operators. Any driver sacked for fraud will easily find a job with another bus company. There, he can pass on his tricks, or learn new ones. Or both….

In some countries passengers have been convinced that it is in their interests to help enforce good driving practices. In Kenya, in a controlled experiment, notices were put up in some minibuses telling people to shout out if the driver started to speed or to drive dangerously. This worked and driver behaviour improved so much that it could be detected in the national accident records and insurance claims, with the campaign drivers having significantly better average records (Habyarimana and Jack, 2009). The lesson is that passengers can influence good driver behaviour if they are educated through a poster campaign into believing it is in their interests and it is there responsibility to shout out. Clearly the Kenyan and Fijian cultural contexts are very different and the LTA-FBOA poster campaign has not yet worked or motivated people. Nevertheless, it seems worth arranging a pilot scheme in Fiji to try to encourage people on buses to shout out if the driver does not issue tickets. It is their money that is being 'stolen' and they should shout to improve driver practice.

A combined and enforced campaign appears to be needed and is recommended here in Section 6.3.1. This will need the cooperation of all parties FBOA, LTA, the drivers, the checkers and inspectors and the public. It will involve genuine enforcement with penalties and a public relations campaign to safeguard what is the passengers' money.

Revenue protection needs tamper-proof recording and ticket issuing equipment. Fiji seems to have stood still while other countries recognised this problem years ago. All bus drivers who handle cash are potentially susceptible to fraud, and the issue is common to all countries, irrespective of race or driver wages. Most countries have had to try a range of machines because not all proved infallible, tamper-

proof or socially appropriate. Countries that did evaluate ticket machines are now better able to protect revenue. Fiji can benefit from the experiences of these countries. Because Fiji is starting from such a low base, it must be understood that mistakes may be made on the way, but this should not deflect from the immediate need and the ultimate goal.

5.2. Bus operations

5.2.1. Fuel efficiency

Bus operations in Fiji tend not to be as fuel efficient as in those in some other countries. The measures contained in the recommendations of the Transport Tribunal of 2003 on fuel-saving have yet to be fully implemented. Fuel inefficiency is mainly due to a combination of factors including driver behaviour, fuel quality, road conditions and the age and the specifications of the engines. Some other factors that could reduce fuel efficiency including loading levels and traffic congestion are not major constraints in Fiji. The importance of road conditions was covered in Section 3.7. Engine type and fleet renewal options were discussed in Section 3.5. The issue of driver behaviour is discussed in Section 5.3.1.

5.2.2. Peaked services

Many routes, including so-called labour services, are highly peaked. There is a strong tidal effect of transport demand (surges inwards in the morning rush hour and surges outwards in the afternoon). This is particularly evident in Suva, but also affects transport services in smaller towns such as Lautoka and Labasa. To meet peak traffic demand, more passenger seats are required than are needed at other times of the day. This is the dilemma faced by public transport providers in cities around the world where peaks frequently lead to overcrowding in public transport (buses, minibuses, trams, trains). Passengers may have to accept less comfort and space. There is a strain on bus fleets to efficiently meet peak demand. This inevitably leads to over capacity at other times of the day and so some vehicles must be idle once the peak has passed. No bus operator who has invested in vehicles wishes them to be idle for much of the day. Such peaked routes may be profitable, but the overall investment in buses is skewed.

Two possible solutions to the problem of peaked routes may end up exacerbating the situation, and therefore should not be accepted lightly. Rather the solution needs to be planned carefully with the regulator, the urban authorities and the transport operators agreeing the most appropriate mix of transport options for peak and non-peak services.

One solution is to have large buses operating at peak times and smaller buses operating at other times. This was mentioned in the review's Terms of Reference in section E (i) (c) (2). The advantage of this option is that the operating costs for off-peak routes are more in line with the lower passenger volumes than running large buses throughout the day. The big disadvantage is that much more capital is required to pay for this system. Operators should be able to discuss off-peak frequencies with LTA with a view to agreeing an appropriate balance of social services (the needs of passengers and town at peak times) and their financial implications (investment in additional peak capacity and/or smaller off-peak vehicles).

A second potential solution to the problem of peaked services is to encourage other transport services (notably minibuses) to operate on the crowded bus routes at peak times. This appears to be beneficial for all at peak times, as the bus companies are able to meet the peak demand without extra investment. However, these minibuses now face the same problem of being idle for the rest of the day, and no transport operator wants to see their investment sitting idle. Therefore, whatever the regulations, the minibus operators will tend to look for transport markets during the non-peak times. This will inevitably lead to 'predation', with minibuses taking away some of the off-peak bus market. This will diminish the profitability of bus services, potentially putting the whole bus operation in jeopardy. The problems associated with this are discussed further in Section 6.5 and a proposal to review the competing and complementary transport services is provided in Section 8.

5.2.3. Overnight location of buses and drivers

Many rural bus services are essentially market runs, bringing passengers from the villages into Suva or other market towns. These services exhibit peaked characteristics, with a strong tidal flow of passengers towards the town in the morning and back to the villages in the afternoon. The transport demand in the opposite direction to the peak flow is minimal. This means that bus services start in the early morning in the villages and take passengers to the town, returning in the afternoon. On short routes, they may be able to make more than one journey in the morning and the afternoon, but the transport demand will be very skewed, with journeys running against the tide being almost empty. As noted in Section 5.2.2, this

problem of peaked services is one faced by the transport industry worldwide. The income gained on the peak service has to be sufficient to cover the operating costs of journeys of low demand.

In Fiji, there can be an additional inefficiency to that of unequal directional demand. If the buses have to start their rural services in the rural areas, it is logical that they should over night in the rural areas. This allows the first journey in the morning to start at the point of important transport demand and run into the town. Similarly the last journey of the day is also run in the direction of the major transport demand, ending up in the rural area. However, this means that there must be facilities in the rural area that allow the bus and the bus driver to overnight with security and comfort. Many bus companies find that this is not the case (in the opinion of themselves and/or their drivers). This means many rural buses, and their drivers, overnight in towns and drive to the rural areas in the morning (and almost empty run) and back in the evening (another almost empty run). This is clearly inefficient and the costs of these runs have to be recouped from the passenger fares.

Figure 16: Part of the Tacirua bus fleet: the buses are garaged at the depot

One reason for this particular operational inefficiency is associated with ethnicity and the perceived security situation (some bus operators are reluctant to park their valuable buses in villages overnight). Most bus drivers are Indo-Fijian and some claim that they do not feel comfortable staying in villages. They want to stay with their families in the town. The bus operators (also mostly Indo-Fijian) reported that they have been largely unsuccessful in their attempts to hire and retain responsible drivers who would be willing to stay in the villages. (Some companies have been able to hire drivers who are indigenous Fijians and some have found Indo-Fijian drivers willing to stay in the villages).

With existing rural bus routes, it would seem that costs of the 'empty' runs would provide the bus operators with incentives to find solutions to this problem (and some have done so). These include recruiting suitable drivers and providing appropriate incentives and facilities in the villages to ensure that the buses are secure and the drivers are satisfied.

There are also more profound ways of altering the situation, through the greater use of village-based transport services (carriers, minibuses, small buses or large buses). This is discussed in Section 6.2.1.

5.3. Driving practices

5.3.1. Drivers' standards and attitudes

Bus driving is not easy in Fiji. The topography, road conditions and passenger expectations place a high level of stress on the driver and high quality driving and behavioural skills are required. It is more stressful to drive a one-person bus operation, which is one reason why bus companies in many countries still employ conductors as well as drivers. In industrialised countries (such as Australia and UK) the drivers of one-person bus operations have the benefits of power steering and gearboxes requiring little mechanical effort.

The standards of bus driving in Fiji are generally safe. In many countries in Asia, including Sri Lanka, it is common to see buses overtaking dangerously and racing for business. Thankfully, this is not a feature of bus transport in Fiji. Passengers regard buses as safe (as reported in Section 7). Driving is not generally fuel-efficient. Drivers, routinely accelerate and brake quite sharply, even when routine stops are being made. The practice is exacerbated when passengers demand immediate pick up or set down. There is a general shortage of good drivers and a relatively high turnover as operators find it difficult to retain good drivers. The bus operators say that they have to invest significant time in training drivers, as newly qualified PSV licence holders in Fiji are not necessarily good drivers.

Passengers think that drivers are generally helpful and usually willing to pick up and set down wherever passengers request between bus stops. Only 1% of people surveyed suggested that bus drivers influenced their choice of bus transport, only 4% regarded it as a priority that bus driver quality needed to be improved, and only 6% said that they would be willing to pay for better driver attitudes (see Section 7).

The consultants found that all bus drivers interviewed were friendly and helpful. That being said, they do not see themselves as ambassadors for the bus industry. In most cases they simply take fares and drive the buses, without a welcoming greeting or friendly smile. This is something that the bus industry could improve in order to have better public relationships with their passengers.

5.3.2. Switching off engines at bus stations

In order to save fuel and reduce noise and pollution from fumes, it is good practice to switch off engines at bus stands. At Suva, and some other bus stations, there are clear signs indicating that engines should be switched off. However most bus drivers in Fiji do not switch off their engines. At Suva, this problem is partly a function of the bus station design. Drivers tend to park buses at pick up points, leaving engines running for long periods. Buses should only run into these stands to in order to pick up (in which circumstances it is perfectly legitimate to keep the engine running). The existing regulations on switching off engines should be more stringently enforced by Suva City Council and those managing the bus stations.

Figure 17: Suva bus station notice

5.4. Bus servicing and trained mechanics

5.4.1. Periodic maintenance checks

In general, buses are well maintained by the bus operators and (with a few notable exceptions) are roadworthy and safe. That being said there is the persistence problem of smoke emissions, which is a source of frustration to many passengers and other road users. This was discussed in Section 3.5.2.

Figure 18: Bus inspection and repair facilities at Lautoka General Transport

The quality of maintenance is dependant on the skills of mechanics and the equipment and tools available to them. Systems for monitoring maintenance vary. A few operators have moved to computer-based systems for planning and recording maintenance schedules. The Consultants view this as a good step forward as this will assist future planning and cost analyses. There is nothing intrinsically wrong with the traditional workshop system that involves chalk, blackboards and the institutional experience of the bus company. However, it will be more difficult to analyse lessons relating to fleet efficiency and service schedules if maintenance histories are not stored efficiently.

5.4.2. Servicing facilities and spare parts

Most operators have basic servicing facilities that include inspection pits and engine hoists. Operators that do not own hoists are not significantly disadvantaged as they can borrow or hire them at short notice. Many bus operators have some or all of their servicing facilities in uncovered facilities. This makes some of their operations weather dependant but for most of the year this is not a major constraint.

Nearly all bus fleets comprise a range of bus makes and models. This does not affect operational efficiency but does reduce the financial efficiency of the operations since bus operators have to carry a wider range of spare parts. Bus operators are aware that this means they have to tie up more capital in spare parts than would be the case if the fleets were all of the same type of vehicle. However, most of their purchasing decisions have been greatly influenced by other factors such as availability, purchase

cost and discounts, risk reduction and trying to source more efficient yet durable vehicles. The high cost of maintaining parallel sets of spare parts has been balanced by other perceived economic or technical advantages. All operators would be happy to reduce their fleet diversity if they could be sure of a bus type that was available, affordable, robust and efficient.

5.4.3. Qualified mechanical personnel

The ratio of mechanics to buses varies considerable between operators. From the data examined, the lowest was 0.10 mechanics per bus, while the highest was 0.64 mechanics per bus. This partly reflects the different ways that operators view mechanics. For example, one of the largest bus operators only recognised three of his staff as qualified mechanics, with the rest of the service team classified as servicing assistants. Many bus operators have drivers who also act as mechanics.

The bus operators face the serious problem of the general shortage of skilled mechanics in the country. Good mechanics are continually being lured to Australia and New Zealand by the much higher wage levels on offer there. As in other countries, wage levels offered by the bus industry to mechanics are not particularly high and it would not be realistic for the Fiji Bus Industry to match the salaries available abroad. Nevertheless, it is necessary for operators to consider options for attracting and retaining good mechanics. These could include loyalty bonuses and enhanced pension arrangements.

5.5. Options for reducing losses

5.5.1. Pre-paid ticketing

In order for bus operators in Fiji to begin to offer a more modern and better service for passengers, the Consultants recommend that a pre-paid ticket system should be introduced. The purpose of this is to allow passengers to pre-pay for a week's worth of travel irrespective of how many times they use buses. This could be restricted to a single operator, or many operators could individually introduce their own systems. To really benefit passengers, and hence attract passengers, the system has to be operated by a majority of the main operators. Thereafter, no operator can afford to be outside the system, and hence it would be country-wide, or island-wide, at the very least.

Under the system, passengers would be able to pre-purchase a week's worth of travel, up to three days before the week in question started. At first a fixed, calendar week is recommended for affordability reasons. The advantages of this are:

- Once the pre-paid ticket is purchased, passengers have far less need to carry small amounts of cash. If they lose the ticket, unlike cash, it can be replaced.
- Bus drivers will not have to deal with so much cash. This makes their job easier.
- Fraud is reduced
- Ticket printing costs are reduced
- Cash flow can be improved
- Cash manipulation is decreased
- Once a passenger purchases unlimited travel by bus, he/she is far less likely to make one-off trade-offs of bus versus taxi or bus versus minibus, because the bus fare is effectively now free.

The system, tentatively called *SaverSeven* is proposed as follows:

- Pre-paid ticket values are established based on aggregated fare stages, or zones. A typical weekly value could be 10 times the current average fare within a zone, or to/from zones. This means that any travel over and above 10 trips (say to/from work) would be effectively free, thus offering the passenger a major discount and incentive to purchase.
- The pre-paid ticket should contain two portions: a permanent identity card with name, photo and unique number, to prevent fraud; and a variable portion to be purchased for the amount of travel that the passenger requires. The permanent and variable portions are matched by having the unique number written on the card when the passenger purchases the pre-paid card.
- The passenger must always show both portions (cards) to the driver. Experience has shown that bus drivers can quickly spot that numbers do or do not match. This avoids the variable portions being handed to a second passenger to use on any bus.
- There needs to be an agency responsible for collecting the pre-paid fares, and allocating the funds to operators in proportion to the amount of travel used by these passengers on each operator's buses. This could be an existing agency, for example: LTA or the Fiji Bus Operators Association. A new institution is recommended for two reasons:

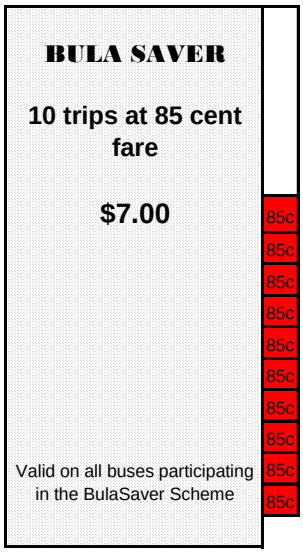
  - Independence from the regulatory authority and the operators, to whom it will apportion revenue;
  - The need to give an incentive to a new agency to be profitable, and hence sell as many tickets as possible. Profit can be used for advertising and the agency could be set up to be long-term profit re-investing.
- Revenue apportionment to operators can be made relatively simply. At the end of any given accounting period (one week, one month), bus operators should make a return to the new agency indicating the usage, by zone, of the pre-paid cards. The agency would then devise a system to allocate revenue to operators based on passenger usage (passenger trips, passenger km, or whatever is agreeable).
- Bus drivers will need to have way of recording passengers who show such cards. This leads naturally to the need for a ticket machine. However, a manual (pen and paper) system could be used, especially where operators already employ checkers/ticket issuers on buses. There is no particular disadvantage of a manual recording system, as all recording systems are potentially susceptible to fraud. However, a manual system requires very little or no capital outlay. The alternatives are:
  - A mechanical ticket machine (Almex A, or equivalent), where a button can be pressed that records *SaverSeven* usage. Mechanical machines can now be rarely used to under-record; only over recording is an issue (see below).
  - An electronic ticket machine would do the same job. Records are less likely to be able to be tampered with, and the added advantage is the level of sophistication that could later allow electronic stored valued tickets.
- Operators might be tempted to encourage drivers to over-record *SaverSeven* use in the hope of getting a larger share of the pool of pre-paid revenue. So long as all drivers cheat equally there is no benefit to anyone, as the pool is finite and the shares would remain the same (ie, it is equitable). The checking should come from the independent agency, which would be mandated to ensure proper revenue allocation. They would undertake surveys (no more than once per year) that would secure the basis for allocation. Spot checks would then be made to see if irregular variations on returns were valid or fraudulent.
- The key point is that once bus operators commit to an integrated ticketing system, there is a common interest for the bus industry. No one operator will ever benefit fraudulently because he will be caught. The long-term disadvantages of being excluded from the system far outweigh any short term cheating.

Ultimately a pre-paid ticketing system could be extended to other modes of transport that form part of the integrated network. This could include carriers and minibuses. Entry to the system would be contingent on adherence to the regulations, rules and norms of the integrated network, as well as the introduction of systems for recording passenger use. Such integration of transport modes will be a key topic for the proposed Public Transport Improvement Board (see Sections 6.6.2 and 9) and should be also considered by the proposed follow-on review of other transport modes (see Sections 6.5.6 and 8).

5.5.2. BulaSaver

The proposed ‘BulaSaver’ is a pre-paid ticket with 10 trips, all at the same fare, sold with an initial discount of 20%. The ticket is ‘dipped’ into a special machine (green, in the photo), which clips a trip off the ticket. The machine may also print a date and time on the ticket, so that it can be inspected.

BulaSavers can be developed for the most popular fare levels. For example, a BulaSaver for 10 trips of 50 cents should cost FJD 4.00. A ticket for ten 85-cent trips would cost FJD 7.00. The revenue apportionment would similar to the SaverSeven concept, from ticket machine records. Unlike SaverSeven, there is no driver involvement on the ticket machine with BulaSaver. The driver should just verify that all the passengers who do not tender cash, actually use the machine.



5.5.3. Regulations and enforcement

Revenue is being abstracted from the bus industry by other modes of transport. Some of the carriers and minibuses are legal, but many are illegal and/or acting illegally. Legally licensed carriers, minibuses and taxis may act illegally by taking passengers from bus stops and/or offering fares below the permitted or metered-fare. This indicates an over-supply in the transport market, driven by individuals looking for income sources because jobs are scarce. This problem is discussed further in Section 6.5.1.

The very high figure of 39% of passengers surveyed at Suva and Nausori bus stands admitted to using minibuses (legal and illegal) between Suva and Nausori. Whilst most bus services operating this route are not loss making, the loss in passengers to minibuses, means that the ability of operators to cross-subsidise loss-making routes is reduced, and these latter routes are thrown into sharper focus.

Legal minibuses routinely speed above 50 kph on the Suva-Nausori road. This enables them to make many trips per day, and increase revenue. Running above the speed limit is potentially dangerous, but fines imposed on minibuses are simply factored into operating costs. The issue is far too serious for regular fines. Consistent speeding should lead to a loss of license and permit to operate. As noted in Section 3.8.3, the sanction of loss of license can be extremely effective in changing behaviour, provided the authorities are consistent.

The existing regulations on illegal forms of transport should be fully and consistently enforced. LTA has the power to do this, and has demonstrated that determined and consistent enforcement can make illegal operators change their behaviour. While consistent enforcement would put pressure on the staffing and resources of the LTA, it is probably the most cost-effective intervention that the Government of Fiji could provide to sustain the bus industry.

6. Future directions for the bus industry

6.1. Cost models, fares, subsidies and concessions

6.1.1. Cost Index Models

The FBOA and LTA have agreed the formulae and inputs for a basic Cost Index Model for bus operations. The objective of the model is to find an agreed fare level which would provide operators with a profit level commensurate with a base year, in this case 2002. The cost inputs have risen since then, and hence, operators argue, fares should rise. The model gives a reasonably independent estimate of what that fare rise ought to be. The model seems robust when validated against actual operating costs for 2007. The model over-estimated costs for 2008, as shown in Table 16.

Table 16: Percentage increase in bus operating costs relative to 2005

Source of estimate	*2007*	*2008*
Cost Index Model estimate	9.6 %	31.3 %
Consultants estimates based on audited accounts	10.1 %	12.7 %

The Cost Index Model estimate for the increased operating costs in 2008 is higher than the actual figure because the Cost Index Model is based on reasonable input costs and not what was actually spent. As noted in Section 3.6.1, operators have tended to reduce expenditure on repairs to compensate for the fuel price rise. Had this reduction in expenditure been a result of efficiencies in repairs and maintenance, it could be concluded that this was a good thing. However, as the cost of spare parts has risen, it is clear that effective maintenance has been reduced. The bus operators are generally well-established companies with a long-term vision, and they would not normally reduce their maintenance costs unless they were experiencing serious cash-flow problems.

The Cost Model Index comparison shown in Table 16 illustrates that the use of the model does not by itself provide any impetus for greater efficiencies in operation. The use of a tendering model, with transparent bidding, would give better incentives to cost cutting and greater efficiency. This should be introduced for subsidised bus services. Once the tendering processes have been proved workable and effective for the subsidised bus routes in Fiji, the system could be gradually applied to all RRLs.

To illustrate the use of Cost Index Models, Table 17 shows the breakdown of bus operation costs and income for 2009. This assumes that sufficient government concessions were granted to allow investment in new vehicles, and that operators spent funds on fleet renewal.

Table 17: Composition of bus operation income and expenditure

Expenditure	*%*	*Income*	*%*
Fuel	38.8	Fares	88
Spares and repairs	10.4	Concessions	12
Tyres and tubes	2.9		
Wages and FNPF	17.8		
Depreciation /fleet renewal	16.9		
Interest and bank charges	6.4		
Other	6.8		
Total	**100.0**	**Total**	**100**

The components in Table 17 form the basis of the Cost Index Model, and allow for differential price changes to be applied to each, in order for an estimate of the change in fares to be made. Table 18 lists the sources of data to be used annually in the cost index model.

Table 18: Sources of data for use in the Cost Index Model

Item	*Value*	*Source*
Fuel	Average % change in pump price of diesel	PIB
Spares and repairs	% change in Consumer Price Index	PIB
Tyres and tubes	% change in price of sample tyre (to be agreed between LTA and FBOA)	FBOA/FIRCA
Wages and FNPF	% change in average wage levels	PIB
Depreciation and fleet renewal	% change in price of importing Hino chassis	FBOA/FIRCA
Interest and bank charges	% change in interest rate	Bank of Fiji
Other	% change in Consumer Price Index	PIB
Government concessions	% change in level of concessions	FIRCA

Table 19 gives an example of the use of the model. Under the assumed changes in costs, the cost index increases from 100 to 106. To increase income by the same ratio (100:106), a fare rise of 6.1% would be required, together with a 5% increase in concessions (Table 19). The scale of the fare rise would depend on the value of the Government concessions to the industry, with higher concessions reducing the size of fare increases, and vice versa.

Table 19: Example of use of the Cost Index Model

Expenditure	*Value Last Year*	*Change (%)*	*Value Current Year*	*Income*	*Value Last Year*	*Change (%)*	*Value Current Year*
Fuel	38.8	7.5	41.7	Fares	88.0	**6.1**	93.4
Spares and repairs	10.4	5.0	10.9	Concessions	12.0	5.0	12.6
Tyres and tubes	2.9	5.0	3.1				
Wages and FNPF	17.8	3.0	18.3				
Depreciation / fleet renewal	16.9	10.0	18.6				
Interest and bank charges	6.4	0.0	6.4				
Other	6.8	3.0	7.0				
Total	**100.0**		**106.0**	**Total**	**100.0**		**106.0**

The Consultants have argued that the LTA needs to develop operating cost models that are matched to the operating environment (see Section 3.6.2). With these, there could be small annual adjustments to fares, based on the real costs of operating in the prevailing environment. If very large changes in costs at the annual review (or between reviews) would trigger a fare rise that the Government deemed unacceptable, then the operating cost models could be used to determine the scale of intervention required to support the industry. This type of planning was illustrated in Section 4.5.2.

The Cost Index Models (existing and the operating environment approach recommended) can identify reasonable fare levels based on operating costs and the need for fleet renewal. However, the Government of Fiji has a record of using its powers to regulate fares in the public interest. It has emphasised the importance of the public's ability to pay and in past years it has agreed to provide subsidies to help meet

the operators' costs while keeping some fares lower than they would based on operators' costs or Cost Index Models.

If the Government is to continue to intervene to regulate fares based on the ability to pay rather than operating costs, then there will have to be a range of concessions and/or subsidies as has been discussed in Section 4.5. The Consultants recommend a transparent bidding mechanism as a better way of winning subsidies than simply using Cost Index Models.

6.1.2. Fares

We have recommended a 10 cent rise on each ticket, with immediate effect, in order to allow operators incomes to rise by an average of 4% to 5%. Our recommendation is that fares should then be held at these levels whilst the full range of complimentary initiatives discussed in Section 4.5 is implemented. These include addressing the issues of concessions for children and the elderly school routes and rural routes as well as reducing bus operating costs by improving the condition of road infrastructure.

As noted in 6.1.1, we recommend that LTA works with the FBOA to develop good cost index models based on different operating environments that could be used to justify subsequent fare increases.

The Government should clarify its policy on future bus fares. If it continues its position of intervention to keep bus fares low, it should make the necessary decisions on bus fare levels as part of its annual budgeting process, and allocate funds for the necessary subsidies and concessions. A soon as practicable, the levels of these subsidies should be determined through least cost gross-cost tendering, as noted in Section 6.1.3 below.

6.1.3. Subsidies and concessions

Concessionary fare levels should be determined by the Government. For dedicated school routes, we recommend that the Government should pay for these through a transparent bidding process.

The bus operators disagree with this, particularly on the issue of concessionary fares for school students, and they would like the fuel rebate to continue. In some ways, this is an easy option in that the status quo is retained. The bus operators are familiar with the fuel rebate that has been paid over several years. They do not have much faith that any alternative system would actually benefit them or that it would be paid in a reliable and timely way.

At present there is some debate over the total value of the fuel rebate. The 2007 figure is broadly in line with the losses incurred by the industry in carrying school students at half fare. However, if the 2008 estimate is correct, then the rebate exceeds these losses. Of course, there is no direct link between the fuel rebate and the losses, which argues all the more for a transparent concessionary payment. Payments for students carried on regular services can be made directly to individual operators on the basis of audited ticket returns. In order that operators' cash flow is not disadvantaged, and to avoid unreasonable administrative costs we recommend that this is done quarterly in arrears in a reliable and timely way.

We have noted that many rural routes are loss making, and this will continue and losses will be greater in areas where there is continued rural de-population. The other main factor that contributes towards losses is the condition of rural roads. The provision of affordable transport in such areas is vital for social and economic development. Where bus services cannot operate the alternative forms of transport are carriers and these are less reliable, less comfortable and less affordable (once bus services have stopped). The most economic response to this is to fully maintain rural roads. Expenditure on proper maintenance usually results in vehicle operating cost savings of *three times* the value of the investment. We strongly recommend sufficient and appropriate investment in rural roads as a means of maintaining bus services for the public good. While roads remain in poor condition the Government should provide a subsidy to rural bus operators. This can be done on the basis of least cost gross-cost tendering.

6.1.4. Fare structure

The current fare structure is 3 km per fare stage in urban areas and 2 km per stage in rural areas. This results in higher fares per km for rural bus passengers who are the least able to afford higher fares. The higher fare is intended to compensate the bus industry for the greater operating costs in rural areas. While this is important to maintain sustainable rural bus services, it would be better to reduce bus operating costs by properly maintaining rural roads (see Sections 3.7.3 and 6.1.3). If this can be achieved, it will be appropriate to rationalise the fare structure, to equalise fare increments in rural and

urban areas. An example of the proposed fare structure is shown in Figure 19. In this example, the first 18 km was designated an urban route and the subsequent distance was a rural route (under the existing system).

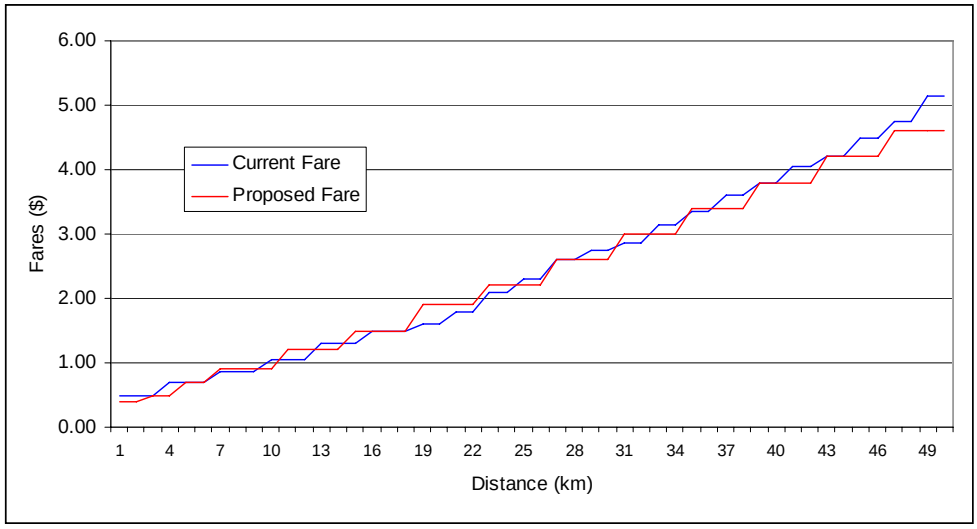


Figure 19: Current and proposed fares (excluding proposed increase)

A further example of the proposed fare structure is provided in Table 20. This is similar to the model given in Figure 19, but also shows the effects of the proposed 10-cent per ticket increase. As noted, this increase does not greatly change ticket prices, but would have a beneficial effect on the bus industry.

Table 20: Proposed fare structure

	Current fare	*Proposed fare*			*Current fare*	*Proposed fare*	
		No increase	*10c increase*			*No increase*	*10c increase*
km	*FJD*	*FJD*	*FJD*	*km*	*FJD*	*FJD*	*FJD*
1	0.50	0.40	0.50	26	2.30	2.20	2.30
2	0.50	0.40	0.50	27	2.60	2.60	2.70
3	0.50	0.50	0.60	28	2.60	2.60	2.70
4	0.70	0.50	0.60	29	2.75	2.60	2.70
5	0.70	0.70	0.80	30	2.75	2.60	2.70
6	0.70	0.70	0.80	31	2.85	3.00	3.10
7	0.85	0.90	1.00	32	2.85	3.00	3.10
8	0.85	0.90	1.00	33	3.15	3.00	3.10
9	0.85	0.90	1.00	34	3.15	3.00	3.10
10	1.05	0.90	1.00	35	3.35	3.40	3.50
11	1.05	1.20	1.30	36	3.35	3.40	3.50
12	1.05	1.20	1.30	37	3.60	3.40	3.50
13	1.30	1.20	1.30	38	3.60	3.40	3.50
14	1.30	1.20	1.30	39	3.80	3.80	3.90
15	1.30	1.50	1.60	40	3.80	3.80	3.90
16	1.50	1.50	1.60	41	4.05	3.80	3.90
17	1.50	1.50	1.60	42	4.05	3.80	3.90
18	1.50	1.50	1.60	43	4.20	4.20	4.30
19	1.60	1.90	2.00	44	4.20	4.20	4.30
20	1.60	1.90	2.00	45	4.50	4.20	4.30
21	1.80	1.90	2.00	46	4.50	4.20	4.30
22	1.80	1.90	2.00	47	4.75	4.60	4.70
23	2.10	2.20	2.30	48	4.75	4.60	4.70
24	2.10	2.20	2.30	49	5.15	4.60	4.70
25	2.30	2.20	2.30	50	5.15	4.60	4.70

In our proposal, most fare stages are extended to 4 km. Fares are rounded to the nearest 10 cents which helps passengers, drivers and operators. In the example shown, the number of fare stages would reduce

from 22 to 14. This simplifies the system, aids understanding, assists bus drivers and reduces the number of ticket types that have to be printed. For short trips, new stages of 0-2, 3-4, and 5-6 km are introduced which allow the adult fare to be reduced for very short trips from 50 cents to 40 cents. The new simplified structure leads to broadly similar fares. For longer trips of 36 km or more (which are likely to be in rural areas) fares would actually fall slightly. For rural bus operators to accept this, the commitment of the Government to adequately maintain rural roads would be crucial.

6.2. Bus routes and terminals

6.2.1. Developing rural hub and spoke systems

Most rural bus routes run from a village to Suva, or another large town, with some passengers starting in the village and others picked up along the way. There is often just one bus in the morning that returns in the evening. Figure 20 illustrates some bus routes into Savusavu operated by Vishnu Holdings. Depending on the road conditions, there are early morning buses to Savusavu leaving from Napuka, Nakobo, Natewa and Drekeniwai (and from Wailevu when the road was better).

Figure 20: Some bus routes to Savusavu and schematic models to illustrate these.

This common system is illustrated in a schematic way in Figure 21 (left). This illustrates a scenario where four different bus services leave from the four villages A, B, C and D around 7 a.m. and pass along the same road to the town, returning in the afternoon.

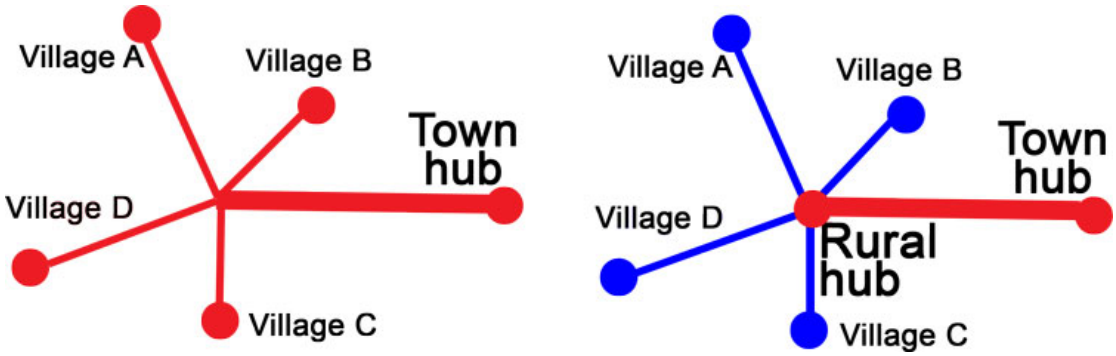


Figure 21: Schematic models of rural hub and spoke bus routes

Left: Model showing four bus routes from villages A, B, C and D going to the town hub
Right: Model showing feeder routes from villages A, B, C and D going to a rural hub to link to the main bus services operating from the rural hub to the town hub.

The main advantage of the village-to-town system is that villagers have one reliable bus service each day that takes them all the way to Suva (or a major market town). It is convenient because the passengers and their goods do not have to change buses. However the system also has disadvantages for the bus company and for different types of passengers.

- If the operator uses four large buses, one for each village, it is inefficient due to low loading levels. If the operator services two villages with one bus (bus from Village A travels to Village B) then it is also inefficient as it includes ‘dead mileage’ and also inconveniences the passengers who travel the extra distance unnecessarily.
- The roads to the villages are often poor so that large buses may not be able to travel when the weather is poor and when road conditions deteriorate further.
- The small number of passengers makes it difficult to fill a bus and so makes it unrealistic to have a more frequent service.

- The service is often only convenient to travel to the big town, and not to a local clinic or a District Centre. If the clinic is along the bus route, then the low service frequency makes the return journey difficult.
- Women are particularly disadvantaged by the daily bus service because they often have multiple tasks within a family economy. They may find it difficult to be ready for the early bus and/or feel that it is impracticable to be away for a whole day.

From the point of view of the rural economy, such bus routes do not stimulate rural growth and rural interaction but keep the villages as minor satellites dependent on the main town.

Some of these problems could be overcome through an innovative approach to bus routes. This would involve the development of carefully located rural bus hubs, with frequent standard bus services on the main roads between the rural hub and the town. There would also be regular feeder services on the smaller roads between the villages and the rural hubs, timetabled to link in with the main road services. These feeder services might use smaller vehicles, perhaps well-designed 'carrier' services (with proper seats and accessible steps). There would be several advantages of such services.

- The feeder services (from village to rural hub) would be able to cope with poor roads better than large buses
- The feeder services could be more frequent, allowing passengers a range of start and return times
- The feeder services would allow people to travel into and out of local hubs providing more convenient access to services and stimulating these to become growth points
- The feeder services would allow rural connectivity: people could travel more easily to other villages via the rural hub.
- The bus services (from rural hub to town) could be staggered, allowing more convenient timetables in both directions along the main roads.

A schematic diagram of such a system is provided in Figure 21 (right). It may be imagined that the four buses that were operating the four village services would now run only on the main road at timetabled intervals, providing a more regular service. The villages would be served by one or more smaller vehicles providing a shuttle service to and from each village and the rural hub, timetabled to coincide with the main road services.

An example of where the system might be applied is shown in Figure 22 which includes the route between Suva and Vunidawa. At present several villages are served by one bus a day that originates in that village, while other villages are served by buses making detours from their direct routes. The system is problematic for the operator because some roads are poor and buses cannot always pass. The system may be difficult for some passengers, because of low frequency and limited time options. The detours from the main routes add to the travel time for many passengers.

Figure 22: Some Tacirua rural bus routes to Suva with a schematic model to illustrate them

From the rural economy perspective the potential growth centre of Vunidawa with its health centre, small stores and government services should be treated as a rural hub. If the outlying villages were served by feeder services operating on shuttle basis (at least two trips per morning and afternoon), rural

transport services would improve and people would be able to get into and out of Vunidawa quite quickly, stimulating local enterprises. The small rural bus terminal and possible depot would also stimulate trade and services. Vunidawa would also benefit from the main bus services connecting it to Suva being more spaced in both directions.

Among the people contacted who were in favour of this approach were staff and patients of rural health facilities who saw the great benefit of more regular, intra-rural public transport rather than the single tidal flow to the urban centres.

The bus companies contacted could see the clear advantages of such a system, but they quite rightly were worried by the possible disadvantages.

- Capital would be needed to invest in the vehicles to be used for the feeder services.
- Removing large buses from poor roads would diminish one of the main pressures to maintain rural roads, and the road system would probably deteriorate.
- For the system to work well, it would need some decentralised resources to support operations at the rural hub (rural depots, additional drivers, technicians, checkers) which would be difficult to control and expensive to maintain (but would assist the local rural economy).
- The higher frequency routes between the rural hubs and the towns would only be profitable if competing carriers and minibuses were not allowed and the bus industry has little faith that the regulators would ensure this.
- They fear the system would eventually lead them to lose the village to rural hub routes to carriers, diminishing their operations and profitability.

This model could operate with new or existing independent carriers operating on the feeder routes and the bus companies providing the services on the main routes. Such carriers could be contracted by the bus companies to provide timetabled services linking to the bus routes. Such complementary arrangements between buses and carriers could be further explored in the context of the proposed review of minibus, carrier and taxi transport in Fiji (see Section 8).

The option to use local carriers was discussed with many different people but was rejected, at least in the short term, for very pragmatic reasons. With such an innovative system, it must be seen to work from the outset otherwise it will be a retrograde step for rural transport. For the system to work there must be reliable and timetabled feeder services to and from the hub, and only the bus companies have the experience, track record and vested interest to provide these. Independent carriers are used to opportunistic operations. They would not want to limit themselves to the feeder services, knowing that many passengers had the fares for long-distance services, and there would be more passengers to pick up along the main road. Therefore, in order to test the system with pilot initiatives, the bus companies that have the relevant route licenses should organise both long distance and feeder transport. The experiences of the Flying Prince bus company that has tried to use carriers on bus routes should be examined.

The Consultants recognise that this is an innovative approach to rural routes in Fiji and it needs further careful planning and discussions with all key stakeholders before finalising one or two pilot initiatives. These could be the routes associated with the following axes.

- Napuka-Savusavu
- Vunidawa-Suva
- Sigatoka Valley Road (Navosa District Centre)-Sigatoka
- Nadarivatu (Government station and possible rural hub) - Vatukoula.

Since the objective is not simply more profitable bus routes but also better rural transport and the stimulation of rural grow centres, the Government should be willing to support such initiatives in terms of funding and regulation. To make it easier for the bus companies to adopt the system, the feeder vehicles should be purchased by LTA (or other body) and leased out to the bus companies at a reasonable monthly rate (with subsequent purchase opportunities). The trial should last for three months in the first instance, with options to continue for further three and six month periods, with the default option of reverting to the old system. The LTA would have to make particular efforts during the trial period to prevent illegal carriers and minibuses from operating along the main routes: if this is not done, the pilot will undoubtedly fail due to abstraction of passengers from the main routes.

6.2.2. Re-routing procedures

The bus network in Fiji is well suited to passenger demand. As demand alters, through new development and population shifts, the industry should respond appropriately. Ideally, the LTA should identify new route opportunities, frequency reductions and route withdrawal and seek changes from operators. In fact, operators themselves tend to have much greater knowledge of passenger requirements, and they should initiate proposals for changes with the LTA. The LTA should then undertake appropriate surveys, and agree modifications with the incumbent operators. Where a completely new route is identified, the LTA should advertise for operators to make proposals which are in the best public interest.

6.2.3. Rationalise bus stopping patterns

Bus stop locations should be continually under review. In some cases passengers establish new informal stops by congregating at points away from regular stops (for example in the shade). Buses then have to stop twice within a short distance which adds to operating costs. The LTA can canvas public opinion about the moving of bus stops by advertising at existing stops, or they can simply inform passengers of changes by notice at existing stops.

In principle, buses should not stop between bus stops. However, passengers do demand this, and often regard it as a right, rather than a privilege. The fact that it occurs frequently bears testament to drivers' and operators' recognition that they are providing a public service. However, buses should not stop at dangerous locations (eg, on bends) and operators should make drivers aware of this. Whilst we do not consider this to be a major problem, the LTA should enforce existing regulations intelligently and sympathetically.

6.2.4. De-centralising bus terminating point

The bus station in Suva is well placed to serve the central business district and main market. Stops within the town are also well placed. Passenger numbers boarding and alighting at the bus station are high, indicating that the station is well placed. However, there are a number of problems at the bus station:

- Pedestrians and buses compete for road space
- Pedestrians are not provided with sufficient facilities
- Road and footway surfaces are in poor condition, with cracks, oil spillages and uncovered drains
- The bus parking area is insufficient
- The pedestrian crossing of Rodwell Road is too narrow
- Bus drivers can be distracted by the many competing movements of pedestrians and buses.

Figure 23: Example of a problem of passengers loading on an island at Suva bus station

These issues can be addressed by a comprehensive re-development of the bus station to incorporate commercial uses. This could take advantage of the high land value which could provide funding for the public facilities. The design must take the improvement of the bus station and its bus and passenger facilities as the primary objective. The design exercise should be jointly managed by the Ministry of Works and Transport and Suva City Council.

6.3. Efficiency gains

6.3.1. Reducing losses from fraud

The LTA, Government departments, consumer groups and the media agree that the bus industry must address its internal fraud losses. In any industry, the complete elimination of fraud is very difficult.

However stakeholders must be made aware that serious efforts are being made to reduce losses due to fraud and that there are negative consequences to the driver and to the passengers of ticket fraud. Some bus companies take this issue more seriously than others. The initiation by bus companies of clear policies and determined practices to reduce fraud should be a precondition for further subsidies. Some recommended ways of reducing fraud are set out below.

Improved inspection: checking passenger tickets

Passengers are obliged to hold a ticket for the duration of their journey as proof of payment. If this is enforced, drivers will be obliged to issue tickets. Bus checkers (inspectors) should make a point of checking some (or all) passengers for their tickets. This will ensure that passengers have paid, and that the driver must have issued tickets (in which case the reconciliation of cash collected should balance ticket stubs). If passengers have no ticket, they should be issued with one by the checker with an excess fee, perhaps set initially at an extra 100% of the original fare. This could rise as people get used to the system, and this will encourage passengers to pay the fare and to demand a ticket. The introduction (or active enforcement) of such system should be accompanied by a public information campaign stressing that this is in the interests of everyone. People might be encouraged to shout out if the driver does not issue a ticket to enforce good driver behaviour. It would be easiest to start rigid enforcement at the same time that new ticket machines are introduced.

Improved inspection: reducing over-riding

The current system relies on passenger honesty in purchasing tickets at the appropriate fare equivalent their journeys. Some passengers pay less than they should and 'over-ride'. It is not fair to expect drivers or checkers to monitor the boarding and alighting points of all passengers. Therefore the industry should move towards issuing tickets printed with the boarding point or fare stage. Over-riding can then be more easily monitored by checkers. In industrialised countries, bus checkers (inspectors) monitor tickets on a random basis, and the consequences of detection are serious enough to discourage over-riding.

6.3.2. Install ticket machines

Ticket machines can be programmed to issue tickets stamped with the fare stage. These can range from inexpensive and simple mechanical ticket machines to electronic systems. In some cases the driver simply punches a button at each fare stage change (and this can be verified by the checkers). Some machines can be calibrated to automatically change the fare stage on the basis of distance travelled (although this can cause problems if stages vary). Machines must be tamperproof, and accessed only by management.

All ticket machines should keep a duplicate record as they issue tickets. This enables operators to have data on the numbers of passengers boarding at the various fare stages and the fares paid (and hence distance travelled). Such data is invaluable in route planning, both for operators and the LTA.

If ticket machines rely on the driver (or conductor) to issue the ticket, they are open to fraud in the same way as the current manual system. One way to improve security is for the driver to set the ticket type according to fare tendered, but the passenger self-issue their tickets by pressing a button on the passenger side. This is enforced by inspectors checking passenger tickets.

6.3.3. Move towards electronic ticketing

Recommendations have been made in Section 5.5.1 for pre-paid ticketing. These can be mechanical or manual at first, but there is no reason why Fiji should not move towards electronic ticketing. Passengers' pre-paid tickets would have a stored value and an on-board ticket machine would reduce part of the stored value, according to the fare. This works particularly well with flat fares. With staged fares, one machine reads the ticket on boarding and a second machine reads it on alighting point. While such systems usually have separate boarding and alighting doors, the system could work with two machines by a single front door. The best systems use contactless cards (which can even be kept in a handbag or wallet), but contact cards also work well. If an alighting passenger fails to provide an exit contact, the card may be programmed to deduct the full route fare. The driver should ensure that all passengers provide contact with their card on boarding: they should have no financial incentives not to do this.

6.4. Re-structuring the industry

6.4.1. Numbers of operators

Over the 32-year period from 1976 to 2008, the number of bus companies reduced and the size of companies increased in terms of buses owned. Today, about half the companies are small, with 29 operators (44%) holding only one RRL. The change in the number of bus operators in Fiji is shown in Table 21.

Table 21: Change in number of bus operators 1976 to 2008

Year	*Bus Companies*	*Buses*	*Buses per company*
1976	79	835	10.6
2008	66	1082	16.4

There is no obvious relationship (based on operators' audited returns) between the size of the company and its profitability. There are advantages to the passenger of having small local bus services provided by a single operator. The larger bus companies tend not to have uniform fleets, as they, like the smaller companies, are bound by financial considerations when considering capital purchase of buses. It is likely that in the coming years there will be some failing companies and some consolidation, but the Consultants do not recommend any actions to try to change the number of operating bus companies.

6.4.2. Size of buses

There is no real advantage in purchasing small buses just to save money on running off-peak services. The small savings in fuel costs would be more than offset by the capital cost and the fact the buses can only be used for a limited number of operations. Small buses have been used in London to re-generate bus routes and these used a new brand image to attract passengers on both peak and off-peak services. Where these initiatives proved successful, the operators had to move to larger buses.

However, small buses can have an advantage on shuttle routes, where high frequency means than larger buses would operate with sub-optimal loads. Tacirua has introduced small buses for its express runs between Suva and Nausori, while Vishnu Holdings has introduced small buses for shuttle runs around Savusavu (Figure 24). These small buses are modern, comfortable and economical. They help provide a good image for these services, while allowing the bus companies to diversify their range of services.

Figure 24: Small buses operated by Vishnu Holdings (left) and Tacirua (right)

6.5. Competition and integration

6.5.1. Problems of competition from minibuses and carriers

The bus industry in Fiji appears to be at a critical stage and Government policy and effective regulation could determine whether or not it continues in its present form. To date, regulation has resulted in relatively comprehensive bus services that would be the envy of many countries in the world. Suva and all major towns and very many villages have timetabled bus services operating at an affordable cost. The fares allow bus companies to make an overall profit by allowing the fuller loads to compensate for some loss-making routes and journeys at non-peak times. The Consultants have evidence that this is indeed the case.

The present system was developed largely in the absence of intense free-market competition. The bus companies are now facing increasing competition, primarily from minibuses on tar roads (including many illegal operators) and carriers on gravel roads (including legal and illegal operations).

Regulated buses, operating to timetables and with fixed fares, find it difficult to compete with minibuses and carriers. Minibus operators and carriers can adjust their timing and their prices to entice some bus passengers. With the high fixed costs of bus operations, the haemorrhaging of those marginal extra passengers can make the difference between profit and loss on timetabled routes. Bus companies may respond by cutting services to get higher loading levels, but this encourages more passengers to opt for the minibus and carrier services instead of waiting for a bus. In the absence of regulation, bus services

start a descending spiral of decreasing services and profitability. Experience from many countries in the world suggests that deregulated free-market competition will result in the collapse of timetabled bus services, and an increase in the number of minibuses and carriers.

6.5.2. Effects of competition from minibuses and carriers

The collapse of regulated bus services and the rise in minibus and carrier operations would have several social, regulatory and fiscal implications for the Government and people of Fiji. Compared with buses, it would be much more difficult for the Government to regulate minibuses and carriers for fares, safety, routes and timetables. Already LTA finds it more difficult to regulate minibuses and carriers than buses. With the decline of buses, there would be a large rise in the number of different operators of minibuses and carriers with resulting difficulties for the regulatory authority, particularly in enforcing fares and standards.

In the rural areas, in the absence of buses, rural transport services would become less predictable, less safe, less comfortable and more expensive. The reduction of service levels and increase in costs can already be seen where buses have been taken off routes temporarily or permanently. While buses were running, carriers regularly came before the bus and were cheaper (reducing their prices to those of buses, or even lower). When buses stopped running, carriers raised their fares. Moreover, on some routes carriers stopped running regularly after the withdrawal of buses, since there were no longer people waiting for buses. They reverted to unpredictable travel patterns based on private hire and less regular trips to town.

Based on the experiences of countries that have deregulated their bus and public transport services, with declining bus services, the number of minibuses operating on major routes would probably increase significantly. They would continue to increase up to the point where the market became oversupplied. At this stage, operational profitability would be reduced for everyone and investment in service quality and safety would also be reduced. With many more minibuses, the congestion around urban terminals and on main routes would probably be greater. This is why some countries that allowed their bus services to fail are now trying to replace minibuses with larger conventional buses, particularly in urban and peri-urban areas. This can be difficult due to the large number of minibuses and their flexible organisation.

There is a common dilemma faced by small-scale transport operators as they try to balance supply and demand. When people realise that money can be made from minibuses and taxis (and in other countries rickshaws and motorcycle taxis), more and more people become transport entrepreneurs and the transport market is divided between an increasing numbers of operators. Left unchecked, they will inevitably increase until the market is saturated. At this time, it is in interests of all transport operators that the number of minibuses or taxis on the roads at any one time is reduced. However, since it is in no one person’s interest to remove their own vehicle from the road, excessively high stocking levels tend to be maintained (this is the same dilemma faced by stock owners grazing common ground).

Theoretically and officially, the LTA could control the problem of every increasing numbers by limiting the number of licenses given to minibuses and taxis. However, even now (when numbers of minibuses are still low compared to countries where bus services have failed) the LTA is unable (or unwilling) to control the numbers of minibuses and people carriers and large numbers of unlicensed operators provide public transport services every day in full view of the police and the authorities.

If buses are increasingly replaced by minibuses and carriers, the public transport market would be seen to be more competitive and more people (including many indigenous Fijians) would be involved in the provision of transport services. However, experience from other countries suggests that cartels would probably develop (as have the various minibus associations) and one of their roles would be to reduce competition to maintain fares at a high level. Also, as the market became oversupplied, individuals would be less able to gain sufficient income from minibus and taxi work, and the authorities would have a potential problem of social unrest within the informal sector transport industry.

The Consultants recommend that the Government of Fiji avoids some of the negative effects of increasing informal sector transport services by supporting the bus industry and regulating effectively to remove unfair competition. The Consultants believe that well-regulated and fairly-competing public transport services (buses, minibuses, carriers and taxis) are in the best interests of the people of Fiji. Poorly regulated and chaotic free-market competition will be detrimental to passengers in the long-term.

6.5.3. Promoting fairer competition

It is recognised by all stakeholders, including the bus operators, that there are legitimate roles for minibuses and carriers as public transport operators in Fiji. However, they should all be regulated in a comparable way, with differences in detail as appropriate to their varied transport niches. The principles of regulation should be the same, and they should have comparable (but not necessarily identical) standards relating to construction, safety and insurance. It is recognised that this will involve raising the standards and enforcement for minibuses and carriers, and that this will involve costs (paying for appropriate insurance cover, for example). This should be considered in the proposed study of these public transport systems that is presented in Section 8.

Figure 25: Example of a legal minibus passing a bus with illegal behaviour

Passengers said they opted for minibuses for their speed even though they knew they were less safe

6.5.4. Reducing illegal operations by minibuses and carriers

The bus industry is suffering predation of passengers by minibuses and carriers in two separate ways: illegal vehicles and illegal practices. Both of these need to be addressed by the LTA and the police.

Vehicles that are not licensed to carry passengers stop to pick up bus passengers. These include white-plated minibuses and carriers that do not have 'excess' permits. People carriers (minivans, matchboxes) are also unlicensed. Examples of such activities can be seen in and close to Suva and other locations every day, and this is bringing the law and the regulatory authorities (LTA and the police) into disrepute.

Vehicles that are licensed to carry passengers may be doing so illegally, by operating outside of their allocated area. Some minibuses operating on the Nausori-Suva corridor, the Queen's Road and the King's Road actually have licenses for other routes, but move to the main roads because there is greater transport demand (and people waiting for buses). Carriers with excess permits may be licensed to carry passengers from their village to the town, and so they are legally allowed to carry passengers. However they may not be licensed to pick up passengers along existing bus routes.

The Consultants recommend that the LTA, in collaboration with the police, makes a point of eliminating, as far as practical, all illegal transport operators and illegal transport practices. Given the lax regulation of the past, it is only fair that operators are given warning that there will be a crack down. The 'three strikes and out' that was successfully run in Vanua Levu (see 3.8.3) by the LTA gave illegal operators a warning and proved highly successful as a deterrent while it was being consistently enforced.

Given the length of time that some illegal transport services have been operating (including some white-plated minibuses and people carrier minivans), the Consultants suggest that the crack down could be delayed until after the proposed study (see Section 8) on these forms of transport has been undertaken. This would provide an opportunity to define appropriate strategies for dealing with illegal operators through legalisation, amnesties and/or prosecution.

6.5.5. An integrated transport system comprising complementary services

The future of the bus industry in Fiji will depend on finding an appropriate balance of competing and complementary public transport services. Recommendations for the bus industry should be part of an integrated strategy for public transport services that includes bus services, minibuses, carriers and taxis.

Important policy decisions will have to be made concerning the future mix of these forms of transport and the possible conflicting demands of free-market competition, complementary transport services and effective regulation. A laissez faire approach may lead to the collapse of the bus industry in its present form that is unlikely to benefit the travelling public in Fiji in the medium-term and long-term.

The Consultants acknowledge that the recent growth in legal and illegal transport operators presents a very difficult situation for the LTA and the Government. Some owners and operators of minibuses, carriers and taxis are well connected, with powerful colleagues and friends in positions to influence the Government and the Regulator. Effective regulation requires tough decisions in order to promote good, efficient and safe services and prevent illegal operations. The more people that are involved in the informal transport sector, the more difficult it will be to restrict its operations. If the informal operations continue to grow, the bus industry will decline quite rapidly. This will benefit the informal operators but will lead to a chaotic transport market, much more difficult to regulate for prices, safety and quality, with the public losing services and the Government losing revenues.

6.5.6. Proposal for a follow-up study on other public transport services

The Consultants believe that neither the Government nor the travelling public wishes to see the collapse of the bus industry in its present form. It may be that ways can be proposed to maintain the many benefits of the existing widespread regulated bus services while increasing the benefits of safe, affordable and complementary minibus, carrier and taxi services. The Consultants have provided Terms of Reference in Section 8 and also a variation proposal for the current contract to allow the Consultants to review in more detail the existing situation concerning minibuses, carriers and taxis. It is envisaged that the proposed additional work would allow the Consultants, in cooperation with other stakeholders, to propose realistic policies and strategies for improved complementary public transport services in Fiji.

6.6. Consultations, cooperation and self-regulation

6.6.1. Establishment of a Forum for Transport and Development in Fiji

The Consultants are very much aware of the high levels of misunderstanding and mistrust that exist in Fiji within and between the land transport operators, the regulators, the Government, the media and the public. The Consultants found that many people in the Government, the LTA, FBOA and CCF as well as operators of minibuses, minivans and carriers were charming and reasonable, and yet their views concerning some of the other stakeholders were very prejudiced. Much of the public debate appears to involve repeating entrenched views. The Consultants would like to see a forum for positive and creative discussion on the transport industry in Fiji. They also suggest the various stakeholders should work together to improve the situation and help plan for better transport services in Fiji.

The Transport Planning Unit of the Ministry of Works and Transport has been instrumental in holding one-day stakeholder workshops on transport issues. The last National Transport Sector Forum was held on 12 November 2008 and proved very valuable and popular. The Consultants would like to see the formation of an informal (in the first instance) network that would continue and expand the debate. The network would provide a forum for discussion, investigation and various activities designed to ensure the transport needs of the people of Fiji are met in appropriate, efficient, acceptable and affordable ways.

The aim would be to link the various stakeholders and engage in debate and joint planning of relevant subjects such as transport integration (competition and complementarity), hub and spoke systems, safety issues, emission control, ticketing options and bus accessibility. The network could arrange working groups, workshops and study visits, with members being kept informed through a newsletter.

The initiative to develop the network could be taken by the Transport Planning Unit (TPU), but it will be important for the TPU to facilitate other organisations to take leading roles in the establishment and development of the network. The network will only be effective if it is perceived as being broadly-based, and representing the interests of all parties. It must not be seen as a government institution, but it also must not been seen as an academic group, a consumer/passenger lobby group, an association promoting the interests of transport operators or an NGO-dominated organisation. All the stakeholders (government, regulators, transporters, users, researchers and NGOs) must regard themselves as members, but the network must be seen as inclusive and in everyone’s interest. It is therefore important that the TPU facilitates and stimulates the development of a strong, multi-disciplinary and broadly representative core group derived from several key sectors concerned with transport and development.

A suitable time to launch the network would be in the context of the stakeholder workshop proposed for the follow-on review of minibuses, carriers and taxi transport in Fiji (see Section 8). Further ideas relating to this proposed networking forum are included in Section 10.

6.6.2. Establishment of a Public Transport Improvement Board

It is proposed that the Technical Working Group that supported the Bus Industry Review should continue to meet as a Joint Working Group to follow-up this review in the various ways recommended. It would be particularly appropriate if this working group (comprising LTA, TPU, FBOA and CCF and other interested stakeholders) were considered a specialist working group within the context of the Forum for Transport and Development in Fiji.

In response to feedback from earlier drafts of this report, the Consultants would like to propose the establishment of a Public Transport Improvement Board (PTIB) to ensure that the various stakeholders do indeed work together to improve the transport industry in Fiji. The consultants have argued for better regulation by LTA and better self-regulation within the bus industry to improve standards. However, it was made clear from the comments of the various stakeholders that people do not believe that the LTA and the bus industry will actually take the required regulatory and self-regulatory action by themselves.

The introduction of a self-regulation system to improve service quality, improve operational efficiency, reduce pollution and improve safety would assist the overall improvement of bus services in Fiji. Currently, however, there is no appetite for self regulation amongst the bus operators, who would prefer the LTA to fully enforce existing regulations. However, the LTA does not, at present, have the capacity to fully enforce the provisions of LTA Act and its regulation. Nor does the LTA have the capacity to bring forward initiatives to improve the bus industry. It is not envisaged that capacity building within the LTA would significantly change the situation within the short-to-medium timescale required for action.

The FBOA is not a statutory body, and not all bus operators are members of it. It is not an appropriate organisation to deliver the challenging and innovative self-regulation that is now required within the transport industry. To overcome this we recommend the establishment of a new statutory body, charged with, amongst other things, introducing and maintaining self-regulation in the bus industry. Given the existing problems regulation throughout the public transport industry, that directly affects the bus operators, the consultants recommend that this body should promote self-regulation throughout the road public transport industry. It would therefore promote improvements in bus, minibus, carrier and taxi services and all these transport types would be represented on the Board.

To illustrate the concept, the Consultants have prepared a draft Act for the establishment of the proposed Public Transport Improvement Board. This is presented in Section 9 (page 71) to stimulate discussion. In this document, all public transport operators would have to be registered with the new body in order to be able to operate public services in Fiji (stage carriage, express, point to point, taxi). The established body would receive its revenue from a levy on each licensed route or vehicle (as appropriate). The body would have a statutory function to introduce and maintain self regulation across a range of areas including competition, safety, emissions and standards of service. It would also bring forward initiatives for improvements to the bus industry such as ticket machines and common ticketing.

While the registration of bus services would be straightforward (these are all formal-sector companies), the registration and regulation of minibuses, carriers and taxis would be more complicated (there are many small operators). This subject should be tackled by the proposed follow-on review of minibuses, carriers and taxi transport in Fiji (see Section 6.5.6 and Section 8). The Bus Industry Joint Working Group (see Sections 3.5.2 and 10.5) should discuss the scope, roles, representation and operational details of the Public Transport Improvement Board and draft detailed terms of reference for the approval and action of the Ministry.

6.7. Conclusions and next steps

In the view of the Consultants, there are many reasons to be worried: the bus industry is really facing a crisis. In the absence of good policy decisions and a clear and timely strategy, the bus industry could enter a downward spiral which would not be in the best interests of the Government and people of Fiji.

However, the Consultants are also optimistic. The bus industry has survived and developed over the years thanks to the good offices and actions of the bus companies, the Government, the regulators and

the passengers. There must be an understanding that all parties will have to contribute towards the survival, sustainability and modernisation of the bus industry. The Consultants therefore conclude that:

- In exchange for subsidies the operators have to reduce fraud
- In exchange for profits, the operators have to renew their fleets
- In exchange for a bus industry providing affordable public transport services, the Government has to maintain the roads
- In exchange for an efficient, timetabled and easily regulated bus industry, LTA must protect buses from the illegal operations of minibuses and carriers
- In exchange for assistance for loss making routes, operators must declare transparent ticket returns and move to competitive tendering
- In exchange for a good, modern bus service, passengers must accept a small fare increase and actively encourage fraud prevention and the implementation of modern ticketing (including 'saver' options).

The Consultants have provided many ideas that they hope will be considered by the various stakeholders. It will be for the LTA, TPU, FBOA and other stakeholders to decide on the most appropriate options and take the related actions. There will be need for many different interventions in the coming months and years, but there are four inter-related actions that should be taken speedily to ensure that the momentum for improvement is not lost.

- The existing TWG should meet to discuss this report and agree to continue to meet as a working group in the coming years to initiate, monitor and evaluate the necessary follow up initiatives. This could be in the context of the proposed Forum (see below).

- LTA and TPU, in consultation with the TWG members, should initiate the follow-on study into complementary and competing forms of transport (carriers, minibuses, minivans and taxis). As has been stressed, the future of the bus industry could depend on an appropriate and acceptable solution to the present problems of illegal completion. The Government and the LTA need to make informed decisions concerning these forms of transport, including appropriate numbers, conditions of licensing and levels of enforcement in different situations in Fiji. Suggested Terms of Reference for this study have been provided in Section 8. The present Consultants would be happy to undertake this as a variation to the existing contract with OCA, and this would ensure an integrated approach. However, even if this variation were not approved, the study should be done as soon as practicable.

- The TWG should consider the proposals for the formation of the Forum for Transport and Development in Fiji. It is suggested that TPU takes the lead in launching this (see Section 9). The reason why this should be done soon is that this could provide a framework for future discussions and studies and the planning of many of the suggested initiatives involving the bus industry and other modes of public transport. The Forum would bring together a wide range of stakeholders who might not otherwise be brought into the processes. Working groups could be formed relating to emissions, road maintenance, rural transport hubs, ticketing options and many other issues. These could include not just the core TWG organisations (TPU, LTA, FIRCA, Ministry of Finance and Planning) and associated bodies (FBOA, CCF) but also other relevant stakeholders (local government, researchers, other transport operators, NGOs, external resource organisations). The Forum could be launched at a workshop called to present and discuss this report that could be held during the proposed follow-up study on carriers, minibuses and taxis.

- The TWG should facilitate the formation of a Bus Industry Working Group (in the context of the Forum for Transport and Development). One if its first tasks should be to discuss, plan and develop terms of reference for the establishment of the proposed Public Transport Improvement Board. This proposed Board should play an important role in assuring better, safer and cleaner services in Fiji, provided by buses, minibuses, carriers and taxis.

To start the planning process, the Consultants have provided a draft 'road map' in Figure 26 . This is not a definitive planning chart, but a catalyst to start the planning processes.

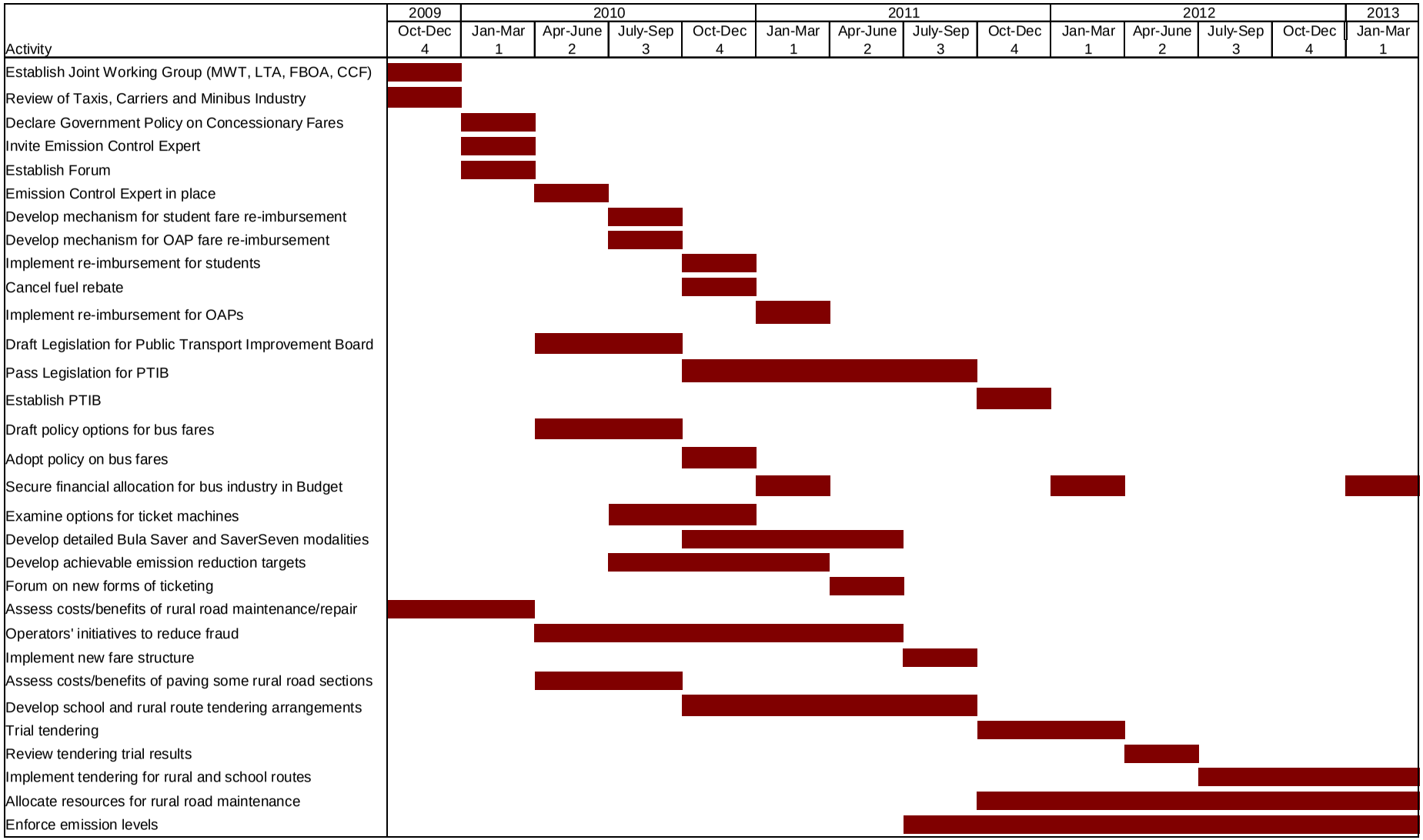


Figure 26: Planning chart for the next steps in regulating and revitalising the bus industry

Fiji Land Transport Authority

Fiji Bus Industry Review

Final Report

ANNEXES

ORIONCONSULTINGASSOCIATES

7. Fiji Bus Passenger Survey

7.1. Purpose and logistics of the survey

The consultants arranged a small survey of bus passengers in order to gain further insights and understanding of bus travel in Fiji. The survey was designed to obtain information on how people use buses. It also asked about passengers' perceptions concerning the cost of bus transport, the advantages and disadvantages of buses and alternative means of transport and on options for improving bus services.

The survey team was recruited with the assistance of Ms Joshika Samujh of the Consumer Council of Fiji. The enumerators were trained on 20 January and questioned bus passengers in Suva, Nausori, Sigatoka and Navua in the period 21-23 January 2009. A total of 243 people were interviewed and the geographical distribution of these is summarised in Table 22.

Table 22: Location of survey respondents

Survey location	*Number of respondents*	*%*
Suva	158	65
Nausori	38	15
Sigatoka	16	7
Navua	31	13
Total	**243**	**100**

7.2. Survey results

Passengers were asked how they travelled to and from their bus stop (or bus terminal). The methods they used are summarised in Table 23. Most people walked to and from their buses. The very high percentage of passengers (92%) able to access buses and their destinations by walking is an indicator of the extent of the bus network and the high penetration of bus services.

Table 23: Passengers' methods of travelling to and from bus services

Mode of transport	*Travel to bus*		*Travel from bus*		*Combined totals*	
	Number	*%*	*Number*	*%*	*Number*	*%*
Walking	226	94	220	91	446	92
Minibus	5	2	5	2	10	2
Carrier	3	1	1	1	4	1
Car	0	0	3	1	3	1
Taxi	2	1	1	1	3	1
Other	5	2	11	4	16	3
Total	**241**	**100**	**241**	**100**	**482**	**100**

Ninety percent of respondents said they sometimes used other forms of public transport, notably minibuses and taxis as indicated in Table 24.

Table 24: Other transport services used by bus passengers

Mode	*Number*	*%*
Minibus	125	33
Taxis	160	42
Carriers	58	15
None	38	10
Total	**381**	**100**

Passengers were asked their reasons for taking minibuses or carriers as alternatives to bus services. Most respondents said they used minibuses because they were faster or more convenient. The main reason for opting for carriers was their willingness to carry goods. Some people used carriers because they were faster or more convenient or because there were no buses on their route. The respondents' reasons are summarised in Table 25.

Table 25: Passengers' reasons for using alternatives to bus services

Reason for use	*Minibus (% of respondents)*	*Carrier (% of respondents)*
Cheaper	2	3
More convenient	9	8
Safer	1	3
No buses on my route	3	13
Faster	83	18
Like drivers	1	1
Can carry my goods	1	54
Total	**100**	**100**

Passengers used both legally-registered minibuses (with yellow plates) and illegal minibus operators (with white plates). With the illegal carriers there is no compensation in the case of an accident. People using minibuses were asked if they were aware of the differences between the two types. Most respondents (84%) were aware, and this is summarised in Table 26.

Table 26: Respondents knowledge of yellow and white plates on minibuses

Aware of yellow and white plates	*Number*	*%*
Yes	152	84
No	28	16
Total	**180**	**100**

Passengers were asked to give their opinions as to the levels of bus fares. Almost half the respondents thought they were acceptable while half thought they were too high. This is summarised in Table 27.

Table 27: Respondents' views on the level of bus fares

Response	*Number*	*%*
OK	110	45
Bit too high	89	37
Much too high	40	16
I can afford a bit more	2	1
I can't afford it now	1	0.5
I don't care	1	0.5
Total	**243**	**100**

Bus passengers were asked for what features of bus services they would be prepared to pay extra. They opted for better frequency, comfort and safety as well as less smoke emission. This is summarised in Table 28.

Table 28: Bus service features for which respondents were prepared to pay more

Feature	*Number of responses*	*%*
Buses more frequent	126	21
Buses more comfortable	111	19
Safer buses	105	18
Less smoky buses	134	22
Better roads	86	14
Nicer drivers	35	6
Total	**597**	**100**

In order to assess how travellers valued their time, bus passengers were asked if, and how much, they would be willing to pay to save twenty minutes of travel time. The results are summarised in Table 29. Sixty percent were not prepared to pay extra to save twenty minutes. Forty percent of respondents said they were prepared to pay for shorter travel time, with an average willingness to pay 21 cents extra.

Table 29: Respondents' willingness to pay extra to save twenty minutes

Cents extra	*Number of respondents*	*%*
0	141	60
10	31	13
20	37	15
30	16	7
40	11	5
Total	**236**	**100**
Average of all responses was 8 cents *Average of positive responses was 21 cents*		

Passengers were asked an open-ended question about what they thought was the best feature of their bus service. Respondents thought the services were safe, affordable and had good levels of service. Very few respondents referred to comfort as a positive feature. This is summarised in Table 30.
Table 30

Table 30: Passengers perceptions of the best features of bus services

Feature	*Number of respondents*	*%*
Safe	77	34
Affordable	72	32
Good service level	58	26
Comfortable	8	3
Other	11	5
Total	**226**	**100**

Passengers were asked an open-ended question on what improvements they would like to see in bus services. The responses cluster around a variety of issues as shown in Table 31. Forty percent of respondents wanted cleaner, improved and more modern buses. Improve seating was another related issue. This is in line with the willingness of passengers to pay more for less smoky and more comfortable buses (Table 28).

Table 31: Issues identified by passengers for improving bus services

Suggested improvements	*No*	*%*
Cleaner, improved and modern buses	92	40
Improve seating	32	14
Improve operations (frequency, timetable, reliability, punctuality)	25	11
Improve safety (including emergency exits)	17	7
Fewer breakdowns	16	7
Improved environment (fewer emissions and oil leaks, fuel efficiency)	10	4
Improve driver quality	9	4
Better roads	9	4
Modify fares and issue tickets	8	4
Introduce more competition	4	2
Other	6	3
Total	**228**	**100**

Clearly, the responses of the passengers to the various questions would be influenced by the bus company they used and the distance they were travelling. This survey was not large enough to make detailed correlations. However the bus operators that were used by the respondents are summarised in Table 32. The questionnaire form is provided in Table 33.

Table 32: Bus operators used by the survey respondents

Operator	*Number*	*%*
Blue Line	6	2.3
Central Transport	25	9.7
Citiline Bus Services	4	1.6
Dawasamu Transport	1	0.4
Dee Cees Bus Services	28	10.9
Dominion Transport	2	0.8
George Transport	7	2.7
Island Buses	30	11.7
Latchman Buses	1	0.4
Lodoni Transport	2	0.8
Maharaj Buses	17	6.6
Nadera Transport	1	0.4
Nairs Transport	12	4.7
Nasese Bus	9	3.5
Pacific Transport	9	3.5
Raiwaqa Buses	4	1.6
Shankar Singh Transport	4	1.6
Shore Buses	16	6.2
Sunbeam Transport	11	4.3
Sunset Express	1	0.4
Tacirua Transport	33	12.8
Taunovo Bus	8	3.1
Tebara Transport	18	7.0
Valley Buses	5	1.9
Vatukoula Express Service	1	0.4
Wainibokasi Transport	1	0.4
Westbus	1	0.4
Total	**257**	**100.0**

Table 33: Bus passenger survey questionnaire form

Bus Industry Restructuring Study

No.

Questionairre for Bus Passengers

1 What journey are you doing today (have just done)

From		To	

2 Which Bus Companies did you / will you use ?

Bus 1		Bus 1	

3 What Bus Fare you pay ?

Bus 1		Bus 2	

4 What means of tranport do you use to get to/from the bus stop

a) Where you get **on** the bus		and **off**	
Walk		Walk	
Minbus/minivan		Minbus/minivan	
Carrier		Carrier	
Car		Car	
Taxi		Taxi	
Other		Other	

4 What do think about the bus fare ? (Tick one)

OK	
Bit too high	
Much too high	
I can afford a bit more	
I cant' afford it now	
I don't care	

5 Would you pay any more if ? (Tick many)

Buses more frequent	
More comfortable	
Safer buses	
Less smoky buses	
Better Roads	
Nicer Drivers	

6 Do you ever use - Tick if yes

Minibus	
Taxis	
Carriers	

7 If you use minibus say why? (Tick any)

Cheaper	
More convenient	
Safer	
No buses on my route	
Faster	
Like Drivers	
Can carry my goods	

8 If you use carriers say why ? (Tick many if you wish)

Cheaper	
More convenient	
Safer	
No buses on my route	
Faster	
Like Drivers	
Can carry my goods	

9 Minibuses can have yellow or white plates, Did you know ?
With white plated minibuses there is no compensation if you are injured

Yes	
No	

10 Do you use Minibuses with yellow plates (which are LTA certified) ?

If yes	From where		To where	

11 Do you use Minibuses with white plates (which are illegal, not certified by LTA) ?

If yes	From where		To where	

12. How much more would you pay the journey on your bus service ? Tick one

If you could save 20 mintues time (Tick one)

0 cents	
10 cents	
20 cents	
30 cents	
40 cents	

13. Rate the public Transport Services

Type	Good	Average	Bad	Don't Use
Bus				
Minibus				
Carrier				
Taxi				

13. What is the best thing about the bus service ?	

14. What improvement to the bus service would you like ?	

15. Any other Comments	

16. Would you like to join a passenger forum for better bus services ?	Name		Tel:	

8. Review of minibuses, carriers and taxi transport in Fiji

Proposed terms of reference for a review of minibuses, carriers and taxi transport in Fiji

Background

In 2008, the Government of Fiji through the Land Transport Authority (LTA) and Ministry of Works and Transport, in conjunction with the Fiji Bus Operators' Association agreed to carry out a comprehensive review of the bus industry in Fiji. Following a competitive tendering process, Orion Consulting Associates BV carried out the review in December 2008 and January 2009.

One of the main issues that emerged from the bus industry review related to other forms of public transport that may compete with the bus industry or which may provide complementary services. The main forms of public transport outside the bus industry are:

- Minibuses or minivans (carrying 12-18 people)
- Taxis (regulated saloon cars, carrying up to 4 passengers, operating from urban areas)
- People carriers (sometimes known as minivans or 'matchbox' taxis, that are unregulated 5-8 seater people-carriers operating as taxis on poor peri-urban roads)
- 'Carriers' (pickups or light trucks) that carry both goods and people on rural roads.

Minibuses

Minibuses or minivans are a relatively recent form of public transport in Fiji. Legal minibuses (with yellow plates) are licensed by LTA to operate on specific inter-urban routes, notably on the Suva-Nausori Roads, and along the Queen's and King's Road on Viti Levu. It is claimed that the licensed vehicles do not always operate on their licensed routes, as they may move to more popular and profitable routes. In addition to the regulated minibuses (with yellow plates), there are large numbers of illegal minibuses operating with white plates. Some of these have applied for yellow-plate licenses, but few have been issued in the past year. Many minibuses are owner-operated. Some drivers hire the minibuses from owners who have bought them specifically for leasing out for income-generation. Such owners may have more than one minibus, but large fleets are not common. The operators generally link together in associations, and there are many mini-bus associations that coordinate operations on one or more route. One of the main functions of associations is to control the queuing for passengers at the terminals. The associations accept both legal and illegal minibuses, and some associations have more white-plate vehicles than yellow-plate ones

There is direct competition between buses and minibuses on several routes, particularly on the Queen's, King's and Prince's Roads. The competition has been increasing in recent years, and much of this competition is made up from unregulated (white plate) minibuses. Passengers reportedly opt for the minibuses because they leave promptly (on busy routes and at peak times) and drive more quickly, giving shorter journey times. Some new minibuses operating on intercity routes are more comfortable than traditional buses, but older, crowded minibuses are considered less comfortable. Minibuses have regulated fares, slightly more expensive than bus fares, but minibus operators are said to vary the fares, lowering their prices to attract bus passengers and raising them in the evenings when there are few competing bus services.

Carriers

Carriers are freight-carrying pickups and light trucks that also carry passengers. They may have bench seats at either side of the load platform, but passengers are also carried on the load platform, sitting on freight, luggage or the floor. Some carriers are owned by the villages or by local businessmen. Their natural 'niche' is on rural roads that are unsuitable for buses, and in such circumstances they provide invaluable transport services. In this way many carrier operations are complementary to bus services. Many carriers operate daily services between villages and urban markets (including Suva) carrying only local people and their produce. Others pick up passengers along the roadside, and so compete directly with buses.

Taxis and minivans (people carriers)

Taxis are regulated to operate from taxi bays on regulated meter-based fares in and around towns. They are not restricted to routes, and they mainly provide point-to-point transport of people and their personal

goods. In this way they are mainly complementary to buses. However there is some competition, as some taxis carry commuters and even intercity passengers along bus routes, often matching the bus fares. Taxis are not subject to quantity or quality regulation. As a result taxis are plentiful in the main cities and towns, although vehicle quality is relatively poor.

People carriers (matchbox taxis or minivans) are not licensed, and therefore operate outside the existing regulatory framework. They are most commonly found in the Suva-Nausori corridor and in the Lautoka area. Around Nasinu, many are based around supermarkets and stores. They carry shoppers and shopping and also link the main bus routes to residential areas with poor roads that are not served by buses or taxis. They therefore operate as high capacity, high clearance taxis. Although this is technically illegal, many people consider such services 'reasonable' and the drivers want to be licensed and recognised. However, some minivan taxis operate on the main King's Road, picking up passengers from bus stops. It is widely believed that if they were legalised, many more would start to operate away from their existing niche, and compete more with both buses and conventional taxis.

Regulation for service quality, fair competition and complementary services
The regulation of land transport in the past fifty years has resulted in relatively good and comprehensive bus services complemented in towns by numerous taxis and in rural areas by carriers. Suva and all major towns as well as very many villages have timetabled bus services providing transport at a regulated and broadly affordable price to passengers. The present system was developed largely in the absence of intense free-market competition. The bus companies are now facing increasing competition, primarily from minibuses and carriers.

The recent Fiji bus industry review (Haworth and Starkey, 2009) reported that regulated buses, operating to timetables and with fixed fares, find it difficult to compete with minibuses and carriers. Minibus and carrier operators can adjust their timing and their prices to entice some bus passengers. With the high fixed costs of bus operations, the loss of those marginal extra passengers can make the difference between profit and loss on timetabled routes. This may induce a descending spiral of decreasing profitability and a reduction in bus services. Experience from many countries in the world suggests that deregulated free-market competition will result in the collapse of many timetabled bus services, and an increase in the number of minibuses and carriers.

The Government and people of Fiji wish to have a comprehensive and affordable public transport system that operates in all parts of the country. Where possible, a balance needs to be found between reasonable consumer choice of services, regulation for safety, prices and service frequency, improving quality stimulated by market forces, and the elimination of unfair competition and illegal practices. Mechanisms need to be identified to maintain the many benefits of the existing widespread regulated bus services while increasing the benefits of safe, affordable and complementary minibus, carrier and taxi services. The proposed activities will review the existing situation of minibuses, carriers and taxis and assist the development of policies and strategies for improved complementary public transport services.

Proposed activities

A. Evaluation of current regulatory regime and operating practices

- Review the existing legislation governing minibuses, carriers, people carriers (minivans) and taxis and their operations.
- Analyse the current policies for the minibuses, carriers, minivans (people carriers), and taxis and their effective potential, drawing on experience from other countries.
- Assess the general quality and quantity of the existing fleets of minibuses, carriers, minivans and taxis, commenting on their roadworthiness and safety record.
- Review the numbers of minibus, carrier and taxi licenses granted and estimate the numbers of vehicles in use and the main services actually operated.
- Review the fares charged by minibuses, carriers, minivans and taxis
- Review the available police/LTA records on minibus, carrier, minivan and taxi accidents/incidents.
- Assess the quality of transport services provided by minibuses, carriers, minivans and taxis using field observations, discussions with LTA and operators and passenger focus groups.

- Assess the current system of monitoring minibus, carrier and taxi service quality (on the road), and vehicle fitness (off-road) by authorities, by interviews and inspections of workshops.
- Review of the functions and operations of the transport associations and consider the benefits and practicality of self-regulation for service quality.
- Assess the general operating conditions (including road type and quality) and passenger facilities associated with the various services provided by minibuses, taxis, minivans and carriers.
- Examine existing competition and integration in the public transport market, and the apparent affects of competition on waiting and travel times, passenger comfort, safety, fares paid and operating profits.

B Analysis of comparative advantages of the different transport types

- Undertake illustrative financial analyses on minibus, carrier, minivan (people carriers) and taxi operations in representative situations and locations.
- Assess the direct fiscal impact of the transport services of buses, minibuses, carriers and taxis.
- Assess the comparative safety and the transport implications in selected situations (urban, peri-urban, inter-urban, remote rural) of buses, minibuses, carriers, minivans and taxis.
- Assess briefly the potential for other complementary means of transport including intermediate means of transport.

C Future direction of the public transport services in Fiji

Use the above analyses to develop a comprehensive, integrated and coordinated approach for the various public transport services in the future. The approach should deal explicitly with:

- Key roles of buses, minibuses, carriers, people carriers and taxis within an integrated transport strategy.
- Appropriate balance of complementary modes of transport and competition.
- Options for an appropriate number of operators (and/or groups of operators).
- Policy guidelines for licensing and regulating the different types of public transport.
- Network planning and the location and development of rural and urban transport terminals that encourage the integration of complementary transport types and allow constructive competition while protecting socially important but vulnerable services.
- Measures to assist the adoption of appropriate, sustainable and socially inclusive fare structures that will allow a vibrant industry that is responsive to future external impacts.
- Appropriate tariff strategies responsive to operating conditions in urban and rural areas.
- Options for establishing sustainable passengers' forums for stakeholder feedback.
- Safety, regulatory enforcement and inspection issues.
- The establishment and role of the proposed Public Transport Improvement Board.

9. Public Transport Improvement Board

Illustrative Draft Act to Establish Public Transport Improvement Board

Published in the Gazette
Dated …….

Act No. xx of 2009

An Act made to establish a Board to improve the quality of road based public transport in Fiji.
Whereas it is expedient to establish a board for the purpose of improving the quality and safety of road based public transport in Fiji;
Now, therefore, it is herewith enacted as follows.

1. Short title and commencement

(1) This Act may be cited as the Public Transport Improvement Board Act, 2009.
(2) It shall come into force on the date that it is published by the Government notification in the Gazette.

2. Definitions

In this Act, unless there is anything repugnant in the subject or context:

a) "activity" means the supply of goods, services and works in relation to road public transport
b) "Board" means the board established by this Act to ensure the improvement of public transport in Fiji
c) "bus" means a vehicle as defined under section xx of the Land Transport Authority Act of 2000
d) "carrier" means a vehicle as defined under section xx of the Land Transport Authority Act of 2000
e) "Chairman" means the chairman of the Board;
f) "Secretariat" means the body of staff hired by the Board for its support and day to day administration of its affairs;
g) "LTA" means the Land Transport Authority
h) "Chief Executive" means the chief executive officer of the Secretariat;
i) "minibus" means a vehicles defined under section xx of the Land Transport Authority Act of 2000
j) "person" shall include any group of persons, company or commercial organisation;
k) "Minister" means the Minister responsible for transport

3. Act to prevail over other laws

Notwithstanding anything to the contrary contained in any other law for the time being in force, the provisions of this Act and the rules made there under shall have effect.

4. Establishment of the Board

(1) Within 60 days of the commencement of this Act, the Government shall establish the Public Transport Improvement Board.
(2) The Public Transport Improvement Board shall –
(a) be a body corporate with perpetual succession;
(b) have a common seal;
(c) be capable of—
(i) acquiring, holding and disposing of real and personal property;
(ii) suing and being sued in its corporate name; and
(iii) doing or performing all such acts and things as a body corporate may legally do or perform.

5. Head office

The head office of the Board shall be situated in Suva and the Board may, if necessary, set up branch offices at any place.

6. Composition of the Board

(1) The Board shall consist of the following members:
- a) the Secretary, Ministry of Transport and Works, ex-officio;
- b) The Chief Executive of the Land Transport Authority, ex-officio;
- c) three persons representing owners of bus companies operating in Fiji;
- d) one person representing owners of minibus companies operating in Fiji
- e) one person representing owners of carriers operating in Fiji
- f) one person representing taxi owners in Fiji
- g) a professor or researcher nominated by the Department of Mechanical Engineering, Fiji Institute of Technology;
- h) the Chief Executive of the Consumer Council of Fiji, ex-officio; and
- i) a person nominated by the Fiji Council of Commerce and industry

(2) The members of the Board shall, at the first meeting of the Board, elect a Chairman and Vice-chairman from among their members.

(3) The Board may also nominate and include one further member, not being a representative of the government.

(4) Members of the Board shall not, by virtue only of their appointments to the Board, be deemed to be officers in the public service.

(5) Ex-officio Board Members shall be nominated by name by their respective organisations.

(6) The names of all members of the Board as first constituted and every change in membership thereafter shall be published in the Gazette.

(7) A member of the Board, other than an ex officio member, shall hold office for a period of three years from the date of his or her appointment and shall be eligible for re-appointment for one further term at the expiration of that period.

(8) No Act or proceeding of the Board shall be illegal, nor any question relating thereto be raised, merely on the ground of the existence of a vacancy in, or any defect in the constitution of, the Board.

7. Functions

The functions of the Board shall be as follows, namely:
- a) to keep and maintain a register of all public transport companies in Fiji;
- b) to promote the improvement of the quality and safety of the public transport industry in Fiji;
- c) to develop and maintain a system under which only companies registered with the Board under the Act may operate public transport services in Fiji;
- d) from time to time make recommendations to the Government for amendments to the Land Transport Act, 2000 and subsequent legislation;
- e) to assist public transport operators to self-regulate their activities in accordance with the provisions of the Land Transport Authority Act;
- f) to bring forward initiatives to assist the LTA to enforce the provisions of the LTA Act;
- g) to undertake research directed at improving the quality and safety of public transport services in Fiji;
- h) to conduct training in Fiji, and co-ordinate the training conducted by others, of persons engaged in the public transport industry;
- i) to publish, from time to time, such technical and commercial information as it deems necessary or expedient for the benefit of persons engaged in the public transport industry;
- j) to review, from time to time, the process of awarding Road Route Licences;
- k) to monitor and evaluate, from time to time, the capacity and progress of persons engaged in the public transport industry;
- l) to encourage competition in the public transport industry;
- m) to exercise disciplinary control over the conduct of any person engaged in the public transport industry;
- n) to develop and promote the use of low polluting vehicles within the public transport industry;
- o) to develop and promote initiatives for integrated ticketing between public transport operators;
- p) to develop and promote initiatives for discounted fares that benefit the travelling public;
- q) to make recommendations on fare stages and fare levels to the LTA;
- r) to develop, and assist the LTA to implement, systems for tendering public transport routes;
- s) to publish periodic reports on the activities and achievements of the Board and make the reports available to the general public; and
- t) to do such things as the Board may deem necessary or expedient to achieve its objectives under this Act.

8. Income for the Board

(1) The funds for the Board shall consist of -

a) such sums as may be appropriated by Government for the purposes of the board;
b) any fees payable under this Act;
c) the levy imposed under section 8(2);
d) Income from commercial services provided to the public transport industry.

(2) The Board may impose a levy on any company or individual licensed by the LTA to operate a public transport, carrier, or taxi service in Fiji, and such levy shall be appropriated for the general operations of the Board.

9. Board Secretariat

(1) Day to day affairs of the Board shall be conducted by a Secretariat made up of staff employed full-time for this purpose. Those staff shall not be deemed to be officers in the public service.

(2) The Secretariat shall comprise a chief executive officer appointed by the Board, who shall be known as the Chief Executive, and other staff who shall be hired by the Chief Executive. The Chief Executive shall be responsible for the administration of the affairs of the Board and shall act as secretary to the Board at its meetings.

(3) The Secretariat shall render advice and assistance to the Board so that it may discharge its functions properly, it shall be responsible for implementation of any decision of the Board and it shall exercise all powers and discharge all duties delegated to it by the Board.

(4) If the office of Chief Executive becomes vacant, or if by reason of absence, sickness or other cause, the Chief Executive is unable to discharge his or her functions, the Chairman of the Board shall appoint as Acting Chief Executive another staff member of the Secretariat until the Chief Executive resumes his or her duties or a new appointment is made.

(5) The Board may appoint consultants to assist it in carrying out its functions.

10. Meetings

(1) Subject to the provisions of this Act, the Board may regulate the proceedings of its own meetings.

(2) The meetings of the Board shall, after consent of its Chairman, be summoned by its secretary, and shall be held at least once in three months at such place and time as may be determined by the Chairman.

(3) The meetings of the Board shall be presided over by its Chairman or, in his or her absence, by its Vice-chairman.

(4) Meetings of the Board must be suspended or terminated if the number of members present falls below five.

(5) The Chairperson shall at the written request of not less than four members of the Board convene a special meeting of the Board to transact any extraordinary business on a date specified in the request. A written notice shall be sent to the members at least three days prior to the date of the meeting.

11. Registration

(1) No person shall carry on business in the public transport industry in Fiji unless he is registered under this Act.

(2) No person being registered under this Act shall carry on business of a category in respect of which he is not registered.

(3) An employee of any person registered under this Act shall not be deemed to carry on business within the meaning of sub-section (1) or (2) by reason only of his or her performance of his or her functions as an employee.

(4) The Board shall, for the purposes of this Act, keep and maintain, in the appropriate prescribed form, a register of persons engaged in the public transport industry.

(5) The register shall be in the custody of such officer employed by the Board as the board may designate, and shall be kept at the offices of the Board.

(6) Every person registered under this Act shall, after 31st December each year, pay to the Board such annual fees as may be prescribed.

(7) No person registered under this Act shall obtain a licence or permission to operate a bus, carrier, minibus or taxi service before payment of the annual subscription fees.

(8) The Board shall, once in every year, and as soon may be convenient after 1st January each year, publish the names, addresses, dates of registration, category, and other particulars of persons registered under this Act.

12. Certificate

(1) The Board shall issue a certificate to every person registered under this Act.
(2) The certificate issued under sub-section (1) shall be valid from 1st January to 31st December of that year.
(3) In considering an application for registration and in issuance of a certificate the Board shall take into account –
   i. The safety record of the applicant
   ii. The financial status of the applicant
   iii. The extent to which the applicant has made improvements to his or her public transport service against any targets which the Board may set from time to time.

13. Appeals

(1) a person aggrieved by –
   (a) The refusal of the board to register him under this Act for any reason; or
   (b) The removal by the Board of his or her name from the register; may after filing written notice to the Board and within three months after the date on which notice is given to him by the Board of the refusal or removal as the case may be, appeal to the Minister in such an manner as may be prescribed.
(2) On hearing an appeal under sub-section (1) the Minister may –
   (a) dismiss the appeal; or
   (b) if he is of the opinion that the Council has not acted in accordance with this Act, make an order that the name of the appellant be entered or retained in the register; or
   (c) refer the matter back to the Board for further consideration

14. Regulations

The Minister may, by notice published in the Gazette, make regulations under this Act.

15. Delegation of powers

The Board may, by order, delegate any of its powers or duties under this Act or any rule made there under to the Chief Executive, to one or more than one of the officers employed in its secretariat or to any subcommittee of the Board.

16. Co-option

The Board and its sub-committees may co-opt any person to advise it during its deliberations and any person so co-opted shall not be entitled to vote at any meeting of the Board or its sub-committees.

17. Disclosure of interest

If a member of the Board acquires any pecuniary interest, direct or indirect, which could result in private interests conflicting with duties as a member of the Board, the member shall without delay disclose such interest to the Board.

15. Protection of works done in good faith

No civil or criminal case nor any other legal action can be taken against the Board or any member, the Executive Director, any other officer or staff of the Board if any person is affected or there being a possibility of being affected due to any work done in good faith under this ordinance.

10. Promotion of Forum for Transport and Development

10.1. Different technologies, situations and stakeholders

The people and Government of Fiji require a good and well-maintained network of infrastructure (roads, bridges, ferries, paths) on which operates regular, safe, affordable and appropriate means of motorised and non-motorised transport for passengers, freight and individuals. The Government has a crucial role in establishing much of the infrastructure and providing a legislative and regulatory framework for transport provision and operation. It has to provide an enabling environment in Fiji where members of civil society (individuals, families, businesses, NGOs) are able to operate means of transport carrying passengers and freight for regulated transport services and private purposes. The scope is vast, with many different parameters including:

- Infrastructure (roads, bridges, terminals, footpaths, ferries)
- Operating environment (urban, rural, remote rural)
- Motorised transport (buses, minibuses, taxis, minivans, carriers, cars, pickups, trucks)
- Water and air transport services (large and small)
- Intermediate means of transport (bicycles, motorcycles, three-wheelers, sledges)
- Stakeholders (Government, regulators, operators, users, support services)
- Support services (contractors, workshops, manufacturers, importers).

With so many different stakeholders, it is clearly very difficult for any consensus to be reached on how to maintain and improve transport services and road infrastructure. Yet there is a need to encourage the various stakeholders to contribute to the debate and assist in the development of improvements in transport services in Fiji. The Consultants suggest that one important initiative could be the formation of a network which might be called the Forum for Transport and Development in Fiji. This network would provide a forum for discussion, investigation and various activities designed to ensure the transport needs of the people of Fiji are met in an appropriate, efficient, acceptable and affordable way.

10.2. Advantages of networks

A network is a group of individuals or organisations who, on a voluntary basis, exchange information or undertake joint activities in such a way that their individual autonomy is strengthened by the interactive process of networking. Networks link people who would not otherwise be linked (Starkey, 1998).

- Networks facilitate the exchange of information, skills, knowledge, experiences, materials and media, through meetings, workshops, publications and cooperative programmes. This increases the competence of members.
- Network information exchange reduces unnecessary duplication of work and effort, facilitating faster progress and a wider overall impact.
- Networks effectively link people of different levels, disciplines, organisations and backgrounds who would not otherwise have an opportunity to interact. This can bring together funding and technical cooperation agencies with those in need of resources and support. They create awareness that many others have similar concerns and development problems and provide the critical mass needed for local, national or international advocacy and policy change.
- Networks help address complex development problems and issues that seem overwhelming to individuals at a national or local level. They are a source of peer support and encouragement, motivation and professional recognition (Starkey, 1998).

Many network benefits arise from the exchange of experiences, skills and materials through meetings, publications and cooperative programmes. Transport networks should be multidisciplinary and involve the public sector, NGOs, the private and informal sectors and transport users. They should aim to bring together people concerned with transport including those involved in local and national planning and policy formulation, regulation, research, education, transport businesses (formal and informal), support services (coach builders, workshops, retailers, financing), development activities (public sector and non-governmental) and related industries and services (agriculture, health, education, local government). Such networks can play crucial roles in identifying key constraints and possible solutions. They can also help to encourage appropriate support, regulation and investment in transport services, operational procedures and the maintenance and development of appropriate infrastructure.

10.3. Practical implications of networks

A network is a method of linking people and organisations. There are various different organisational structures, with varying degrees of formality. However more attention should be given to concrete activities that meet the common objectives, rather than putting time and effort into formalising organisational arrangements. Some of the most effective national and international networks have operated for many years with minimal structure but with lively programmes of activities organised by different members. It is the multi-directional process of networking that is vital, and is more much more crucial than the network structure. In the medium term, a network can be formally established as an association or non-governmental organisation but this is not necessary and it can be divisive. Networks can exist as informal groups of organisations and individuals linked through common planning and activities.

From the outset, a network should aim to:

- Involve many organisations and stakeholders
- Formulate clear objectives
- Establish a committed core group of individuals or organisations
- Develop an active programme of activities based on enthusiastic member participation interaction and sharing
- Explore the scope for complementary networks and linkages
- Ensure sufficient resources are available for activities and coordination
- Gain a good reputation through activities, publicity and influential champions
- Regularly monitor and evaluate network progress.

10.4. Recommendations for an ongoing Fiji Forum

The Transport Planning Unit of the Ministry of Works and Transport has been instrumental in holding one-day stakeholder workshops on transport issues. The last National Transport Sector Forum was held on 12 November 2008 and proved very valuable and popular (TPU, 2008). The idea would be have a network that would continue and expand the debate. The initiative to develop the network could be taken by the Transport Planning Unit (TPU), but it will be important for the TPU facilitates other organisations to take leading roles in the establishment and development of the network. The network will only be effective if it is perceived as being broadly-based, and representing the interests of all parties. It must not be seen as a government institution, but it also must not been seen as an academic group, an NGO-dominated organisation, a consumer/passenger lobby group or an association promoting the interests of transport operators. All the stakeholders (government, regulators, transporters, users, researchers and NGOs) must regard themselves as members and the network must be seen as inclusive and in everyone's interest. It is therefore important that the TPU facilitates and stimulates the development of a strong, multi-disciplinary and broadly representative core group derived from several key sectors concerned with transport and development.

Although the TPU will convene, and initially chair the core group of the Forum for Transport and Development in Fiji, it is recommended that the position of chair be rotated between the various members. This will reinforce the view that this Forum is genuinely independent, and is not controlled by government.

The Consultants recommend that the Forum for Transport and Development in Fiji operates for at least two years as an informal association. It should endeavour in this time to develop democratic procedures designed to ensure fair representation of the various stakeholder groups. In the short term, the network as a structure will not itself require funding or a bank account. It should organise (in collaboration with its partners and members) an active programme of workshops, stakeholder meetings and working groups. Network activities, such as workshops, meetings, investigations and newsletters may require funding, but these funds can be channelled through those organisations responsible for each event. Different activities may be arranged by the TPU, FBOA, other operator associations, NGOs, local authorities (eg, Northern Division) or university departments.

The Study Team recommends that the Forum for Transport and Development in Fiji and its various members be linked to the International Forum for Rural Transport and Development (IFRTD). Although the IFRTD has a strong rural commitment, many of its members are equally involved in urban transport and development. The links with IFRTD, which can also be informal, will allow individuals and

organisations in Fiji to gain from an impressive pool of expertise and experience relating to transport systems in the region, and elsewhere.

The Forum for Transport and Development in Fiji should try to develop and undertake a range of interlinked but independent activities and events relating to bus transport, other transport services, infrastructure provision and maintenance and the needs of pedestrians and other forms of transport. The establishment of special interest groups and decentralised activities should be encouraged. Thus there may be both multidisciplinary action groups working at Divisional, Provincial or District Levels (looking at local needs for integrated transport) as well as thematic groups (eg, bus transport services, developing hub and spoke models, emission standards, labour based road maintenance).

The Forum for Transport and Development in Fiji and its working groups and component organisations (including the TPU) should endeavour to link with other organisations outside Fiji and engage in reciprocal information exchange including possible study visits in the Pacific and Asian regions.

10.5. Activities of the Fiji Forum

A core group (provisional steering committee) of the Forum for Transport and Development in Fiji should be established and start to develop a programme of activities. It is recommended that it concentrates on arranging working groups and activities, using the human and logistical resources of its members. The core group should strongly resist the temptation to be distracted by structural issues (such as being established as a legal entity) until it has a track record of implemented activities and achievements.

Working groups

The Forum for Transport and Development in Fiji should form a series of working groups to plan improved strategies and to monitor organisational arrangements relating to transport services and related infrastructure. The working groups should produce brief progress reports every three months, which can be summarised in the Forum's newsletter. The working groups could include:

- Bus industry joint working group and options for the Public Transport Improvement Board
- Transport services in remote rural areas: the roles of buses and carriers
- Improving transport services in and around Suva
- Improving transport services in the Northern Division (and other areas)
- Defining fuel efficient and low emission bus engines for Fiji
- Different contracting arrangements for road maintenance
- Integrated Rural Accessibility Planning (IRAP) in Fiji
- Provision of transport services in each Division/Province/District
- Intercity passenger transport services
- Empowering and promoting local freight transport entrepreneurs
- Improving road safety
- Possible transport service provision by three wheelers
- Terminals, transport interchanges and the greater integration of all transport systems.

It is suggested that the Bus Industry Joint Working Group proposed to follow-up this review should be considered a specialist working group within the context of the Forum for Transport and Development in Fiji. It will comprise LTA, FBOA, TPU and CCF and other interested stakeholders. One of its first tasks will be to discuss the possible roles and organisational procedures of the proposed Public Transport Improvement Board.

Resource publications and newsletters

TPU should arrange for the dissemination of this report (Haworth and Starkey, 2009) to stimulate discussion and interest in the many issues raised on bus transport and the possibility of the formation of the Forum for Transport and Development in Fiji.

The Forum should prepare and circulate a quarterly newsletter to members and potential members of the Forum for Transport and Development in Fiji and interested partners and stakeholders. In the first instance, the TPU should undertake this. There is much information from this current report that could be summarised for such a newsletter.

Workshops and stakeholder meetings

Workshops and stakeholder meetings are a vital way of planning initiatives and sharing information. Some workshops should be held at national level and some at Divisional Level. Among the workshops that should be planned and implemented in the context of the Forum for Transport and Development in Fiji are:

- Presentation and review of the study of the Fiji bus industry
  (sharing and discussing this report)
- Stakeholder workshop(s) on minibuses, carriers and taxis and buses in Fiji
  (as proposed in Section 8)
- Preparing for the Public Transport Improvement Board
- Improving transport services in remote rural areas
- Improving transport services in and around Suva.

The first three topics could be combined into one or more closely related workshops to follow up this study and to prepare the ground for better integration of the different public transport services in Fiji.

Launch of the Forum for Transport and Development in Fiji

One suitable time to launch this proposed network would be at the next National Transport Sector Forum. Another possible occasion would be at the stakeholder workshop recommended for the follow-on review of minibuses, carriers and taxi transport in Fiji (see Section 8). The findings of the bus industry review could be presented and discussed at this workshop, as well as suggestions for the Public Transport Improvement Board. The present Consultants would welcome the opportunity to participate in and help facilitate this event and the launch of the Forum for Transport and Development in Fiji.

11. Public submissions on bus safety

11.1. Minister's statement on bus safety

In early September 2008, the Minister for Works, Transport and Public Utilities issued a statement on bus safety, explaining that the LTA had been directed to review bus safety, including the following safety measures:

- Pursuant to Regulation 50(1) (PSV) Regulation 2000, imposition of a realistic revocation age on all omnibuses in Fiji, in consultation with the Fiji Bus Operators Association and international benchmarking for reasonable revocation age limit. It is a national concern that approximately more than fifty percent of omnibuses are over twenty years in construction age.
- Regulatory amendment for inclusion of emergency exit doors and windows on all omnibuses, including omnibuses that have sealed glass doors and windows.
- Regulation to ban carriage of all dangerous goods on any omnibus, particularly gas, kerosene, benzene and flammable items.
- Regulation to reduce from twelve months to six months for all omnibus to require Certificate of Fitness and Certificate of Road Worthiness, with the exception of omnibuses ten years or less in construction age.
- Regulation to impose mandatory appropriate fire extinguishers including the number and type of such fire extinguishing equipment.
- Regulation to impose mandatory certificate from accredited firm in respect to compliance of fire fighting equipment, standards etc, as a condition for issuance of Certificate of Fitness for all omnibuses by Land Transport Authority.
- Regulation to impose mandatory First Aid training and certification of all omnibus PSV drivers licensed by Land Transport Authority, appropriate First Aid kits to be placed on all omnibuses and OHS legislation compliance.
- Regulation to impose regular audits on the bus companies, conducted to LTA with the appropriate powers to ensure regular and preventative maintenance and repair is conducted on all omnibuses in adherence to compliance standards and best interest of public safety.
- Any other measures, regulation, compliance and standards to ensure improvement in public safety in accordance to section 8 of the Act in respect to the Land Transport Authority's road safety mandatory role and obligation. (Information, 2008).

The Minister of Works and Transport invited public submissions on this topic and an advertisement was published in the Fiji Times on 5 September 2008. Three public submissions were received from:

- Consumer Council of Fiji
  (ten pages: Consumer Council of Fiji, 2008).
- Fiji Bus Operators Association
  (nineteen pages: Fiji Bus Operators Association, 2008).
- Josefa Rainima, Civil Aviation Authority of the Fiji Islands
  (three pages: Rainima, 2008).

11.2. Summary of public submissions on bus safety

11.2.1. The Consumer Council of Fiji

The Consumer Council of Fiji (CCF) pointed out that although travelling by bus was one of the safest means of transport, it was essential that the bus industry demonstrated a clear safety culture, with appropriate vehicle standards and trained staff. The CCF cited statistics suggesting that between 1997 and 2006 there had been about 280 accidents involving buses in Fiji, resulting in ten fatalities. In 2008, there had been six significant bus accidents reported in the press, three of which involved fatalities, including the Raiwaqa Bus tragedy near Sigatoka on 28 August 2008, in which twelve people died.

Commenting on the Minister's proposals, the Consumer Council of Fiji had the following observations.

- There should be an upper age limit for imported buses, and the bus industry should make use of existing fiscal incentives to purchase new buses.
- All buses should have easily accessible emergency exit doors and windows
  - Emergency exit windows must be easily removed (not screwed in)
  - Buses should have two doors, one for entry and one for exit

- Local bus body fabrication should be banned or strictly controlled with severe penalties for non-compliance with safety standards
- Dangerous goods (flammable materials) should be banned from buses
- All buses should have six-month tests, not just buses over ten years
- All buses should be fitted with fire extinguishers (fines for non-compliance)
- All buses to have first aid kits and all drivers trained in their use
- All bus companies to have regular safety audits (with penalties for failures)
- Bus companies should be responsible, and be held responsible, for bus safety.

In addition the Consumer Council suggested

- The bus companies should strictly comply with the existing provision for use of fire resistant materials in buses and the LTA should enforce this.
- Bus records should be improved to allow external safety audits
- Bus brake standards should include dual circuits and/or anti-lock braking systems (ABS)
- Introduce accreditation system for bus operators
- Develop a code of practice for buses
- Limit route licenses to six years to stimulate the bus industry and consider the public interest and quality of the operator when considering license applications
- Review regulatory requirements and update fine levels to encourage compliance
- Increase the third party insurance cover (currently, FJD 4000 a person or FJD 40,000 per bus).

11.2.2. The Fiji Bus Operators Association

The Fiji Bus Operators Association (FBOA) welcomed the initiative on bus safety, but stressed the need to consult with all stakeholders, including the bus operators, prior to changes in the regulatory framework. They made the following points

- Bus travel is generally very safe and is the safest mode of public transport
- Poor road conditions and rising operating costs is adversely affecting the bus fleet
- FBOA has a history of collaborating with the regulatory authorities to provide safe and economical public transport.

Concerning the proposed amended regulations, the FBOA made the following observations:

- LTA already has the power to remove unsafe vehicles (Regulation 50), and it should use this power. It is the condition of a bus that is important, not its age. There is no need for a revocation age limit. Any revocation should be based on condition and operational fitness for purpose.
- Regulation 52 already specifies the requirements for emergency exits and so there is not need for further regulation. Existing regulations have not necessarily been enforced, and the industry and the regulator should work together for appropriate designs for new vehicle bodies and affordable options for existing vehicles.
- The FBOA supports measures to ban flammable cargo (already covered by Regulation 23 (1) (o) prohibiting dangerous articles). A public awareness campaign is needed to educate the public, and the onus should be on the public not to carry dangerous goods on buses.
- The FBOA does not support routine six monthly testing for all buses, as it would put a strain on the bus industry and testers. Legislation already exists (Regulation 8 of the Land Transport Regulations Amendment of 2003, Legal notice 49) provides the LTA with the power to issue bus fitness certificates for less than one year, if they have reason to doubt that fitness will be maintained for 12 months. This should be used to provide six months tests on potentially suspect vehicles, rather than the whole fleet.
- The FBOA supports the carrying of fire extinguishers and points out Regulation 52 (35) already provides the regulatory framework. The LTA and the operators should agree on the appropriate equipment to be carried. Similarly, existing regulations cover the inclusion of fire extinguishing equipment in bus body design.
- Buses already carry first aid equipment and the FBOA would be happy for first aid training to be included in existing defensive driving courses. There is no need for new regulations.
- The LTA already carries out vehicle auditing, and there is no need for additional regulation.
- The FBOA believes that truck chasses can be safely used to make buses. No incidents of bus safety issues due to truck chasses have been reported. LTA has all the regulatory powers

necessary to refuse to licence any vehicle based on a truck chassis that is thought to be a safety risk. There is no need for new regulation.

The FBOA made the following additional observations and recommendations:

- Poor road conditions are a major contributor to safety problems. Improving road conditions will improve bus safety.
- Rigorous safety regulation should be applied to all public transport vehicles including minibuses and carriers.
- Public awareness of safety issues and correct behaviour on buses should be increased
- The limit of Third Party insurance cover should be increased from FJD 4000 to FJD 100,000 per passenger and that claims be limited to this sum.

12. Contact details of key informants

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14. Tables and background data

14.1. Accidents involving buses

Table 34: Accidents involving bus operators for the years 1997–2006.

Year	*Category*			*Division*				*Total*
	Fatal	*Hospitalised*	*Not hospitalised*	*South*	*East*	*West*	*North*	
2006	2	6	56	3	5	56	0	64
2005	0	13	13	3	3	16	4	26
2004	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*
2003	0	9	15	7	3	19	3	32
2002	0	8	21	14	6	8	7	35
2001	4	8	23	14	6	8	7	35
2000	1	9	28	11	5	16	6	38
1999	*na*	*na*	*na*	*na*	*na*	*na*	*na*	*na*
1998	1	21	29	9	16	25	1	51
1997	2	4	27	8	0	24	1	33

Source: CCF based on Bureau of Statistics, Road Traffic Accidents Report 1997–2006. na = data not available

Table 35: Some newspaper reports of accidents involving buses in 2007-2008

Source	*Report date*	*Category*	*Operator*	*Brief description*
Fiji Times	30 August 2008	Fatal	Raiwaqa Bus	Bus caught fire and went off the road killing 10 people and injuring 36 others near Navuevu village in Sigatoka on the night of Thursday 28 August 2008.
Fiji Times	3 August 2008	Minor	Parmod Enterprises	On afternoon of Friday 1 August a bus ran off the road and into a drain in Seaqaqa–Savusavu highway.
Fiji Sun	20 June 2008	Minor	Unknown	It was reported that a victim (Ishwaar Chand) had been hit by a bus in Nadi bus stand in 2007.
Fiji Times	21 May 2008	Fatal	Unknown	On the night of Tuesday 20 May, a bus carrying 40 passengers collided with a truck in Veisari near Montfort Boys Town outside Lami.
Fiji Times	17 September 2008	Fatal	Maharaj Bus	School bus catches fire as it passed Volivoli village town around 3.45pm. More than 70 Students of Cuvu College were travelling towards Sigatoka town.
Fiji Times	17 September 2008	Minor	Valley Bus	A bus heading towards Sigatoka Town rolled down the hill in Nacoclevu.

Source: Consumer Council of Fiji based on the cited newspapers

14.2. Road route licences

Table 36: Road Route Licences (RRL) issued at December 2008

Company	*RRL No*	*Issue date*	*Expiry date*	*Main route*
A K Naicker & Sons Buses	12/19/2	4/5/95	4/5/05	Nadi/Mulomulo/Bukuya/Nadi
Akbar Buses Limited	12/13/5	28/4/98	28/4/08	Tavua/Yaladro
Akbar Buses Limited	12/14/19	9/3/98	9/3/08	Vaileka/Tavua/Ba
Akbar Buses Limited	12/14/2	7/2/96	7/2/06	Vaileka/Tavua/Ba
Akbar Buses Limited	12/14/27	16/12/98	16/12/08	Lautoka/Rakiraki/Lautoka Express
Akbar Buses Limited	12/14/3	19/6/97	19/6/07	Ba/Vaileka/Ba
Allied Transport Company Limited	12/15/8	19/8/99	19/8/09	Ba/Toge/Balevuto
Atunaisa Qabale	12/6/50	28/11/95	28/11/05	Suva / Muaivuso
Baitul Motors	12/12/4	8/7/98	8/7/08	Tavua/Vatukoula/Koro No.1
Bulileka Transport Ltd	12/23/23	6/10/96	6/10/06	Labasa/ Bulileka
Bulileka Transport Ltd	12/23/49	6/10/96	6/10/06	Labasa/Navidamu/Seva
Bulileka Transport Ltd	12/23/53	28/10/97	28/10/07	Labasa/Navidamu/Vunimako/Seva
Buresala Transport Ltd	12/9/90	25/6/07	25/6/17	Suva/Levuka/Suva
Central Transport Co Ltd	12/6/4	30/9/05	29/9/15	Suva/Vatuwaqa
Central Transport Co Ltd	12/6/6	13/3/07	7/4/17	Suva/Samabula South
Central Transport Co Ltd	12/6/7	13/3/07	7/4/17	Suva/CWM Hospital
Central Transport Co Ltd	12/6/8	31/3/06	31/3/16	Suva /Toorak
Chattur Lal	12/7/148	25/6/06	25/6/16	Matainabou/Wainibokasi/Nausori
Chiman Lal	12/16/11	19/1/96	19/1/06	Tavua / Ba / Lautoka / Ba / Votua
Citiline Bus Services Limited	12/6/2	14/3/07	14/3/17	Suva / Rewa St / Raiwaqa
Citiline Bus Services Limited	12/6/48	24/4/06	31/3/16	Suva/Laucala Bay Rd/Grantham
Citiline Bus Services Limited	12/6/49	26/1/00	26/1/10	Suva/Rewa Street
Citiline Bus Services Limited	12/6/9	18/9/06	5/10/16	Suva/Nabua/Mead Rd/Cunningham/Suva
Coral Sun Fiji Ltd	12/10/19	25/3/96	25/3/06	Nadi Airport /Suva
Cosmic Holding Ltd	12/15/4	30/11/98	30/11/08	Ba/Vunisamaloa
Dawasamu Transport Ltd	12/7/24	22/1/99	22/1/09	Suva/Nausori/Baulevu
Dayal Buses Limited	12/18/13	4/5/97	4/5/07	Lautoka/Nadi
Dayal Buses Limited	12/19/4	4/5/96	4/5/06	Sabeto/Nadi/Votualevu/Nadi/Malolo
Dayal Buses Limited	12/19/8	30/9/98	30/9/08	Nadi / Vatutu
Dee Cees Bus Services Limited	12/6/10	11/11/06	25/9/16	Suva/Kinoya/Nasinu
Dee Cees Bus Services Limited	12/6/19	22/9/06	25/9/16	Suva/ Samabula North
Dee Cees Bus Services Limited	12/6/21	22/9/06	25/12/16	Suva/ Samabula North
Dee Cees Bus Services Limited	12/6/33	14/11/06	25/12/16	Suva/Nadera
Dee Cees Bus Services Limited	12/6/36	14/11/06	25/12/16	Suva/Nadera
Dee Cees Bus Services Limited	12/7/25	2/9/06	25/12/16	Baulevu/Nausori/Suva
Deluxe Road Transport (Fiji) Limited	12/9/96	9/7/97	9/7/07	Dawasamu/Matavatucou/Suva/Ucunivanua/Suva
Dominion Transport Co Limited	12/18/34	28/11/95	28/11/05	Lautoka/Nadi/Sigatoka
Dominion Transport Co Limited	12/20/10	14/7/96	14/7/06	Nadi/Batiri/Nabila
Dominion Transport Co Limited	12/20/3	30/6/87	30/6/97	Nadi/Sigatoka
Empire Bus Services Limited	12/15/15	10/3/98	10/3/08	Ba/Raviravi/Feeder Road/Navau Terminus/Sorokoba/Sarava/Maganlal Jiwa
Empire Bus Services Limited	12/15/2	9/6/97	9/6/07	Ba Town Service
Empire Bus Services Limited	12/9/6	9/6/97	9/6/07	Suva/Tavua/Vatukoula
Empire Bus Services Limited	12/9/7	7/2/98	7/2/08	Suva/Vaileka/Ellington/Dobuilevu/Nayavu/Vaileka/Ba
Estol Transport Limited	12/10/66	18/2/99	18/2/09	Suva/Lautoka Circular
Estol Transport Limited	12/7/104	3/12/97	3/12/07	Makoi/Narere/Nausori
Estol Transport Limited	12/7/147	26/9/00	26/9/10	Baulevu/Nausori/Suva
Estol Transport Limited	12/7/160	18/12/02	18/12/12	Noco, Wainibokasi, Nausori, Suva

Estol Transport Limited	12/7/21	12/7/05	10/7/15	Matainabou/Wainibokasi/Nausori
Estol Transport Limited	12/7/43	3/9/99	3/9/09	Lokia/Nausori/Suva
Estol Transport Limited	12/7/72	11/5/97	11/5/07	Makoi/ Nausori
Fiji Transport Company	12/14/4	19/6/97	19/6/07	Vaileka/Tavua/Ba
Fiji Transport Company	12/15/24	8/8/98	8/8/08	Ba/Raviravi/Lautoka
Fiji Transport Company	12/16/12	16/12/98	16/12/08	Ba/Lautoka Express
Fiji Transport Company	12/16/3	19/6/97	19/6/07	Lautoka/Vatukoula
Fiji Transport Company	12/16/5	19/6/97	19/6/07	Lautoka/Ba
Fiji Transport Company	12/16/7	23/1/96	23/1/06	Lautoka/Ba & Lautoka/Teidamu
Flying Prince Transport Co Ltd	12/11/3	7/2/98	7/2/08	Vaileka/Ellington/Navolau/Korokula/Nanukuloa/Saivou /Balabala/Dobuilevu
George Transport Ltd	12/6/25	18/8/06	22/8/16	Suva/Nepani/Tovata/Nasinu 9½ miles/Naulu/Suva
George Transport Ltd	12/6/25	18/8/06	22/8/16	Suva/Nepani/Tovata/Nasinu 9½ miles/Naulu/Suva
George Transport Ltd	12/7/150	31/12/97	31/12/07	Makoi Stage1&2/Suva
Intercities Buses Services Ltd	12/9/13	19/6/97	19/6/07	Suva/Lautoka
Intercities Buses Services Ltd	12/9/72	8/11/98	8/11/08	Suva/Lautoka Express
Island Buses Limited	12/7/102	3/12/97	3/12/07	Kinoya/ Nausori
Island Buses Limited	12/7/141	27/7/98	27/7/08	Nausori/Nakasi
Island Buses Limited	12/7/3	22/9/99	22/9/09	Suva/Nausori/Raralevu
Island Buses Limited	12/7/45	10/12/05	27/7/15	Wainibuku/Naulu/Nausori
Island Buses Limited	12/7/52	16/6/96	16/6/06	Nausori/Vatuwaqa/USP
Island Buses Limited	12/7/99	21/6/96	21/6/06	Suva/Nausori
Kadar Buksh Transport Company Limited	12/16/24	30/5/89	30/5/99	Lautoka/Ba Express
Kadar Buksh Transport Company Limited	12/16/8	30/6/97	30/6/07	Lautoka / Ba / Sarava / Koroqaqa
Kadar Buksh Transport Company Limited	12/18/23	16/3/97	16/3/07	Lautoka/Field 40/Rifle Range
Khan Buses Limited	12/18/9	4/5/96	4/5/06	Nadi/Lautoka
Latchman Buses Limited	12/23/34	24/9/96	24/9/06	Labasa Town Service
Latchman Buses Limited	12/23/55	3/12/98	3/12/08	Labasa/ Savusavu/ Labasa Express Service
Latchman Buses Limited	12/7/152	8/10/89	8/10/99	Noco, Wainibokasi, Nausori, Suva
Lautoka General Transport Ltd	12/15/5	30/7/97	30/7/07	Ba/Vulavula
Lautoka General Transport Ltd	12/16/17	29/9/98	29/9/08	Lautoka/Nacilau
Lautoka General Transport Ltd	12/16/2	23/1/96	23/1/06	Ba / Vatukoula / Lautoka
Lautoka General Transport Ltd	12/16/20	16/12/98	16/12/08	Lautoka/Ba
Lautoka General Transport Ltd	12/16/21	15/1/96	15/1/06	Lautoka/Ba Express
Lautoka General Transport Ltd	12/16/9	4/5/97	4/5/07	Lautoka/Ba
Lautoka General Transport Ltd	12/17/18	10/7/98	10/7/08	Banaras/Tavakubu/Hospital/Lautoka
Lautoka General Transport Ltd	12/17/19	5/7/98	5/7/08	Ltk/Natabua/Saru/Tawatawa
Lautoka General Transport Ltd	12/18/19	4/5/97	4/5/07	Lautoka/Nadi
Lodoni Transport Limited	12/9/94	19/11/06	31/1/17	Dawasamu/Matavatucou/Suva/Ucunivanua/Suva
M R Khan Bros Transport Co.	12/18/14	16/3/97	16/3/07	Sabeto/Nadi/Lautoka
M R Khan Bros Transport Co.	12/18/15	16/3/97	16/3/07	Sabeto/Lautoka
M R Khan Bros Transport Co.	12/18/16	16/3/97	16/3/07	Sabeto / Keolaiya / Nadi
Maharaj Buses Limited	12/10/101	20/10/97	20/10/07	Navua/Suva
Moti Chandra & Co Ltd	12/16/10	4/5/95	4/5/05	Lautoka/Ba
Moti Chandra & Co Ltd	12/18/17	4/5/95	4/5/05	Veiseisei/Vuda/Lautoka
Moti Chandra & Co Ltd	12/18/18	8/3/00	8/3/10	Lautoka/Nadi
Nadera Transport Ltd	12/6/54	8/7/98	8/7/08	Suva/ Narere Roundabout
Nadera Transport Ltd	12/7/47	25/2/96	25/2/06	Nadera /Nausori
Nadi General Transport	12/18/10	12/5/95	12/5/05	Nadi/Lautoka
Nadi General Transport	12/18/46	3/11/98	3/11/08	Sabeto/Lautoka/Nadi
Nadi General Transport	12/18/47	3/11/98	3/11/98	Sabeto/Nadi/Lautoka
Nairs Transport Company Limited	12/6/39	23/7/07	18/4/17	Suva/Nasinu/Wainibuku/Naulu
Nairs Transport Company Limited	12/7/122	27/4/98	27/4/08	Narere/Suva

Nairs Transport Company Limited	12/7/39	23/7/07	18/4/17	Wainibuku/Naulu/Nausori
Nakasi Davuilevu Buses Limited	12/6/57	16/7/07	18/4/17	Suva/Nasinu
Nasese Bus Co. Ltd	12/6/3	31/3/06	31/3/16	Suva/Nasese
Nasese Bus Co. Ltd	12/9/92	27/5/97	27/5/07	Suva/Korovou/Matavatucou/Dawasamu/Burewai
Northwest Transport Company	12/14/28	6/12/96	6/12/06	Ba/ Tavua/ Ba
Northwest Transport Company	12/14/29	6/12/96	6/12/06	Vatukoula/Tavua/Ba
Northwest Transport Company	12/14/5	4/1/96	4/1/06	Tavua / Ba
Pacific Transport Co Ltd	12/10/15	18/3/06	18/3/16	Suva/Nadi via Highway
Pacific Transport Co Ltd	12/10/02	18/3/06	6/2/16	Suva / Lautoka
Pacific Transport Co Ltd	12/10/20	6/8/97	6/8/07	Suva / Lautoka
Pacific Transport Co Ltd	12/10/31	22/3/98	22/3/08	Suva / Lautoka / Suva Express
Pacific Transport Co Ltd	12/10/44	24/8/97	24/8/07	Suva/Lautoka Express
Pacific Transport Co Ltd	12/10/05	18/3/96	18/3/06	Suva/Korolevu
Pacific Transport Co Ltd	12/10/79	8/11/98	8/11/08	Ba/Suva/Ba/Express via Queens Rd
Pacific Transport Co Ltd	12/10/99	9/12/99	9/12/09	Suva/Lautoka Express
Pacific Transport Co Ltd	12/17/12	2/2/99	2/2/09	Lautoka City Service
Pacific Transport Co Ltd	12/17/4	4/5/97	4/5/07	Lautoka/Tavakubu
Pacific Transport Co Ltd	12/18/4	18/3/06	18/3/16	Lautoka/Nadi
Pacific Transport Co Ltd	12/20/2	5/2/07	3/5/17	Sigatoka/Nadi
Pacific Transport Co Ltd	12/25/9	14/5/06	17/3/16	Vuna/Waiyevo/Naivakawau
Paradise Transport Co Ltd	12/18/44	23/9/97	23/9/07	Naduri/Sigatoka/Nadi/Lautoka
Paradise Transport Co Ltd	12/18/45	24/8/97	24/8/07	Sigatoka/Lautoka Express
Paradise Transport Co Ltd	12/20/4	4/1/96	4/1/06	Nadi/Maro/Veisabasaba/Malomalo
Paradise Transport Co Ltd	12/21/3	30/5/96	30/5/06	Sigatoka/Kavanagasau/Raiwaqa
Parmod Enterprises Ltd	12/23/52	21/8/95	21/8/05	Labasa/Korotari
Raiwaqa Buses Limited	12/6/17	30/9/95	30/9/05	Suva/Laucala Bay Rd/Grantham
Rajendra Chand	12/22/2	24/11/05	24/11/05	Levuka/Bureta
Ravindras Transport Ltd	12/9/77	10/10/96	10/10/06	Ucunivanua/Suva
Reef Resort Tours Ltd	12/26/14	24/4/96	24/4/06	Nadi Hotel/ Nausori Highlands
Reef Resort Tours Ltd	12/26/28	13/12/96	13/12/06	Tubakula/Sigatoka/Raymond Burr's Orchid G
Rotuma Island Council	12/29/2	16/5/00	16/5/10	Rotuma Island
Shankar Singh Transport Ltd	12/10/102	28/10/97	28/10/07	Navua/Suva
Sher Ali Khan Buses	12/15/11	19/8/89	19/8/99	Vatusui/Moto/Ba/Tabataba/Namosau Rd
Sher Ali Khan Buses	12/15/19	22/9/97	22/9/07	Ba/Benai/Koronubu/Namau
Sher Ali Khan Buses	12/15/20	22/9/97	22/9/07	Ba/Qerelevu/Nakavika
Sher Ali Khan Buses	12/15/3	7/11/95	7/11/05	Ba/Veisaru,Ba/Busabusa,Ba/Shnakar Pundit Residence
Shore Buses Limited	12/6/14	2/2/07	2/2/17	Suva/Delainavesi
Shore Buses Limited	12/6/15	2/2/97	2/2/17	Suva/ Wailekutu
Shore Buses Limited	12/6/16	2/2/07	2/2/17	Suva/Kalokolevu/Naboro
Sunbeam Transport Limited	12/10/100	19/12/99	19/12/09	Suva/Lautoka Express
Sunbeam Transport Limited	12/10/32	28/11/95	28/11/05	Suva/Sigatoka
Sunbeam Transport Limited	12/10/41	7/8/96	7/7/06	Suva/Lautoka A/C Express
Sunbeam Transport Limited	12/10/85	8/11/98	8/11/08	Suva/Lautoka Circ. Express
Sunbeam Transport Limited	12/10/97	10/3/99	10/3/09	Suva/Ba/Suva Exp. via Queens Rd
Sunbeam Transport Limited	12/21/11	27/8/96	27/8/06	Sigatoka/Kulukulu/Malevu
Sunbeam Transport Limited	12/9/2	25/3/96	25/3/06	Suva/Lautoka/Suva/Ba
Sunbeam Transport Limited	12/9/42	20/9/98	20/9/08	Suva/Lautoka Express
Sunbeam Transport Limited	12/9/5	3/1/97	3/1/07	Suva/ Vatukoula
Sunbeam Transport Limited	12/9/59	12/2/97	12/2/07	Suva/Lautoka Mid. Exp.
Sunbeam Transport Limited	12/9/8	15/3/96	15/3/06	Suva/Navesau
Sunbeam Transport Limited	12/9/91	28/11/95	28/11/05	Suva/Lautoka/Suva Express
Sunset Express	12/10/98	10/12/99	10/12/09	Suva / Lautoka / Suva Express

Tacirua Transport Ltd	12/6/23	20/11/07	31/1/17	Suva/ Tamavu/ Colo - i - Suva
Tacirua Transport Ltd	12/6/24	20/11/06	4/9/16	Suva/Tamvua/Lakha Singh
Tacirua Transport Ltd	12/6/28	22/2/07	31/1/17	Suva/Wailoku
Tacirua Transport Ltd	12/7/110	3/12/97	3/12/07	Narere Housing Authority / Nausori
Tacirua Transport Ltd	12/7/14	20/1/99	20/1/09	Vunivesi/Sawani/Nausori
Tacirua Transport Ltd	12/7/146	3/1/07	31/1/17	Nausori / Suva Exp. Via Princes Road
Tacirua Transport Ltd	12/7/149	30/7/06	5/10/16	Nausori / Muanikoso
Tacirua Transport Ltd	12/7/18	20/11/97	20/11/07	Corbett Avenue/Waila/Nausori/Dilkusha Rd/Waila
Tacirua Transport Ltd	12/8/9	12/7/99	12/7/09	Suva/Serea/Lmvna/Vtkrsa/Nvni/Nlvtu/Nsri/Suva
Tailevu Buses Limited	12/9/32	9/7/97	9/7/07	Suva/Nausori/Korovou/Dawasamu
Taunovo Bus Co Ltd	12/10/104	29/9/98	29/9/08	Taunovo/Deuba village/Vunibau Village
Taunovo Bus Co Ltd	12/10/17	28/10/97	8/8/17	Suva/Galoa/Navua
Taunovo Bus Co Ltd	12/10/47	29/9/98	29/9/08	Galoa/Navua
Tavua General Transport	12/13/8	12/7/99	12/7/09	Tavua/Nadrau
Tebara Transport Limited	12/7/139	12/9/97	12/9/07	Bau/Nausori/Suva/Bau
Tebara Transport Limited	12/7/151	8/10/00	8/10/10	Nausori/Kings Rd/Nasinu
Tebara Transport Limited	12/7/42	16/7/96	16/7/06	Nakaikogo/Toga/Nausori/Suva
Tebara Transport Limited	12/7/5	16/10/05	15/10/15	Suva/Nausori/Bau/Matainabou
Tebara Transport Limited	12/7/6	12/10/05	15/10/15	Wainibokasi/Nausori/Suva
Tebara Transport Limited	12/7/08	31/3/05	15/10/15	Suva/Nausori/Cautata
Tui Narere Transport Limited	12/7/124	27/4/98	27/4/08	Narere/Suva
Tui Narere Transport Limited	12/7/140	8/8/98	8/8/08	Narere/Suva
Valley Buses Ltd	12/21/10	3/3/99	3/3/09	Tubarua/Sigatoka/Lautoka/Express Services
Valley Buses Ltd	12/21/6	4/10/96	4/10/06	Sigatoka Valley Rd. / Sigatoka
Vatukoula Express Service	12/9/65	11/3/98	11/3/08	Suva/Vatukoula Express
Vatuvure Holding Co Ltd	12/9/93	24/2/98	24/2/08	Suva/Korovou/Ucunivanua
Vishnu Holdings Limited	12/24/10	NULL	NULL	Savusavu/Napuka, Savusavu/Drekeniwai, Savusavu/Wailevu
Vishnu Holdings Limited	12/24/15	14/4/97	14/4/07	Savusavu/Tabia/Vuinadi/Korotasere
Wainibokasi Transport Co Ltd	12/7/26	26/10/99	26/10/09	Wainibokasi/Matainabou/Nausori
Wainibuka Transport Co. Ltd	12/7/138	12/9/97	12/9/07	Bau/Nausori
Waiqele Buses Limited	12/23/28	15/11/96	15/11/06	Labasa / Batinikama
Waiqele Buses Limited	12/23/28	15/11/96	15/11/06	Labasa / Batinikama
Waiqele Buses Limited	12/23/33	21/11/98	21/11/08	Naviavia/Wailevu/Savusavu/Dawara/Lbsa
Waiqele Buses Limited	12/23/5	15/5/95	15/5/05	Labasa/Waiqele
Waiqele Buses Limited	12/24/11	16/5/97	16/5/07	Savusavu/Labasa
Westbus (Fiji) Ltd	12/19/5	4/5/95	4/5/05	Nadi / Savalau / Votualevu
Westbus (Fiji) Ltd	12/19/6	19/5/96	19/5/06	Nadi, Denarau, Lavusa, Vuniyasi, Buabua, Malakua, Yavusania, Toge, Svhschool, Airport, Vatutu

Source: Land Transport Authority (LTA)

Table 37: Bus operators showing number of RRLs and school routes

Operator	*Consolidated RRLs*	*School Routes*
A K Naicker & Sons Buses	1	0
Akbar Buses Limited	5	4
Allied Transport Company Limited	1	1
Atunaisa Qabale	1	0
Baitul Motors	1	1
Bulileka Transport Ltd	3	0
Buresala Transport Ltd	1	0
Central Transport Co Ltd	4	2
Chattur Lal	1	1
Chiman Lal	1	1
Citiline Bus Services Limited	4	9
Coral Sun Fiji Ltd	1	0
Cosmic Holding Ltd	1	0
Dawasamu Transport Ltd	1	2
Dayal Buses Limited	3	2
Dee Cees Bus Services Limited	6	12
Deluxe Road Transport (Fiji) Limited	1	0
Dominion Transport Co Limited	3	0
Empire Bus Services Limited	4	13
Estol Transport Limited	7	3
Fiji Transport Company	6	0
Flying Prince Transport Co Ltd	1	1
George Transport Ltd	3	10
Intercities Buses Services Ltd	2	0
Island Buses Limited	6	2
Kadar Buksh Transport Company Limited	3	3
Khan Buses Limited	1	0
Latchman Buses Limited	3	3
Lautoka General Transport Ltd	9	3
Lodoni Transport Limited	1	1
M R Khan Bros Transport Co.	3	2
Maharaj Buses Limited	1	1
Moti Chandra & Co Ltd	3	1
Nadera Transport Ltd	2	0
Nadi General Transport	3	2
Nairs Transport Company Limited	3	2
Nakasi Davuilevu Buses Limited	1	2
Nasese Bus Co Ltd	2	1
Northwest Transport Company	3	1
Pacific Transport Co Ltd	13	3
Paradise Transport Co Ltd	4	3
Parmod Enterprises Ltd	9	1
Raiwaqa Buses Limited	1	0
Rajendra Chand	1	0
Ravindras Transport Ltd	1	0
Reef Resort Tours Ltd	2	0
Rotuma Island Council	1	0
Shahabud Dean Transport	2	9
Shankar Singh Transport Ltd	1	1
Sher Ali Khan Buses	4	1
Shore Buses Limited	3	5
Sunbeam Transport Limited	12	1

Sunset Express	1	0
Tacirua Transport Ltd	9	10
Tailevu Buses Limited	1	0
Taunovo Bus Co Ltd	3	1
Tavua General Transport	1	0
Tebara Transport Limited	6	8
Tui Narere Transport Limited	2	0
Valley Buses Ltd	2	0
Vatukoula Express Service	1	0
Vatuvure Holding Co Ltd	1	0
Vishnu Holdings Limited	2	1
Wainibokasi Transport Co Ltd	1	1
Wainibuka Transport Co Ltd	1	1
Waiqele Buses Limited	5	1
Westbus (Fiji) Ltd	2	2
Total	**198**	**135**

Source: Land Transport Authority (LTA)

14.3. Bus operating costs

Table 38: Items that may be included in estimating gross bus operating costs

Depreciation	Security
Fuel	Spare parts
Oil and lubricants	Signs
Bus Repairs	Staff expenses
Building Repairs	Subscriptions
Tyres and tubes	Rates
Directors Salaries	Travelling expenses
Other Wages	Uniforms
Bank Charges	Valuations
Registration	VAT
Bus Stand charges	Water
Insurance	Workers compensation
Interest	Accountancy
Rent	Advertising
Telephone etc	Amortisation
FNPF	Audit costs
TPAF Levy	Business Licence
Finance Charges	Consultancy
Freight, cartage duty	Casual Staff
Hire charges	Cleaning
Legal fees	Donations
Medical	Entertainment
Health and Safety	Electricity
Compensation	Road Fund levy
Postage	Wheel tax
Printing	Profit
Security	

15. Consultants' Itinerary

Mon 8 Dec
Consultants Paul Starkey and Sion Haworth arrive in Fiji.
Visits: Bus terminals Sigatoka and Suva. Interviews with bus users
Introductory meeting: Transport planning unit

Tue 9 Dec
Meeting: Save the Children, Fiji. Meeting: ECREA. Visits: Suva bus terminal

Wed 10 Dec
Meeting: Save the Children, Fiji.
Meeting: Land Transport Authority (LTA) and Technical Working Group

Thu 11 Dec
Meeting: Land Transport Authority. Meeting: Bus Operators Association. Meeting: Consumer Council

Fri 12 Dec
Meeting: Dept of Roads. Meeting: Deputy Secretary for Transport
Brief Meetings: Permanent Secretary, Hon Minister
Meeting: Director, Dee Cees Buses and visit bus depot

Sat 13 Dec
Meeting: Managing Director, Tacirua Buses
Field visits to bus routes around Vunidawa area. Interviews with rural transport stakeholders

Sun 14 Dec
Review of documents and work on financial models

Mon 15 Dec
Meeting: Lami Council. Meeting: Fiji Institute of Technology
Meeting: Traffic Department, Fiji Police, Nabua Police station. Visit: Raiwaqa Bus Depot
Visit and discussions (operators and passengers): Minivan terminals in Suva and Nausori.
Informal traffic counts Suva-Nausori corridor

Tue 16 Dec
Meeting: Fiji Islands Revenue and Customs Authority
Meeting: Ministry of Finance, National Planning and Sugar Industry

Wed 17 Dec
Meeting: Permanent Secretary, Ministry of Works and Transport
Meeting: National Planning Office, Ministry of Finance, National Planning and Sugar
Meeting: Permanent Secretary, Ministry of Industry, Tourism, Trade and Commerce
Visit: Lal Coach Builder

Thu 18 Dec
Travel along Queen's Road and visit to Sigatoka, with discussions with bus passengers and transport stakeholders. Meeting: LTA, Sigatoka. Meeting: Navosa District Office
Meeting: New owner of Valley Comfort Transport Ltd.
Meeting: Director, Dee Cees Buses and visit bus depot

Fri 19 Dec
Workshop on Fiji Bus industry at LTA. Consultants' presentation of their initial findings.
Meeting: CEO, LTA. Mid-term debriefing, Transport Planning Unit.

Sat 20 Dec
Travel and interviews with transport stakeholders along King's Road (Paul Starkey).
Sion Haworth departed Fiji.

Sun 21 Dec
Visit to Lautoka General Transport Bus Depot and travel to several bus routes for interviews with transport stakeholders.

Mon 22 Dec
Paul Starkey departed Fiji.

Mon 12 Jan
Paul Starkey arrived in Fiji. Visit to flood-damaged infrastructure in and around Nadi. Travel to Suva, via Queens Road. Meeting and itinerary planning with Transport Planning Unit

Tues 13 Jan
Travel Suva-Labasa (weather disrupted). Meeting and discussions with LTA and bus operators

Wed 14 Jan
Observation of flooding in Labasa. Discussions on bus industry with Governor
Visit to some bus routes and damaged infrastructure (weather disrupted)
Discussions with passengers and bus operators. Travel Labasa-Savusavu (weather disrupted).

Thu 15 Jan
Visit to bus routes Savusavu to Natewa and Loa in Vanua Levu.
Discussions village leaders, passengers, transport operators

Fri 16 Jan
Discussions with transport operators and passengers, Savusavu
Meeting: Team Leader, LTA, Savusavu. Discussions, MD Vishnu Holdings Ltd (Bus company)
Travel Savusavu-Nadi-Suva (weather disrupted).

Sat 17 Jan
Visit Suva bus station and discussions with stakeholders

Sun 18 Jan
Document review and report drafting. Arrival in Fiji of Dr Sion Haworth

Mon 19 Jan
Meeting and discussions with DS and TPU, MWT. Meeting and discussions with LTA

Tue 20 Jan
Meeting and discussions Fiji Van and Carrier Association
Route visits with minivan operators Nasinu. Visit and discussions: S Nair Bus Depot

Wed 21 Jan
Meeting and discussions, Deputy Secretary, Education. Meeting and discussions, Asia Development Bank.
Passenger survey, Suva Bus Terminal. Passenger survey, Nausori

Thu 22 Jan
Passenger survey, Navua, Sigatoka. Meeting and discussions, Fiji Development Bank
Meeting and discussions: Managing Director, Tacirua Buses
Meeting and discussions, LTA staff. Meeting and discussions: Managing Director, Vishnu Buses

Fri 23 Jan
Passenger survey, Suva. Meeting: Managing Director, Dee Cees Buses
Discussions. Transport Planning Unit

Sat 24 Jan
Meeting: Managing Director, Shore Buses. Visit: Pacific Transport bus depot

Sun 25 Jan
Work on summary report and presentation

Mon 26 Jan
Visit and discussions, Pacific Transport bus depot. Visit and discussions, Sunbeam bus depot

Tue 27 Jan
Presentation of consultants' findings to TWG. Discussions with LTA and TPU

Wed 28 Jan
Meeting Consumer Council. Visit and discussions, Tacirua Transport. Paul Starkey departed Fiji

Thu 29 Jan
Studied operation of school bus runs. Visit and discussions, Tebara buses.
Meeting Transport Planning Unit

Fri 30 Jan
Meeting Transport Planning Unit. Meeting LTA. Meeting members of Bus Operators Association

Sat 31 Jan
Sion Haworth departed Fiji.

16. Fiji Bus Industry Review Terms of Reference

Purpose of the Review

The Government through the Land Transport Authority (LTA) and Ministry of Works & Transport, in conjunction with the Fiji Bus Operators' Association have agreed to carry out a comprehensive review of the Bus industry in Fiji.

Background

The Land Transport Authority is the authority responsible for the control of all issues related to Public Service Vehicle within Fiji. One of its core functions is to ensure so far as is practicable the provision of road transport passenger services adequate to meet the requirements of the public. Furthermore it is also mandated under law to devise, initiate, and carryout measures for the coordination, improvement and economic operation of passenger transport and goods transport by road.

The review will look at matters such as the future direction of the bus industry, review of bus fares as currently administered, review of the current road route licences, bus operators' business operations, improper use of subsidies by some bus operators, arrangements under the LTA statutes, an assessment of the quality of the services provided by the bus operators, introduction of fuel saving measures, review of Government subsidies and other benefits currently available to the bus operators, and other matters of interest to all the stakeholders in this industry.

Rationale

As per the joint press release by the Government of Fiji (Attorney General and Minister for Justice, Electoral Reform, Public Enterprise and Anticorruption) and the Fiji Bus Operators Association of 9 July 2008, Government is acutely aware of the effect of the rising global price of fuel. This rise is affecting not just Fiji, but every other country in the world. It is not affecting just the bus operators but all industries and businesses in Fiji. Except that the bus fares are regulated so cost increases cannot be passed on like other industries and it caters for the underprivileged in society. It is the intention of the Government to support the public transport system in Fiji over the long term as a viable alternative to private transport.

Objectives of the Review

The main objectives of the Review are as follows:

A. The evaluation of the current regulatory regime

i. Review arrangements under the LTA statutes and relevant policies;
ii. Safety or roadworthiness of existing bus fleet.
iii. Review of the current route licences;
iv. Substantive review of the LTA Act and corresponding Regulations in relation to bus fare structure;
v. To see the possibilities of having subsidiary legislation specifically dealing with the standardisation of bus fares;
vi. An assessment of the quality of the services provided by the bus operators:
    a. Frequency, reliability, security, cleanliness of bus, overcrowding, cut-off age of buses.
    b. Introduction of at least six monthly/or random inspections.
    c. Introduction of a Self regulation/Quality Management System & Code of Conduct.
vii. LTA's processes in verifying accuracy and monitoring of running costs for each bus Company.
viii. Assessment of the quality of roads where buses are providing services.
ix. Adverse affect on the bus industry by other modes of transport (both legal and illegal).

B. The effectiveness of the subsidies

i. Review the processes, procedures and legislation or policies that have been put in place to administer and monitor the implementation of concessions provided to the bus industry;
ii. Review of government subsidies and other benefits currently available to the bus operators (Inclusive of Senior Citizens, disabled/physically impaired & School Children, etc.); and
iii. Determine the financial loss to the bus industry which is being offset by the current concessions/subsidies;
iv. Evaluate the effectiveness of:
    a. providing concessions/subsidies to the bus industry;
    b. short term viability of existing subsidy bus services/routes.
    c. long term viability of existing subsidy by Government.

d. Options for levels of fare structure or government subsidy,
(Consultant to develop at least three levels of economic models in conjunction with the Technical Working Group).

v. Determine whether the financial position of the industry can be improved through alternative measures such as rerouting arrangements, etc.

vi. To determine whether subsidies are abused.

C. Identification of uneconomical routes/schedule

i. Review and identify uneconomical routes and schedules;

ii. Rationalise Bus route maps / schedules;

iii. Options for other alternative modes of transport.

D. Current loopholes within the bus industry

i. Leakages due to pilferage of bus takings by bus drivers;

ii. Consideration of electronic ticketing machines;

iii. Prepaid tickets/cards to be considered;

iv. Review bus operators' business operations in terms of efficiency e.g.

- Periodic maintenance checks,
- Switching off engines at bus stations,
- Driver standards & attitudes,
- Qualified personnel,
- Proper servicing facilities,
- Smoke emissions & noise pollution.

E. The future direction of the bus industry

i. Provide recommendations for the future direction of the bus industry; to include but not limited to the following:

a. The improvement of the industry through alternative measures such as rerouting arrangements, etc.

b. A cost model or formula be developed to establish the appropriate value or benchmark for calculating a subsidy or concessionary rate;

c. Efficiency gains and effectiveness of existing bus operations:
   - Rationalise bus stopping patterns e.g. not every 100m/passenger waving down buses, safety of existing bus stops.
   - Size of buses, e.g. Off peak services to use smaller buses how does this affect bus subsidy.

d. Price structure with respect to different stages: Urban [3km/stage]; Rural [2km/stage], in conjunction with the road conditions.

e. Introduction of fuel saving measures;

f. Bus driver behaviour: Larceny by servant; Proper training of Drivers.

g. Decentralising of bus terminating point.

h. Future viability of existing number of bus operators. As the Government subsidises the existing industry, there may be opportunities to reduce the number of bus operators, operating a more uniform bus fleet which can provide Government and bus users economies of scale (cost efficiencies) over the long term.

i. Other matters of interest to all the stakeholders in the industry.

j. Policing of illegal transport operations that may impact upon bus operators' sustainability.

Methodology

An independent consultant with extensive experience in the public land transport sector and in particular bus industry, bus management and in particular similar type operations within the region will conduct the Review. The consultant will have full responsibility to the Ministry of Transport and the Technical Working Group (TWG) for the satisfactory completion of the Review, including the preparation of the Review Report.

Working arrangements will be put in place to ensure close accountability to the TWG. Day-to-day support and management of the Review will be provided by the TWG.

In terms of this Review, the clients will be considered to be the agencies in the TWG. The TWG is comprised of representatives of the Ministry of Transport, Land Transport Authority, Ministry of Finance & National Planning, Fiji Islands Revenue & Customs Authority (FIRCA) all based in Suva, Fiji.

The consultant will take the following broad approach in carrying out these tasks:

i. Attend an initial briefing in Suva with the TWG;
ii. Direct involvement of Bus Company staff and Management for the purpose of ensuring access to quality information on the Company operations and to secure their commitment to the recommendations of the review;
iii. Examine relevant study reports, annual reports, financial reports etc;
iv. Consult with relevant stakeholders in the country and outside, including the municipal councils, private companies, relevant ministries/departments, NGOs, customers and bus industry experts;
v. Solicit feedback from stakeholders by means of surveys, phone and email;
vi. Brief the TWG on preliminary findings and recommendations towards the end of the fieldwork;
vii. Prepare draft reports and a final report as specified in this TOR.

Reporting Requirements

1 Subject to flight schedules if consultant is from overseas, the Review is expected to take approximately three to four weeks of fieldwork. One week will be available for preliminary work and report writing. The Review is expected to commence in September, with an interim report expected to be presented to the TWG on Monday 3 November 2008.
2 Within two weeks of the completion of the fieldwork, the Consultant will prepare and submit the First Draft Report for consideration by the Steering Group, which will respond with its comments.
3 The Consultant will consider these comments in preparing and submitting the Draft Final Report to the TWG, seeking their feedback.
4 If necessary, the Consultant will then incorporate any final changes and modifications suggested or required by the TWG into the Final Report (no later than one week after receipt of the shareholders response to the Draft Final Report and no later than one month after distribution of the Draft Final Report).
5 The structure of the reports will closely follow the TORs for the Review. The report must be clear on how the Consultant addressed each objective of the Review. The final report will include an Executive Summary (including a list of recommendations). The main body of the report shall not exceed more than 50 pages. Recommendations are expected to focus on the main issues, but not limited to address any new issue that may evolve.
6 All reports will be prepared in Microsoft Word and PDF formats (PC version) and submitted to the TWG in electronic form.
7 LTA will take responsibility for producing and distributing, as appropriate, bound hard copies of the report.
8 The copyright for the report will remain with the TWG agencies.

Expected Review Outputs

- Briefing on preliminary findings and recommendations
- First Draft Report
- Draft Final Report
- Final Report