



Australian Government

Department of Transport and Regional Services

Bureau of Transport and Regional Economics

# Bass Strait *Passenger Vehicle*

## EQUALISATION SCHEME

BTRE MONITORING REPORT NO. 7

2002–2003



# **BASS STRAIT PASSENGER VEHICLE EQUALISATION SCHEME**

**BTRE MONITORING REPORT NO. 7  
2002-03**

Bureau of Transport and Regional Economics  
Canberra  
April 2004

*Disclaimers*

The BTRE seeks to publish its work to the highest professional standards. However, it cannot accept responsibility for any consequences arising from the use of information herein. Readers should rely on their own skill and judgement in applying any information or analysis to particular issues or circumstances.

Cover photographs courtesy of TT-Line Company Pty Ltd

## CONTENTS

|                          |   |           |
|--------------------------|---|-----------|
| <b>FOREWORD</b>          |   | <b>ix</b> |
| <b>EXECUTIVE SUMMARY</b> |   | <b>xi</b> |
| <b>CHAPTER 1</b>         | <b>INTRODUCTION</b>   | <b>1</b>  |
|                          | Overview of Bass Strait travel                              | 1         |
|                          | Services and operators                                      | 2         |
|                          | The Scheme  | 2         |
|                          | Requirement for monitoring                                  | 3         |
|                          | Outline of the report                                       | 3         |
| <b>CHAPTER 2</b>         | <b>OPERATION OF THE SCHEME</b>                              | <b>5</b>  |
|                          | Coverage  | 5         |
|                          | Payment of the rebate                                       | 6         |
|                          | Claims for reimbursement                                    | 7         |
|                          | Payments under the Scheme                                   | 8         |
| <b>CHAPTER 3</b>         | <b>CHANGES IN FARES AND TRAFFIC LEVELS</b>                  | <b>11</b> |
|                          | Fares   | 11        |
|                          | Traffic   | 15        |
| <b>CHAPTER 4</b>         | <b>IMPACT OF THE SCHEME ON TRAFFIC</b>                      | <b>19</b> |
|                          | Econometric model   | 19        |
|                          | Trend comparisons   | 22        |
|                          | Assessment  | 25        |
| <b>CHAPTER 5</b>         | <b>TT-LINE REVENUE AND EXPENSES</b>                         | <b>27</b> |
|                          | Operating revenue   | 27        |
|                          | Operating expenses  | 29        |
|                          | Profitability   | 31        |
| <b>CHAPTER 6</b>         | <b>CONCLUDING COMMENTS</b>                                  | <b>33</b> |
| <b>APPENDIX I</b>        | <b>MONITORING PROVISIONS IN 2002 MINISTERIAL DIRECTIONS</b> | <b>35</b> |

|                    |                                       |           |
|--------------------|---------------------------------------|-----------|
| <b>APPENDIX II</b> | <b>MODEL OF SEA PASSENGER TRAFFIC</b> | <b>37</b> |
| <b>REFERENCES</b>  |                                       | <b>41</b> |

## TABLES

|      |  |    |
|------|--|----|
| 1.1  | Number of adult passengers travelling between Tasmania and the mainland (return journeys), 2002-03 | 2  |
| 2.1  | One-way trip rebates for eligible vehicles on Bass Strait route, 2002-03                           | 7  |
| 2.2  | TT-Line one-way net fares for selected vehicle classes, 30 June 2003                               | 8  |
| 2.3  | Reimbursements to TT-Line by claim period, 2001-02 and 2002-03                                     | 10 |
| 3.1  | Benchmark one-way passenger fares for <i>Spirit of Tasmania I/II</i> , end of 2002-03              | 12 |
| 3.2  | Impact of rebates on TT-Line one-way fares, 1996, 2002 and 2003                                    | 13 |
| 3.3  | TT-Line's average reimbursement per motor vehicle passenger, 1996-97 to 2002-03                    | 15 |
| 3.4  | TT-Line traffic (one-way trips) and voyages, 1995-96 to 2002-03                                    | 16 |
| 3.5  | TT-Line traffic per voyage, 1995-96 to 2002-03   | 17 |
| 4.1  | Estimated impact of the Scheme on motor vehicle passenger numbers, 1996-97 to 2002-03              | 20 |
| 4.2  | Number of adult visitors travelling to Tasmania, by purpose and mode, 1996-97 to 2002-03           | 23 |
| 4.3  | Eligible vehicles for which reimbursement paid, 2001-02 and 2002-03                                | 26 |
| 5.1  | Selected financial information for TT-Line, 1996-97 to 2002-03                                     | 28 |
| 5.2  | Financial indicators (adjusted) for TT-Line, 1996-97 to 2002-03                                    | 29 |
| II.1 | Time-series data used to re-estimate econometric model   | 38 |



## FIGURES

|     |  |    |
|-----|--|----|
| 2.1 | Rebate reimbursements under Bass Strait Passenger Vehicle Equalisation Scheme, 1996-97 to 2002-03    | 9  |
| 2.2 | Reimbursements to TT-Line by claim period, 1996-97 to 2002-03  | 10 |
| 3.1 | Numbers of passengers and vehicles carried by TT-Line (one-way trips), 1990-91 to 2002-03            | 16 |
| 4.1 | Numbers of sea and air passengers carried across Bass Strait (return journeys), 1993-94 to 2002-03   | 24 |
| 4.2 | Number of sea passengers carried across Bass Strait (one-way trips), by category, 1995-96 to 2002-03 | 25 |
| 5.1 | TT-Line's operating revenue and expenses (unadjusted), 1992-93 to 2002-03                            | 27 |
| 5.2 | TT-Line's revenue (unadjusted) and reimbursements, 1992-93 to 2002-03                                | 30 |





## FOREWORD

This report presents the results of the BTRE's seventh annual review of the Bass Strait Passenger Vehicle Equalisation Scheme. It covers the operation and impact of the Scheme up to (and including) 2002-03.

The BTRE gratefully acknowledges the assistance provided by TT-Line, Tourism Tasmania, and the Tasmanian Assistance Services team at Centrelink.

The study was undertaken by Kym Starr and Krishna Hamal.

Dr Judith Winternitz  
Acting Executive Director

Bureau of Transport and Regional Economics  
Canberra  
April 2004



## EXECUTIVE SUMMARY

Tourism and many other activities in Tasmania rely heavily on transport services across Bass Strait. In 2002-03, TT-Line provided the main ferry service on this route, carrying 22 per cent of adult passengers (air and sea) and most of their accompanied motor vehicles.

TT-Line's operations were substantially upgraded in September 2002. The *Spirit of Tasmania* (and the *Devil Cat*) were replaced by the *Spirit of Tasmania I* and *Spirit of Tasmania II*. The new ships provided improved facilities, more frequent services, and greater passenger and vehicle capacity.

## THE SCHEME

The Bass Strait Passenger Vehicle Equalisation Scheme provides a rebate against the fare charged by a ferry operator to transport an accompanied passenger vehicle across Bass Strait. The aim is 'to reduce the cost of seagoing travel for eligible passengers'. The Scheme, which is funded by the Australian Government, commenced in September 1996.

Enhancements to the Scheme were introduced in September 2002. The off-peak and shoulder season rebates (for cars, buses, motor cycles) were increased, and the Scheme was extended to cover additional types of vehicles.

The level of payments under the Scheme is open-ended, and varies with the number (and mix) of eligible vehicles carried by sea across Bass Strait. Payments to all operators totalled \$31.8 million in 2002-03, a rise of almost 100 per cent from the figure of \$16.0 million in the previous year. Around 99.9 per cent of payments were made to TT-Line.

The higher payments in 2002-03 reflected the impact of traffic growth and the enhancements to the Scheme. Average reimbursement per motor vehicle passenger was \$73.51 in 2002-03, a rise of 26 per cent compared to the previous year. There had previously been little change in average reimbursement.

## FARES

The enhancements to the Scheme resulted in lower fares for eligible vehicles in the off-peak and shoulder seasons and for newly-eligible types of vehicles. TT-

Line also reduced many passenger fares from September 2002. Passenger fares were subsequently increased by an average of 2.5 per cent in January 2003.

Trends in fares can be analysed in terms of a 'representative' package fare – the fare for two adult passengers in a standard cabin and accompanied by a standard vehicle. From June 2002 to June 2003, this fare (plus an adjustment for meals) declined by around 4.0 per cent for off-peak travel and by 4.3 per cent for shoulder travel. There was a rise of 4.6 per cent for peak-season travel, as the rebates in this season were not changed.

Rebates under the Scheme, which were passed on to travellers in the form of lower vehicle fares, continued to reduce the cost of sea travel to and from Tasmania during 2002-03. The reductions (i.e. the 'representative' package fare compared to the total payment received by TT-Line) ranged from 24 per cent in the peak period to 30 per cent in the off-peak period.

## **TRAFFIC**

The enhancements to the Scheme and the increase in capacity facilitated substantial growth in TT-Line's traffic in 2002-03. The number of passengers was up by 45 per cent compared with the previous year, and the number of vehicles rose by 56 per cent. This growth far exceeded any other annual increases in the period since the introduction of the Scheme.

Sea traffic across Bass Strait has trended upwards over the long term, although there have been short-term declines as a result of factors such as the Gulf War and engine problems on the *Spirit of Tasmania*. From 1995-96 to 2002-03, passenger traffic grew by 134 per cent and vehicle traffic rose by 234 per cent.

## **FINANCIAL POSITION**

Traffic growth and the enhancements to the Scheme contributed to a significant increase in TT-Line's revenue in 2002-03. Total operating revenue of \$195.5 million included one-off gross proceeds of \$61.2 million from the sale of the *Spirit of Tasmania*. Trading revenue (i.e. total operating revenue less revenue from the ship sale) was \$134.3 million, 56 per cent higher than the comparable figure of \$86.2 million in the previous year.

Payments under the Scheme were equivalent to 24 per cent of TT-Line's trading revenue in 2002-03. This was well above the figure of 18 per cent in the previous three years. The increase particularly reflected the impact of the enhancements.

TT-Line's total operating expenses of \$192.9 million in 2002-03 included one-off expenses of \$62.7 million associated with the carrying value of the *Spirit of Tasmania* at the time of its sale. Trading expenses (i.e. total operating expenses less the carrying value) were \$130.2 million. This was 70 per cent above the comparable figure of \$76.6 million in the previous year.

The increase in TT-Line's trading expenses significantly exceeded the growth in passenger traffic (45 per cent) and vehicle traffic (56 per cent). This reflected up-front costs to expand capacity, higher operating costs with two large ships and more frequent services, and higher borrowing expenses.

TT-Line earned an operating profit of \$2.6 million in 2002-03. This was a substantial turnaround from the operating loss of \$21.3 million in the previous year, when a trading profit of \$9.6 million was more than offset by a write-down of the value of the *Spirit of Tasmania*. Trading profit declined to \$4.1 million in 2002-03, reflecting the relative growth of trading revenue and trading expenses over the year.

## IMPACT OF THE SCHEME

Since the 2000-01 review, the BTRE has used an econometric model to assess the impact of the Scheme. The model was re-specified and re-estimated for the 2002-03 review, with an extra variable (ship capacity) and more recent data.

Analysis based on the model indicates that, in 2002-03, the Scheme resulted in an additional 75 000 motor vehicle passenger trips across Bass Strait. This was an increase of 21 per cent relative to the likely situation without the Scheme. The BTRE estimates that, over the period from 1995-96, an average of 37 per cent of the annual growth in traffic was attributable to the Scheme. The remaining 63 per cent reflected changes in household income and other factors.

The econometric model performs reasonably well in terms of standard statistical tests. However, the detailed results should be interpreted with caution as the model is affected by data limitations.

The BTRE has also compared trends in traffics that are directly affected by the Scheme with trends in other, related traffics. The comparisons indicate that:

- The rate of growth for leisure travellers using sea transport (mainly covered by the Scheme) has been well above the rate of growth for leisure travellers using air transport (not covered by the Scheme).
- Sea passenger traffic (mainly covered by the Scheme) moved from stagnation to growth when the Scheme started, while air traffic (not covered by the Scheme) moved from growth to stagnation.
- The number of sea passengers with an accompanying motor vehicle (mainly covered by the Scheme) has increased, but the number of berth-only sea passengers (not covered by the Scheme) has declined.

The results of the econometric model and the trend comparisons provide strong support for the view that the Scheme has contributed significantly to growth in sea passenger travel across Bass Strait. This traffic growth, and the higher payments under the Scheme, have directly contributed to changes in TT-Line's financial position.



## CHAPTER 1 INTRODUCTION

Tasmania relies on air and sea transport for the movement of cargo and passengers to or from locations outside the State. Passenger and vehicle services across Bass Strait are particularly important, as tourism is a major component of Tasmania's economy.

### OVERVIEW OF BASS STRAIT TRAVEL

Table 1.1 provides information on passenger travel between Tasmania and the mainland in 2002-03.

Approximately 1 070 000 adult passengers travelled across Bass Strait in 2002-03, an increase of 15 per cent compared to the previous year (BTRE 2003, p. 2). There were 652 000 domestic and overseas visitors to Tasmania (61 per cent of total passengers) and 418 000 journeys by Tasmanian residents to the mainland (39 per cent of total passengers) in 2002-03. The number of visitors to Tasmania increased by 132 000 (25 per cent) compared to the previous year, and the number of Tasmanians travelling to the mainland rose by 8 000 (2 per cent).

Table 1.1 indicates that most of the domestic and overseas visitors travelled to Tasmania for holiday/leisure (53 per cent), to visit friends and relatives (23 per cent), or for business purposes (17 per cent). Around 73 per cent of visitors used air transport across Bass Strait, and 27 per cent travelled by sea.

The proportion of visitors using sea transport in 2002-03 was well above the proportion in the previous year (21 per cent), as the growth in sea passenger traffic (61 per cent) was much higher than the growth in air passenger traffic (16 per cent). In absolute terms, the number of sea passengers increased by 68 000 persons and the number of air passengers rose by 64 000 persons over this period.

Table 1.1 indicates that Tasmanian residents who travelled to the mainland primarily went for holiday/leisure (33 per cent), to visit friends and relatives (31 per cent) or for business purposes (24 per cent). Around 86 per cent of Tasmanians travelled by air, and 14 per cent used sea transport. The proportion of Tasmanians using sea transport was above the proportion in the previous year (12 per cent), as sea passenger traffic grew significantly (25 per cent) and air passenger traffic declined slightly (1 per cent) between 2001-02 and 2002-03.



## SERVICES AND OPERATORS

Ferries operated by TT-Line provided the main sea passenger service across Bass Strait in 2002-03. These vessels carried 22 per cent of adult passengers (air and sea), and most of the accompanied motor vehicles, on the route.

The *Spirit of Tasmania*, which started service across Bass Strait in 1993, operated on the route until September 2002. It could carry around 1300 passengers and up to 360 vehicles and 70 standard shipping containers on each voyage.

The introduction of two replacement vessels in September 2002 provided substantially higher capacity across Bass Strait. These vessels, the *Spirit of Tasmania I* and *Spirit of Tasmania II*, can each carry up to 1400 passengers and 600 cars but have a maximum passenger capacity of 1040 on night crossings.

In addition to the TT-Line vessels, two other ships carried small numbers of vehicles across Bass Strait in 2002-03. The *Matthew Flinders* (with facilities for up to 12 passengers and 300 tonnes of cargo) was operated by Southern Shipping, and the *Searoad Mersey* (cargo only) was operated by Patrick Shipping.

## THE SCHEME

In August 1996, the Commonwealth Minister for Transport and Regional Development announced the introduction of the Bass Strait Passenger Vehicle

TABLE 1.1 NUMBER OF ADULT PASSENGERS TRAVELLING BETWEEN TASMANIA AND THE MAINLAND (RETURN JOURNEYS), 2002-03<sup>a</sup>

| <i>Purpose of travel</i>        | <i>Air</i>     | <i>Sea</i>     | <i>Total</i>     |
|---------------------------------|----------------|----------------|------------------|
| Visitors to Tasmania            |                |                |                  |
| Holiday/leisure                 | 222 799        | 120 296        | 343 095          |
| Visiting friends & relatives    | 113 609        | 33 773         | 147 382          |
| Business                        | 96 924         | 13 348         | 110 272          |
| Convention, conference, seminar | 21 325         | 1 439          | 22 764           |
| Other/not specified             | 18 571         | 10 150         | 28 721           |
| Total visitors                  | 473 228        | 179 006        | 652 234          |
| Tasmanians                      |                |                |                  |
| Holiday/leisure                 | 114 355        | 21 624         | 135 979          |
| Visiting friends & relatives    | 109 952        | 21 002         | 130 954          |
| Business                        | 94 650         | 5 627          | 100 277          |
| Convention, conference, seminar | 11 199         | 614            | 11 813           |
| Moving out of Tasmania          | 5 752          | 7 650          | 13 402           |
| Other/not specified             | 22 038         | 3 637          | 25 675           |
| Total Tasmanians                | 357 946        | 60 154         | 418 100          |
| <b>Total passengers</b>         | <b>831 174</b> | <b>239 160</b> | <b>1 070 334</b> |

a. Excludes minors less than 14 years old (27 806 visitors, 29 136 Tasmanians) and day trippers (13 506 visitors, 13 859 Tasmanians).

Source Tourism Tasmania (2003).

Equalisation Scheme (the Scheme). The Minister noted that the resulting fare reductions would help to increase the demand for travel across Bass Strait, with direct benefits to the tourist industry and potential growth in jobs, investment and population for Tasmania (Sharp 1996, p. 1).

The Scheme applied to travel from 1 September 1996. It provided a rebate against the fare charged by a ferry operator to transport an accompanied passenger vehicle across Bass Strait. On 1 March 2001, the Scheme was extended to cover the carriage of vehicles between King Island and mainland Australia. As sea passenger services were not provided on the King Island route, the rebate was made available for passenger vehicles carried by sea where the driver travelled by commercial air service on or about the same day.

The Scheme operates under a set of Ministerial Directions. In the first part of 2002-03 it was administered in accordance with Directions issued in January 2001 by the Minister for Regional Services, Territories and Local Government (DOTARS 2001). New Ministerial Directions issued in September 2002 resulted in substantial changes to the Scheme (DOTARS 2002). The previous seasonal structure for rebates was replaced by constant rebates throughout the year, and the Scheme was expanded to include additional vehicle types.

The Ministerial Directions are administered by Tasmanian Assistance Services (part of Centrelink). During 2002-03, direction and funding for the Scheme were provided by the Transport Programmes Division of the Department of Transport and Regional Services (DOTARS).

## **REQUIREMENT FOR MONITORING**

The Ministerial Directions require the Bureau of Transport and Regional Economics (previously the Bureau of Transport Economics) to monitor the effectiveness of the Scheme on an annual basis (see appendix I). They state that the Bureau should have specific regard to movements in a service operator's revenue and annual operating costs, and to the annual number of eligible passengers, eligible passenger vehicles and passengers travelling under related bookings.

The Bureau has prepared six previous reports on the Scheme, the most recent covering 2001-02. It has generally concluded that the fare reductions provided by the Scheme have resulted in increased sea travel across Bass Strait.

## **OUTLINE OF THE REPORT**

This report presents the results of the seventh annual review of the Scheme, covering 2002-03. It incorporates data provided by TT-Line (from its management database and annual reports), Tasmanian Assistance Services and Tourism Tasmania.

Chapter 2 describes the operation of the Scheme in terms of its coverage, payment of the rebate, claims for reimbursement, and levels of payments.

Chapter 3 covers changes in fares and traffic levels. The impact of the Scheme on traffic levels is examined in chapter 4, which includes the results of econometric modelling undertaken by the BTRE.

Changes in TT-Line's revenue and expenses are considered in chapter 5.

Chapter 6 provides some concluding comments.

Appendixes present the monitoring provisions in the 2002 Ministerial Directions and information on the re-estimation of the econometric model.

## CHAPTER 2 OPERATION OF THE SCHEME

The operation of the Bass Strait Passenger Vehicle Equalisation Scheme can be considered in terms of its coverage, payment of the rebate, claims for reimbursement, and payments under the Scheme.

### COVERAGE

The Scheme initially covered three types of passenger vehicles (motor cars, buses and motorcycles) with an accompanying driver.<sup>1</sup> From 1 September 2002 it was extended to include motorhomes, eligible passenger vehicles towing a caravan, and push bikes. The Scheme applies to any ship operator providing passenger and vehicle services between Tasmania and mainland Australia, or carrying vehicles between King Island and mainland Australia.

The Ministerial Directions specify that a rebate payment may still be available in a situation where, due to unforeseen circumstances, an eligible passenger is unable to accompany the vehicle on the ferry. The driver must provide a boarding pass for air travel across Bass Strait, documentary evidence of rental car hire and the shipment of the eligible vehicle across Bass Strait on or about the same date as the air travel, and personal details for payment of the rebate.

Any new operator entering the trade is eligible to participate in the Scheme under the same conditions as an existing operator. This arrangement is intended to provide certainty in the market as to how the Scheme will apply to a new operator's services.

Three operators carried eligible vehicles across Bass Strait during 2002-03:

- TT-Line, operating the *Spirit of Tasmania* up to September 2002, and then the *Spirit of Tasmania I* and *Spirit of Tasmania II* (Devonport – Melbourne);
- Patrick Shipping, operating the *Searoad Mersey* (weekly calls at King Island as part of a Devonport – Melbourne service);<sup>2</sup> and

---

<sup>1</sup> Motor cars also include vans, utilities, four-wheel-drive vehicles and station wagons. Buses include minibuses, coaches and buses, being motor vehicles equipped to seat more than eight adult persons.

<sup>2</sup> Patrick Shipping carried eligible vehicles between King Island and Melbourne, with eligible passengers travelling on a commercial air service.

- Southern Shipping, operating the *Matthew Flinders* (Bridport—Port Welshpool via Flinders Island and Deal Island).

This report focuses on TT-Line, which carries most of the sea passengers and vehicles on the route. It was reimbursed a total \$31.8 million (99.9 per cent of total payments) for the carriage of 218 677 eligible vehicles in 2002-03 (Tasmanian Assistance Services, pers. comm. Sep. 2003).

Payments to the other operators were \$30 000 (200 motor cars) to Patrick Shipping and \$4 180 (29 motor cars) to Southern Shipping.

## PAYMENT OF THE REBATE

A rebate provided by a service operator under the Scheme takes the form of a reduction in an eligible passenger's vehicle fare. Concurrent with the payment for a booking by an eligible passenger, the operator deducts the rebate from the passenger's vehicle fare in accordance with a schedule in the Ministerial Directions. There are provisions for amendment of the rebate amount where the passenger subsequently changes aspects of his/her travel arrangements (i.e. type of vehicle, type of booking).

The net fare for an eligible passenger vehicle plus its driver is the sum of the vehicle and passenger gross fares<sup>3</sup> less the appropriate rebate. It is the fare actually paid by the passenger.

The BTRE's previous monitoring reports have used two adult fares for a 2-4 bunk inside cabin (the most numerous type of accommodation on the *Spirit of Tasmania*) and the fare for a passenger vehicle of up to five metres in length (the standard vehicle) to calculate the impact of the Scheme. This report uses a 3-4 berth inside cabin, the comparable (and most numerous) type of accommodation on the *Spirit of Tasmania I* and *Spirit of Tasmania II*, for the analysis of fares in 2002-03.

Due to the seasonal nature of demand, TT-Line's passenger and vehicle fares vary during the year. The rebate for the main Bass Strait route also varied on a seasonal basis until 1 September 2002, when constant rebates were introduced—the existing off-peak and shoulder season rebates were raised to the levels of the peak season rebates. Rebates on the King Island route had always been constant throughout the year.

Table 2.1 shows the rebates for the Bass Strait route in 2002-03. From 1 September 2002, the Scheme was expanded to cover additional types of vehicles. On the main Bass Strait route, the amount of the rebate could not exceed the ferry operator's gross fare for a particular type of vehicle—this limited the net fare for any vehicle to a minimum of zero.

---

<sup>3</sup> The gross fare is the amount charged by the service operator for the carriage of an eligible passenger and an eligible passenger vehicle, prior to the deduction of the rebate.

Table 2.2 shows TT-Line's net fares for accompanied vehicles at 30 June 2003. These fares are equivalent to the gross fare less the rebate for the relevant vehicle class (subject to a maximum reduction equivalent to the gross fare).

## CLAIMS FOR REIMBURSEMENT

The onus is on the service operator to determine the eligibility of a passenger for the rebate, apply the rebate to the passenger's gross fare, and claim reimbursement of the rebate from the Australian Government. The Ministerial Directions specify that a claimant is required to provide DOTARS with details (e.g. vehicle type) in a form approved by the Secretary of the Department.

A service operator is limited to no more than one claim for reimbursement in any one calendar month. The operator is allowed to claim:

- for an eligible passenger who has travelled within the previous 12 months; and
- subject to possible provision of a surety, for an eligible passenger who has not yet travelled but has booked and paid for travel to be undertaken during the period of no more than 6 continuous weeks for which the claim is made.

TABLE 2.1 ONE-WAY TRIP REBATES FOR ELIGIBLE VEHICLES ON BASS STRAIT ROUTE, 2002-03

| Period/route/eligible vehicle class        | \$                    |                       |                   |
|--|-----------------------|-----------------------|-------------------|
|  | Season                |                       |                   |
|  | Off-peak <sup>a</sup> | Shoulder <sup>b</sup> | Peak <sup>c</sup> |
| 1 July 2002—31 August 2002                 |                       |                       |                   |
| Main Bass Strait route                     |                       |                       |                   |
| Motor car or bus                           | 100                   | 120                   | 150               |
| Motorcycle                                 | 50                    | 60                    | 75                |
| King Island route                          |                       |                       |                   |
| Motor car or bus                           | 150                   | 150                   | 150               |
| Motorcycle                                 | 75                    | 75                    | 75                |
| 1 September 2002—30 June 2003              |                       |                       |                   |
| Main Bass Strait route & King Island route |                       |                       |                   |
| Motor car or bus                           | Up to 150             | Up to 150             | Up to 150         |
| Motorhome                                  | Up to 300             | Up to 300             | Up to 300         |
| Eligible passenger vehicle towing caravan  | Up to 300             | Up to 300             | Up to 300         |
| Motorcycle                                 | Up to 75              | Up to 75              | Up to 75          |
| Bicycle                                    | 21                    | 21                    | 21                |

a. 1 July 2002—31 August 2002 and 28 April 2003—30 June 2003.

b. 1 September 2002—6 December 2002 and 27 January 2003—27 April 2003.

c. 7 December 2002—26 January 2003.

*Note* The round-trip rebate is exactly double the one-way trip rebate.

*Sources* DOTARS (2001, pp. 15-16; 2002, pp. 10-11). TT-Line (2002a, pp. 18-19).

TT-Line provides Tasmanian Assistance Services with a completed claim form on a monthly basis. The form indicates the scheduled voyages and expected number of vehicles for the next period, and actual numbers for the previous period. Tasmanian Assistance Services determine the rebate on the basis of the schedule for the next period and an adjustment to reflect the difference between expected and actual activity in the previous period. Patrick Shipping also claims on a monthly basis, and Southern Shipping submits about five claims per year.

## PAYMENTS UNDER THE SCHEME

The level of payments under the Scheme is open-ended and varies with the number (and mix) of eligible vehicles carried by sea across Bass Strait. Figure 2.1 presents data on reimbursements to operators under the Scheme since 1996-97. It indicates a significant increase in payments (all operators), from \$8.5 million to \$31.8 million over this period.<sup>4</sup>

There was a particularly large rise in payments to operators in the most recent period. The increase of almost 100 per cent (from \$16.0 million to \$31.8 million) between 2001-02 and 2002-03 reflects higher rebates for travel in the off-peak and shoulder periods, extension of the Scheme to cover several new classes of

TABLE 2.2 TT-LINE ONE-WAY NET FARES FOR SELECTED VEHICLE CLASSES,  
30 JUNE 2003

|  | \$                     |                        |                    |
|--|------------------------|------------------------|--------------------|
| <i>Eligible vehicle class</i>  | <i>Off-peak season</i> | <i>Shoulder season</i> | <i>Peak season</i> |
| Push bike  | 0                      | 0                      | 6                  |
| Motorcycle   | 0                      | 0                      | 38                 |
| Motorcycle with sidecar/trailer  | 22                     | 22                     | 91                 |
| Standard cars/vehicles and vehicles towing trailers, < 2 metres wide                     |                        |                        |                    |
| 0.1-5.0 metres long  | 0                      | 0                      | 55                 |
| 5.1-6.0 metres long  | 27                     | 32                     | 96                 |
| Campervans/motorhomes, < 2 metres wide   |                        |                        |                    |
| 0.1-6.0 metres long  | 0                      | 0                      | 55                 |
| Campervans/motorhomes & vehicles towing caravans, > 6 metres long or > 2 metres wide     |                        |                        |                    |
| 0.1-7.0 metres long  | 0                      | 0                      | 84                 |
| > 7.0 metres long  | 25 per extra metre     | 49 per extra metre     | 63 per extra metre |
| Vehicles towing trailers or other specified vehicles, > 6 metres long or > 2 metres wide |                        |                        |                    |
| 0.1-6.0 metres long  | 67                     | 101                    | 171                |
| 6.1-7.0 metres long  | 150                    | 150                    | 234                |
| > 7.0 metres long  | 25 per extra metre     | 49 per extra metre     | 63 per extra metre |

Source TT-Line (2002a, pp. 20-21).

<sup>4</sup> It should be noted that payments in 1996-97 covered only 10 months, from the start of the Scheme in September 1996.

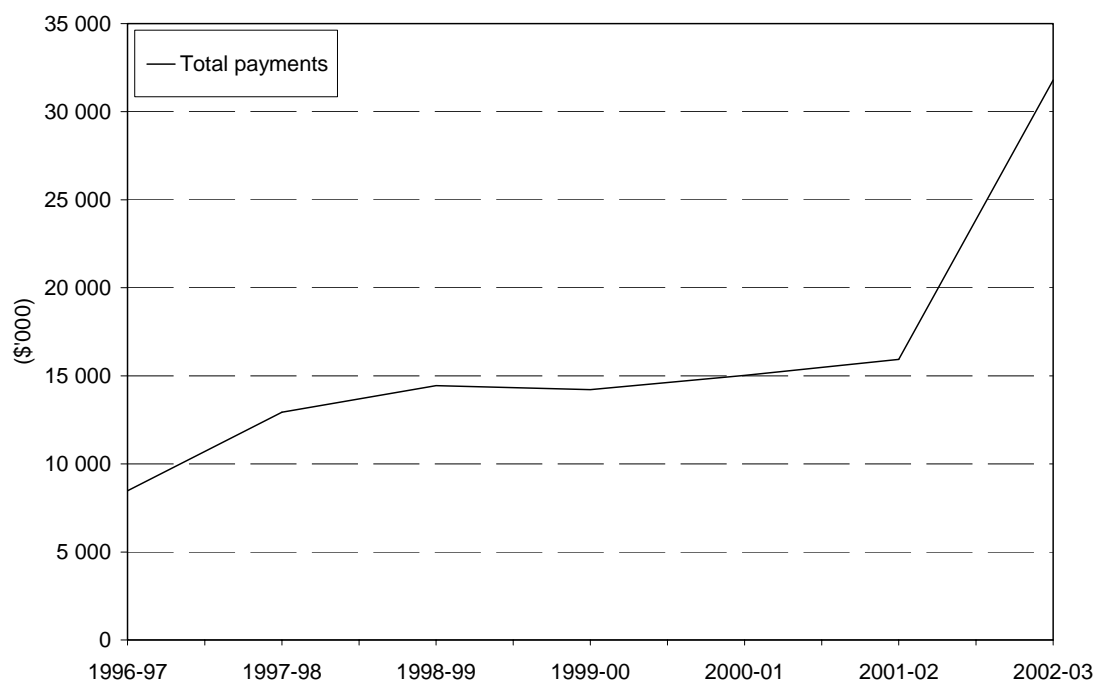
vehicles, and large increases in traffic facilitated by the expansion of shipping capacity across Bass Strait. Data provided by Tasmanian Assistance Services indicate that payments under the Scheme to all operators in 2002-03 comprised:

- \$28 707 860 for motor cars;
- \$1 398 787 for motorhomes;
- \$1 103 850 for caravans;
- \$522 100 for motorcycles;
- \$70 350 for buses; and
- \$24 948 for push bikes.

Table 2.3 presents data on reimbursements to TT-Line in individual claim periods during 2002-03 and the previous year. It indicates significant monthly variation in payments, reflecting the seasonal nature of traffic across Bass Strait. Substantial increases in payments occurred in most months over the two years. The small reduction for August (2002 compared to 2001) may reflect a deferral of travel by some passengers, who preferred to wait for the new ships (and the enhancements to the Scheme) in September 2002.

Figure 2.2 provides additional information on the timing of reimbursements. The pattern of payments from 1997-98 to 2001-02 was reasonably consistent, but differed significantly from the pattern in 1996-97. While the pattern in 2002-03 (albeit with higher payments) was similar to the pattern from 1997-98 to 2001-

FIGURE 2.1 REBATE REIMBURSEMENTS UNDER BASS STRAIT PASSENGER VEHICLE EQUALISATION SCHEME, 1996-97 TO 2002-03



Source Tasmanian Assistance Services (pers. comm. Sep. 2003) and earlier communications.



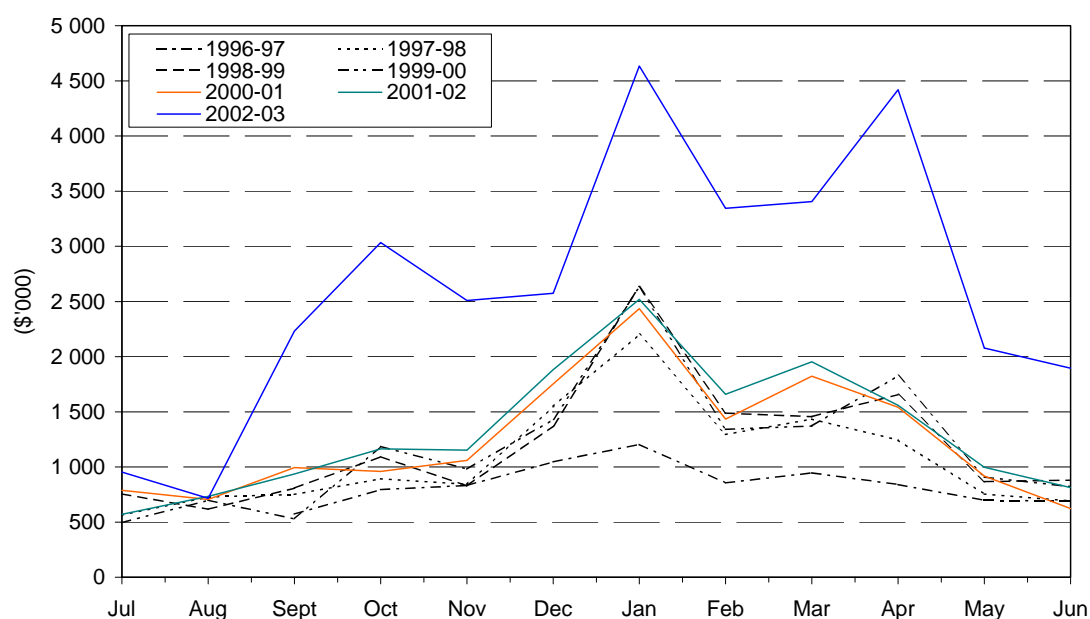
02, there were some changes after the modifications to the Scheme and the introduction of the new ships in September 2002. In particular, it appears that the October and April fluctuations became more pronounced in 2002-03. The data in table 2.3 suggest that the increases in payments for September, November and June were also significantly above average.

TABLE 2.3 REIMBURSEMENTS TO TT-LINE BY CLAIM PERIOD, 2001-02 AND 2002-03

| Claim period | 2001-02         |                   | 2002-03         |                   | Change in payments<br>(per cent) |
|--------------|-----------------|-------------------|-----------------|-------------------|----------------------------------|
|              | Claims<br>(no.) | Payments<br>(\$)  | Claims<br>(no.) | Payments<br>(\$)  |                                  |
| July         | 5 726           | 569 550           | 9 591           | 953 050           | 67.3                             |
| August       | 7 371           | 732 500           | 7 149           | 715 280           | -2.4                             |
| September    | 7 852           | 935 100           | 14 777          | 2 230 268         | 138.5                            |
| October      | 10 009          | 1 163 040         | 20 357          | 3 033 445         | 160.8                            |
| November     | 9 855           | 1 151 220         | 16 839          | 2 509 909         | 118.0                            |
| December     | 13 174          | 1 882 440         | 17 278          | 2 573 695         | 36.7                             |
| January      | 17 574          | 2 519 760         | 31 451          | 4 634 750         | 83.9                             |
| February     | 14 694          | 1 657 080         | 22 579          | 3 344 520         | 101.8                            |
| March        | 16 975          | 1 953 300         | 23 016          | 3 405 453         | 74.3                             |
| April        | 13 336          | 1 558 280         | 29 445          | 4 419 828         | 183.6                            |
| May          | 10 059          | 997 350           | 13 691          | 2 077 761         | 108.3                            |
| June         | 8 175           | 812 550           | 12 504          | 1 895 106         | 133.2                            |
| <i>Total</i> | <i>134 800</i>  | <i>15 932 170</i> | <i>218 677</i>  | <i>31 793 065</i> | <i>99.6</i>                      |

Source Tasmanian Assistance Services (pers. comm. Mar. 2003, Sep. 2003 ).

FIGURE 2.2 REIMBURSEMENTS TO TT-LINE BY CLAIM PERIOD, 1996-97 TO 2002-03



Source Tasmanian Assistance Services (pers. comm. Feb. 2001, May 2002, Mar. 2003, Sep. 2003).

## CHAPTER 3 CHANGES IN FARES AND TRAFFIC LEVELS

The 2002 Ministerial Directions require the BTRE to monitor the effectiveness of the Scheme on an annual basis, with specific regard to:

- movement in a service operator's annual operating costs;
- movement in an operator's revenue; and
- the annual numbers of eligible passengers, eligible passenger vehicles and passengers travelling under related bookings, carried by the operator.

The aim of the Scheme, which is 'to reduce the cost of seagoing travel for eligible passengers', is also relevant<sup>5</sup> (DOTARS 2002, p. 3). In addition, when announcing the Scheme, the Minister for Transport and Regional Development noted that it would help to kick-start the Tasmanian tourist industry and provide a boost to the State's economy as a whole (Sharp 1996, p. 1).

This chapter examines changes in fares and traffic up to the end of 2002-03. The Scheme's impact on traffic is analysed in chapter 4, and TT-Line's revenue and expenses are covered in chapter 5.

### FARES

The introduction of the Scheme resulted in a significant reduction in the vehicle fares paid by eligible passengers. There were subsequently some rises in fares as a result of factors such as increases in TT-Line's fuel costs.

#### Changes in 2002-03

TT-Line introduced a new fare schedule when the *Spirit of Tasmania I/II* entered service in September 2002. Passenger fares were generally lower than fares for comparable accommodation on the *Spirit of Tasmania*, but this partly reflected

---

<sup>5</sup> An eligible passenger is most commonly defined as a passenger accompanied by an eligible passenger vehicle on a Bass Strait service, being the driver of that passenger vehicle. An eligible passenger also includes a driver who travels between King Island and the mainland while his/her passenger vehicle is carried on a King Island service on or about the same day of travel, and a driver with a medical condition who travels on a commercial airline service across Bass Strait while his/her passenger vehicle is carried by a Bass Strait ferry operator on or about the same day of travel.

the fact that the cost of meals was no longer included in the fares. Changes in the fare structure and a different mix/standard of accommodation on the new ships increased the complexity of comparing fares over time.

The fare schedule for the new ships included significant reductions in off-peak and shoulder fares for cars, motorcycles and buses. These declines reflected higher rebates under the Scheme for travel during these seasons (see table 2.1). Fares for motorhomes, passenger vehicles towing a caravan and bicycles also fell, as rebates for these vehicles were introduced in September 2002.

Passenger fares were subsequently increased by an average of 2.5 per cent from 1 January 2003 (TT-Line pers. comm. Nov. 2003). There was no increase in vehicle fares. Table 3.1 presents benchmark passenger fares for the *Spirit of Tasmania I/II* in the fare schedule that was current at the end of 2002-03.

### Impact of the rebate up to 2001-02

Table 3.2 provides information on the impact of the rebate on fares paid by passengers with an accompanying vehicle on the *Spirit of Tasmania* and the *Spirit of Tasmania I/II*. It covers the total fare for a standard vehicle, the driver and one other passenger, as the rebate affects the total travel costs of the accompanying passengers. There has been an average of approximately two motor vehicle passengers per car on the route since 1996-97. The analysis in this chapter is based on 'package' fares for adult passengers with a standard vehicle and a standard cabin.

The 'package gross fare' is the total payment received by TT-Line to transport the vehicle and accompanying passengers across Bass Strait. The 'package net fare' is the total fare paid by the passengers (including payment for carriage of the vehicle), and is equal to the 'package gross fare' less the rebate funded by the Australian Government under the Scheme.

The data in table 3.2 indicate that the introduction of the Scheme in 1996 resulted in an initial decrease of 25-30 per cent in net fares for a standard vehicle and two accompanying adult passengers (using a 2-4 bunk inside

TABLE 3.1 BENCHMARK ONE-WAY PASSENGER FARES FOR *SPIRIT OF TASMANIA I/II*, END OF 2002-03<sup>a</sup>

| <i>Passenger type</i> | <i>Off-peak season</i> | <i>Shoulder season</i> | <i>Peak season</i> |
|-----------------------|------------------------|------------------------|--------------------|
| Adult                 | 178                    | 187                    | 206                |
| Pensioner             | 108                    | 113                    | 125                |
| Senior                | 151                    | 159                    | 175                |
| Tertiary student      | 134                    | 141                    | 155                |
| Child/student         | 91                     | 95                     | 105                |

a. Fares are for an inside cabin (3-4 berth). This is the benchmark accommodation for calculating the impact of the rebate from 2002-03. Fares exclude meals.

Source TT-Line (2002a, pp. 18-19).

cabin). The proportional reductions would have been lower for passengers in more expensive cabins, higher for passengers in less expensive accommodation, and higher for travellers on concessional fares (e.g. seniors).

The levels of the rebate did not change between the commencement of the Scheme in September 1996 and the end of 2001-02. As gross fares increased over this period, the proportional reduction in the 'package net fare' attributable to the rebate declined. The data in table 3.2 indicate that, at 30 June 2002, the rebate provided a 20-24 per cent reduction in the total fare paid by passengers for a standard vehicle and two accompanying adults (2-4 bunk inside cabin).

Table 3.2 incorporates a 2-4 bunk inside cabin and a constant fare structure up to the end of 2001-02. The *Spirit of Tasmania* and the *Devil Cat* operated on the route for a large part of this period, and there were no significant changes in the mix of accommodation available to sea travellers. In addition, the structure of the fare schedule (and the rebate) was constant. A comparison based on the adult fare for two travellers and a standard vehicle therefore provides an adequate indication of overall changes in package net fares over this period.

TABLE 3.2 IMPACT OF REBATES ON TT-LINE ONE-WAY FARES, 1996, 2002 AND 2003<sup>a</sup>

| Period/payments <sup>b</sup>    | Off-peak season | Shoulder season | Peak season |
|---------------------------------|-----------------|-----------------|-------------|
| 1 September 1996                |                 |                 |             |
| Package gross fare <sup>c</sup> | 405             | 435             | 505         |
| Rebate                          | 100             | 120             | 150         |
| Package net fare with meal      | 305             | 315             | 355         |
| 30 June 2002                    |                 |                 |             |
| Package gross fare <sup>c</sup> | 502             | 542             | 625         |
| Rebate                          | 100             | 120             | 150         |
| Package net fare with meal      | 402             | 422             | 475         |
| 30 June 2003                    |                 |                 |             |
| Package gross fare <sup>c</sup> | 506             | 524             | 617         |
| Rebate                          | 150             | 150             | 150         |
| Package net fare (no meal)      | 356             | 374             | 467         |
| Meal adjustment <sup>d</sup>    | 30              | 30              | 30          |
| Package net fare with meal      | 386             | 404             | 497         |

a. Fares for *Spirit of Tasmania* in 1996 and 2002, and for *Spirit of Tasmania I/II* in 2003.

b. Fares are based on a 2-4 bunk inside cabin (*Spirit of Tasmania*) or a 3-4 berth inside cabin (*Spirit of Tasmania I/II*). The package gross fares and package net fares include two adult passengers and one standard motor vehicle.

c. Incorporates fares of \$125/\$145/\$185 for the standard vehicle and \$140/\$145/\$160 for each passenger in 1996, \$140/\$160/\$205 for the standard vehicle and \$181/\$191/\$210 for each passenger in 2002, and \$150/\$150/\$205 for the standard vehicle and \$178/\$187/\$206 for each passenger in 2003.

d. Meal adjustment reflects removal of meals from fares when new ships were introduced in September 2002. Based on TT-Line advice that meal component of fares on *Spirit of Tasmania* was \$15 per passenger.

Sources TT-Line (1996, 2001, 2002a, pers. comm. Nov. 2003).

### Impact of the rebate in 2002-03

Table 3.2 indicates that the published net fare for two passengers (using a standard cabin) and a standard motor vehicle at the end of 2002-03 was lower than the fare at the end of 2001-02. However, as the cost of meals was removed from fares when the *Spirit of Tasmania I/II* were introduced, the published fare for 2002-03 should be adjusted to a comparable 'meals-inclusive' basis. The adjustments would desirably reflect the typical cost of meals on the new ships. However, the BTRE was only able to obtain the meal component of fares on the *Spirit of Tasmania* – \$15 per passenger (TT-Line pers. comm. Nov. 2003).

The adjusted data in table 3.2 indicate that, between June 2002 and June 2003, the package net fare declined by around 4.0 per cent for off-peak travel and 4.3 per cent for shoulder travel. However, it rose by 4.6 per cent for peak-season travel. At 30 June 2003, the rebate provided the following reductions in package fares for two adult passengers (3-4 berth inside cabin) plus the standard vehicle:

- off-peak period – 30 per cent;
- shoulder period – 29 per cent
- peak period – 24 per cent.

The greater percentage reductions for off-peak and shoulder fares reflect the higher rebates for these periods from September 2002. The peak-period rebates were unchanged.

These results should be interpreted with some caution. The introduction of the new ships changed the mix of accommodation on the Bass Strait route, and some of the cabin types are not directly comparable with cabin types on the previous ship. It appears that there were some changes in relative fares for different cabin types (i.e. the fare structure was adjusted) when the new ships were introduced.

The analysis of fare changes is also affected by the extension of the Scheme to include motorhomes, eligible passenger vehicles towing a caravan, and bicycles. As drivers of these vehicles were previously ineligible for the rebate, they received significant vehicle fare reductions from 1 September 2002. Table 3.2 may therefore underestimate the overall reduction in fares paid by motor vehicle passengers, as it only incorporates the standard motor vehicle.

As a result of these factors, the data in table 3.2 may not fully reflect overall changes in fare levels in 2002-03. The average reimbursement per motor vehicle passenger provides additional information on the impact of the Scheme. Table 3.3 indicates that average reimbursement was virtually unchanged between 1996-97 and 1998-99, increased by 6 per cent over the following three years, and then rose by 26 per cent. The large increase in 2002-03 reflects the higher rebates for off-peak and shoulder travel and, to a lesser extent, relatively high rebates for some vehicles (e.g. motorhomes) that were only included in the Scheme from September 2002 (see table 2.1).

## TRAFFIC

The number of eligible passengers and vehicles carried across Bass Strait by sea is a key element in analysing the impact of the Scheme.

TT-Line's passenger traffic increased by 45 per cent in 2002-03 compared with the previous year (table 3.4). There was a rise of 56 per cent in vehicle traffic. The growth in 2002-03 far exceeded any other annual increases in the period since the introduction of the Scheme in 1996-97. The recent rapid growth reflects several factors, including the enhancements to the Scheme and the large increase in capacity when the new ships were introduced in September 2002.

Figure 3.1 illustrates changes in the total numbers of passengers (eligible passengers and other passengers) and motor vehicles carried by TT-Line over the 13 years to 2002-03. There has been a general upward trend in traffic, although this has been accompanied by significant volatility.

Passenger traffic has exhibited three periods of growth, with the second period commencing in 1996-97 when the Scheme was introduced. Between 1995-96 and 1998-99, there was an increase of 59 per cent in passenger numbers. Figure 3.1 also indicates three short periods of traffic decline, which appear to be attributable to a range of one-off factors (e.g. the Gulf War in 1991-92 and engine problems on the *Spirit of Tasmania* in 1999-2000).

Motor vehicle traffic has also exhibited three periods of growth and three short periods of decline. The similarity in passenger and vehicle traffic patterns reflects the high proportion of sea passengers (86 per cent in 2002-03) that travel with an accompanying motor vehicle. There was a 97 per cent rise in vehicle numbers between 1995-96 and 1998-99.<sup>6</sup>

TABLE 3.3 TT-LINE'S AVERAGE REIMBURSEMENT PER MOTOR VEHICLE PASSENGER, 1996-97 TO 2002-03

|                      | <i>Reimbursements<br/>paid to TT-Line (\$)</i> | <i>Motor vehicle passengers<br/>(no. of one-way trips)</i> | <i>Ave. reimbursement per<br/>motor vehicle passenger (\$)</i> |
|----------------------|--|--|--|
| 1996-97 <sup>a</sup> | 8 474 915                                      | 153 045  | 55.38  |
| 1997-98              | 12 938 565                                     | 231 098  | 55.99  |
| 1998-99              | 14 446 755                                     | 261 487  | 55.25  |
| 1999-00              | 14 211 445                                     | 248 745  | 57.13  |
| 2000-01              | 15 030 670                                     | 259 438  | 57.94  |
| 2001-02              | 15 932 170                                     | 272 922  | 58.38  |
| 2002-03              | 31 793 065                                     | 432 498  | 73.51  |

a. Data cover 10 months, from commencement of the Scheme on 1 September 1996 to 30 June 1997.

Sources TT-Line (pers. comm. Nov. 2003) and earlier communications. Tasmanian Assistance Services (pers. comm. Sep. 2003) and earlier communications.

<sup>6</sup> As eligible vehicles comprise around 99 per cent of the vehicles carried by TT-Line, changes in the total number of vehicles closely reflect changes in the number of eligible vehicles.

TABLE 3.4 TT-LINE TRAFFIC (ONE-WAY TRIPS) AND VOYAGES, 1995-96 TO 2002-03

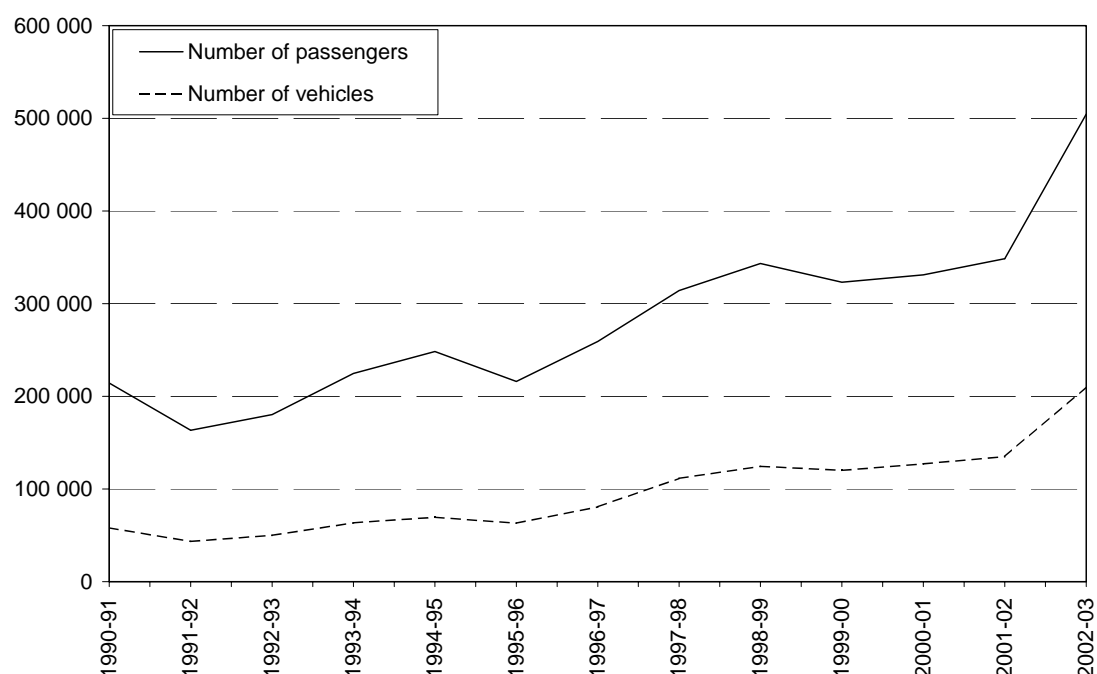
| Year    | Traffic             |                                |                   | Voyages                       |                      |                                    | Total |
|---------|---------------------|--------------------------------|-------------------|-------------------------------|----------------------|------------------------------------|-------|
|         | Passengers<br>(no.) | Vehicles<br>(no.) <sup>a</sup> | Freight<br>(teus) | <i>Spirit of<br/>Tasmania</i> | <i>Devil<br/>Cat</i> | <i>Spirit of<br/>Tasmania I/II</i> |       |
| 1995-96 | 215 986             | 63 029                         | 23 199            | 295                           | np                   | np                                 | 295   |
| 1996-97 | 259 169             | 80 637                         | 22 112            | 313                           | np                   | np                                 | 313   |
| 1997-98 | 314 232             | 111 400                        | 19 116            | 323                           | 117                  | np                                 | 440   |
| 1998-99 | 343 338             | 124 395                        | 20 589            | 334                           | 171                  | np                                 | 505   |
| 1999-00 | 323 211             | 120 084                        | 17 816            | 347                           | 108                  | np                                 | 455   |
| 2000-01 | 330 961             | 127 124                        | 21 771            | 379                           | 99                   | np                                 | 478   |
| 2001-02 | 348 435             | 134 829                        | 22 525            | 367                           | 118                  | np                                 | 485   |
| 2002-03 | 504 350             | 210 194                        | 39 543            | <i>b</i>                      | np                   | 846                                | 846   |

np not applicable.

- a. Numbers of all vehicles (eligible and non-eligible) in this table are lower than total numbers of eligible vehicles in table 4.3. This probably reflects timing differences between the two data sets—TT-Line data in this table record vehicles actually carried during a financial year, whereas Tasmanian Assistance Services data in table 4.3 record vehicles for which reimbursement claims were lodged by any operator during a financial year.
- b. Voyages made by *Spirit of Tasmania* in 2002-03 before its replacement in September 2002 are included in the number of voyages made by *Spirit of Tasmania I/II*.

Sources TT-Line (2003) and earlier issues.

FIGURE 3.1 NUMBERS OF PASSENGERS AND VEHICLES CARRIED BY TT-LINE (ONE-WAY TRIPS), 1990-91 TO 2002-03



Note Passenger data in this figure are in terms of one-way trips (i.e. one return journey is counted as two trips). They are not directly comparable with passenger data in figure 4.1, which are in terms of passenger journeys (i.e. one return journey is counted as one trip). There are also differences in the treatment of minors and day trippers.

Sources TT-Line (2003) and earlier issues. TT-Line (pers. comm. Jan. 2001). PDC (1994) and earlier issues.

Over the full period from 1995-96 to 2002-03, sea passenger traffic increased by 134 per cent and vehicle traffic rose by 234 per cent. The higher growth rate for vehicle traffic partly reflects the high and rising proportion of sea passengers travelling with an accompanying motor vehicle (see discussion in chapter 4).

Table 3.5 provides information on average traffic per voyage since 1995-96. The average number of passengers per voyage declined by 17 per cent in 2002-03 compared with the previous year. The average was at an eight-year low in 2002-03. The average number of vehicles per voyage fell by 11 per cent (to its third-lowest level in eight years) in the latest period.

The average number of passengers per voyage has varied significantly on an annual basis since 1995-96. Contributing factors include changes in traffic levels and the operation of different ships by TT-Line. The reduction in 2002-03 particularly reflects the availability of two large ships on the route throughout the year from September 2002—the number of voyages increased by 74 per cent, which significantly exceeded passenger growth of 45 per cent. These figures suggest that load factors were lower in 2002-03.

TABLE 3.5 TT-LINE TRAFFIC PER VOYAGE, 1995-96 TO 2002-03

| <i>Year</i> | <i>Passengers per voyage</i> | <i>Vehicles per voyage</i> |
|-------------|------------------------------|----------------------------|
| 1995-96     | 732                          | 214                        |
| 1996-97     | 828                          | 258                        |
| 1997-98     | 714                          | 253                        |
| 1998-99     | 680                          | 246                        |
| 1999-00     | 710                          | 264                        |
| 2000-01     | 692                          | 266                        |
| 2001-02     | 718                          | 278                        |
| 2002-03     | 596                          | 248                        |

*Sources* Calculated from data in table 3.4.





## **CHAPTER 4 IMPACT OF THE SCHEME ON TRAFFIC**

Fare reductions of the magnitude associated with the Scheme would be expected to stimulate increased sea travel across Bass Strait. Lower fares would potentially attract travellers from other markets (e.g. other destinations in Australia) and might encourage some Bass Strait travellers (particularly fly-drive tourists) to switch to sea transport.

The increases in sea travel since the introduction of the Scheme may also reflect other factors such as population changes or income growth. The BTRE has therefore constructed an econometric model, as well as undertaking trend comparisons, to identify the impact of the Scheme.

### **ECONOMETRIC MODEL**

The econometric model was initially developed using time-series data from 1985-86 to 2000-01. It was described in detail in the fifth monitoring report (BTRE 2002 pp. 31-36). The model was subsequently re-estimated with additional data covering 2001-02 (BTRE 2003, pp. 33-35).

In view of the substantial increases in capacity following the introduction of TT-Line's new ships in September 2002, the BTRE re-specified and re-estimated the model for the 2002-03 review (see appendix II). The analysis also included more recent data, covering 2002-03.

### **Construction of the model**

The original model estimated the relationship between the number of motor vehicle passengers (i.e. sea passengers with an accompanying motor vehicle) and changes in population, real household disposable income, the sea fare and the air fare. A dummy variable was used to account for the influence of the Gulf War. The BTRE used the sea fare (own-price) elasticity from the model to calculate the net impact of the Scheme on passenger numbers.

Motor vehicle passenger traffic across Bass Strait increased by 58 per cent in 2002-03 compared to the previous year (see table 3.3). Capacity on the route was heavily utilised (particularly during the peak period) prior to the introduction of the new ships, and the increase in capacity from September 2002 facilitated

significant traffic growth. The BTRE therefore included a dummy variable for ship capacity in the re-specified model. This variable can be used to identify the impact of increased capacity (and possibly other major one-off factors) on motor vehicle passenger traffic in 2002-03.<sup>7</sup>

## Results

Table 4.1 presents the estimates of the Scheme's impact based on the re-specified and re-estimated model.

The estimated sea fare (own-price) elasticity of -0.9 obtained from the model indicates that a 1 per cent reduction in the sea fare would lead to a 0.9 per cent increase in the number of motor vehicle passengers. Similar values for the sea fare (own-price) elasticity were obtained in earlier versions of the model.

On the basis of this elasticity, the BTRE estimates that the Scheme resulted in an additional 75 000 motor vehicle passengers on the Bass Strait route in 2002-03. This represents an increase of 21 per cent relative to the likely situation without the Scheme.

The results from the model indicate that, from 1995-96 to 2002-03, an average of 37 per cent of the annual growth in motor vehicle passenger traffic was attributable to the Scheme. The remaining 63 per cent of annual growth reflected the impact of real household disposable income and other factors.

TABLE 4.1 ESTIMATED IMPACT OF THE SCHEME ON MOTOR VEHICLE PASSENGER NUMBERS, 1996-97 TO 2002-03

| Year                 | Motor vehicle passengers (one-way trips) |                  |                | Change (per cent) |
|----------------------|--|------------------|----------------|-------------------|
|                      | Without Scheme                           | With Scheme      | Difference     |                   |
| 1996-97 <sup>a</sup> | 120 518                                  | 153 045          | 32 527         | 27.0              |
| 1997-98              | 183 177                                  | 231 098          | 47 921         | 26.2              |
| 1998-99              | 208 944                                  | 261 487          | 52 543         | 25.1              |
| 1999-00              | 199 488                                  | 248 745          | 49 257         | 24.7              |
| 2000-01              | 212 990                                  | 259 438          | 46 448         | 21.8              |
| 2001-02              | 224 060                                  | 272 922          | 48 862         | 21.8              |
| 2002-03              | 357 241                                  | 432 498          | 75 257         | 21.1              |
| <i>All years</i>     | <i>1 506 418</i>                         | <i>1 859 233</i> | <i>352 815</i> | <i>23.4</i>       |

a. Data cover 10 months only in 1996-97 as the Scheme commenced on 1 September 1996.

Source BTRE analysis.

<sup>7</sup> When constructing the original econometric model, the BTRE was aware of earlier changes in ship capacity across Bass Strait. A capacity variable was not included in the model at that stage as the BTRE's analysis indicated that it would not be statistically significant. This probably reflected the smaller magnitude of the earlier capacity changes and lower levels of capacity utilisation. By comparison, the *Spirit of Tasmania I/II* together provided more than twice the passenger capacity and over three times the car capacity of the *Spirit of Tasmania*.

The BTRE previously estimated that, up to 2001-02, an average of 43 per cent of the annual growth in motor vehicle passenger traffic was attributable to the Scheme (BTRE 2003, p. 18). The lower figure of 37 per cent from the re-specified and re-estimated model reflects the impact of several events in 2002-03. These events include an increase in the peak-season 'package net fare' used for the sea fare (own-price) variable, a slight rise in income elasticity, and the impact of increased capacity captured by the new dummy variable.

The dummy variable for ship capacity is highly significant and of the expected sign. While this variable may also incorporate the impact of other factors in 2002-03 (e.g. more frequent services, increased marketing), the results suggest that increased capacity contributed significantly to the observed traffic growth.

Table 4.1 indicates that the proportional increase in traffic attributable to the Scheme has declined over time. This declining impact is consistent with rising 'package gross fares' and unchanged rebates—that is, a gradual fall in the proportional reduction in 'package net fares' attributable to the Scheme.

In 2002-03, this trend was reversed for shoulder and off-peak travel as higher rebates were introduced, and the proportional reductions in 'package net fares' increased. In contrast, the peak-period rebates were unchanged, with the result that the proportional reductions in 'package net fares' (with meals) fell slightly in the peak season. As the model's sea fare (own-price) variable includes peak-period fares only, it does not incorporate the higher off-peak and shoulder rebates. The model may therefore under-estimate the impact of the Scheme in 2002-03. More detailed specification of the sea fare would improve the model.<sup>8</sup>

It should also be noted that the data in table 4.1 may under-estimate the effects of the Scheme prior to 2002-03. It seems likely that, in these earlier years, capacity constraints prevented some potential passengers from travelling across Bass Strait by sea. In other words, part of the increased 'demand' that could be attributed to the Scheme was not reflected in actual traffic figures. The large increase in the estimated impact of the Scheme on traffic in 2002-03 should therefore be interpreted with caution, as the level of unmet demand probably declined substantially after the introduction of the new ships in 2002.

### **Assessing the model**

The econometric model performs reasonably well in terms of standard statistical tests. The variables included in the model explain 94 per cent of the variation in motor vehicle passenger numbers on the Bass Strait route over the period from 1985-86 to 2002-03. In addition, all of the estimated coefficients are highly significant and of the expected sign.

---

<sup>8</sup> The model should desirably incorporate fares for the three seasons. However, this would be more data-intensive as it would require monthly (or possibly quarterly) data for all of the variables in the model over the period from 1985-86. The model currently uses annual data.

The detailed results should be interpreted with caution as the model is affected by data limitations. For example, it covers a relatively short time period and does not include some potentially relevant variables.

Despite these limitations, the model provides strong support for the view that the Scheme has contributed significantly to the increase in sea passenger travel across Bass Strait since 1995-96.

## **TREND COMPARISONS**

The BTRE has also compared trends in traffics that are substantially covered by the Scheme with trends in related traffics that are not covered by the Scheme. Consistently superior growth in the traffics that are substantially covered would provide additional evidence to support the view that the Scheme has contributed to increased sea traffic across Bass Strait. In 2002-03, around 86 per cent of passengers (i.e. drivers and their travelling companions with an accompanied vehicle) were potentially covered by the Scheme.

### **Tourist traffic**

It was noted in chapter 1 that the introduction of the Scheme was expected to result in direct benefits to the Tasmanian tourist industry. Table 4.2 presents data on the number of adult visitors to Tasmania, by purpose of travel and mode, over the seven years to 2002-03.<sup>9</sup> The data are not directly comparable with TT-Line figures, which are expressed in terms of one-way trips and also include children.

From 1996-97 to 2002-03, the number of holiday/leisure travellers using sea transport (mainly covered by the Scheme) increased much more rapidly than the number of air passengers (not covered by the Scheme). The increases were 70 733 sea passengers (143 per cent) and 50 991 air passengers (30 per cent). The percentage growth in sea traffic exceeded the percentage growth in air traffic in four of the six sub-periods.

There was a similar pattern for travellers visiting friends and relatives (VFR). From 1996-97 to 2002-03, sea traffic increased by 20 886 passengers (162 per cent) and air traffic was virtually unchanged. Sea traffic had higher percentage growth than air traffic in five of the six sub-periods.

The growth patterns for holiday/leisure and VFR travellers are consistent with the view that the Scheme has contributed to increased sea passenger traffic across Bass Strait. There was a different pattern for business travel to Tasmania – the increase in sea passenger numbers was less than the increase in

---

<sup>9</sup> Percentage changes in traffic over the seven years should be interpreted with caution, as the percentages are substantially affected by the initial and final years used in the analysis.

air passenger numbers between 1996-97 and 2002-03, although the percentage change for sea traffic (from a very low base) was higher.

### Air and sea traffic

Figure 4.1 presents information on sea passengers (mainly covered by the Scheme) and air passengers (not covered by the Scheme) carried between the mainland and Tasmania since 1993-94.

Up to 1995-96, air traffic grew strongly while sea traffic increased only slightly. In the next period, from 1995-96 (the year prior to the introduction of the Scheme) to 1998-99, sea traffic grew strongly (up 60 per cent) and air traffic declined slightly (down 4 per cent). During the following period (1998-99 to 2001-02) there was a marginal decline in sea traffic (1 per cent), at least partly due to the breakdown of the *Spirit of Tasmania*, and air traffic increased by 5 per cent. In the final (short) period, from 2001-02 to 2002-03, sea traffic grew much more strongly than air traffic—78 931 sea passengers (47 per cent) compared to 74 508 air passengers (9 per cent).

The introduction (and recent enhancement) of the Scheme was therefore accompanied by a significant change in the trends of sea and air transport. While this pattern may have weakened or altered between 1998-99 and 2001-02,

TABLE 4.2 NUMBER OF ADULT VISITORS TRAVELLING TO TASMANIA, BY PURPOSE AND MODE, 1996-97 TO 2002-03<sup>a</sup>

| Purpose/mode     | Visitors (no.) |         |         |         |         |         |         |
|------------------|----------------|---------|---------|---------|---------|---------|---------|
|                  | 1996-97        | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 | 2002-03 |
| Holiday/leisure  |                |         |         |         |         |         |         |
| Sea              | 49 563         | 71 712  | 85 258  | 86 000  | 77 950  | 79 177  | 120 296 |
| Air              | 171 808        | 187 588 | 191 327 | 204 500 | 192 984 | 180 275 | 222 799 |
| VFR <sup>b</sup> |                |         |         |         |         |         |         |
| Sea              | 12 887         | 16 266  | 18 356  | 17 500  | 17 285  | 17 676  | 33 773  |
| Air              | 113 579        | 102 104 | 106 932 | 95 800  | 114 757 | 102 775 | 113 609 |
| Business         |                |         |         |         |         |         |         |
| Sea              | 4 079          | 4 188   | 4 987   | 4 800   | 5 271   | 5 581   | 13 348  |
| Air              | 75 886         | 71 490  | 70 320  | 80 300  | 63 810  | 85 352  | 96 924  |
| Other            |                |         |         |         |         |         |         |
| Sea              | 7 384          | 4 497   | 5 536   | 3 900   | 9 208   | 8 446   | 11 589  |
| Air              | 47 993         | 43 651  | 41 306  | 38 800  | 39 001  | 40 622  | 39 896  |
| Total            |                |         |         |         |         |         |         |
| Sea              | 73 913         | 96 663  | 114 137 | 112 200 | 109 714 | 110 880 | 179 006 |
| Air              | 409 266        | 404 833 | 409 885 | 419 400 | 410 552 | 409 024 | 473 228 |

a. Excludes minors and day trippers.

b. Visiting friends and relatives.

Source Tourism Tasmania (2003) and earlier data.

the initial (and most recent) changes in trends are consistent with the view that the Scheme has contributed to increased sea passenger traffic between the mainland and Tasmania.

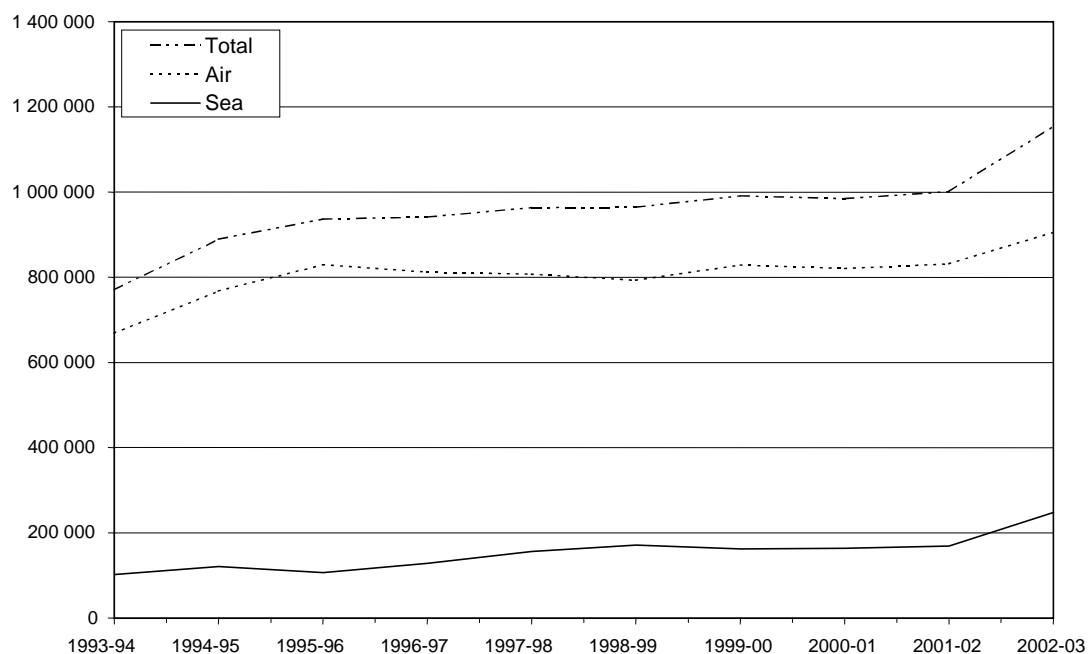
### Categories of sea passengers

Figure 4.2 presents data on motor vehicle passengers and berth-only passengers since 1995-96. As the average number of motor vehicle passengers per eligible vehicle has remained around 2.0 since the introduction of the Scheme, changes in the number of motor vehicle passengers closely reflect changes in the number of eligible vehicles.

The number of motor vehicle passengers has generally risen since the start of the Scheme, while the number of berth-only passengers has generally declined. Motor vehicle passenger traffic rose by 229 per cent between 1995-96 and 2002-03, and berth-only passenger traffic fell by 15 per cent.

The only exception to the upward trend in the number of motor vehicle passengers occurred in 1999-2000, when there was a 5 per cent fall compared to the previous year. This decline, which was associated with engine problems on the *Spirit of Tasmania*, was more than outweighed by subsequent rises.

FIGURE 4.1 NUMBERS OF SEA AND AIR PASSENGERS CARRIED ACROSS BASS STRAIT (RETURN JOURNEYS), 1993-94 TO 2002-03<sup>a</sup>



a. Includes day trippers, Tasmanians and visitors (adults and minors).

**Note** The sea passenger data in this figure are expressed in terms of passenger journeys (i.e. one return journey is counted as one trip). They are not directly comparable with the sea passenger data in figure 3.1, which are expressed in terms of one-way trips (i.e. one return journey is counted as two trips).

**Source** Tourism Tasmania (2003) and earlier data.

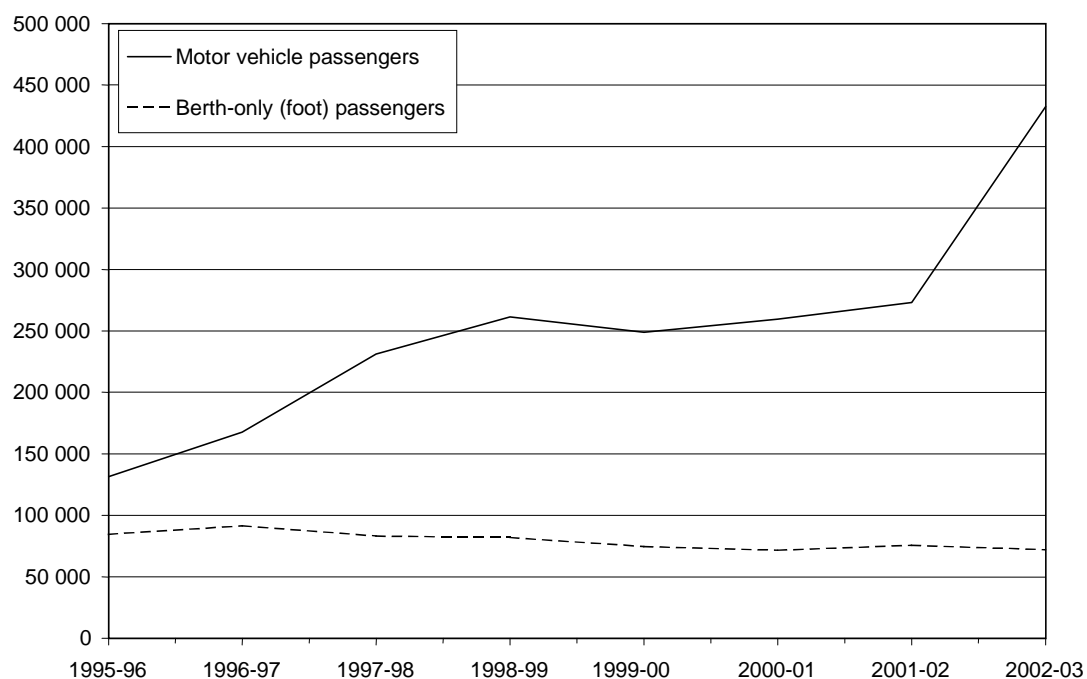
The very large increase of 155 915 passengers carried by TT-Line in 2002-03 compared to the previous year (table 3.4) was solely due to a rise of 159 576 motor vehicle passengers (table 3.3). In contrast, the number of berth-only passengers fell by 3661. Table 4.3 suggests that the increase in motor vehicle passenger numbers particularly reflected a large rise in the number of eligible motor cars. It seems likely that the inclusion of additional vehicle types in the Scheme from September 2002 also contributed to the increase in motor vehicle passenger numbers.

The differing trends for motor vehicle passengers (directly affected by the Scheme) and berth-only passengers (not covered by the Scheme) since 1995-96 suggest that the Scheme has contributed to the growth in sea passenger traffic across Bass Strait. As the Scheme has narrowed the differential between motor vehicle passenger and berth-only passenger fares, it may also have encouraged some substitution between these types of sea travel.

## ASSESSMENT

The BTRE's econometric model indicates that the Scheme has contributed significantly to growth in sea passenger travel across Bass Strait. Increased capacity on the route following the introduction of the new ships in September 2002 facilitated the large increase in traffic in 2002-03. The detailed results from the model should be interpreted with caution as it is affected by data limitations.

FIGURE 4.2 NUMBER OF SEA PASSENGERS CARRIED ACROSS BASS STRAIT (ONE-WAY TRIPS), BY CATEGORY, 1995-96 TO 2002-03



Source TT-Line (pers. comm. Nov. 2003) and earlier communications.



The comparisons of traffic trends provide some further evidence that the Scheme has contributed significantly to the increase in sea passenger traffic. However, it should be noted that these analyses are partial and do not control for other factors that may affect this traffic.

The growth in sea traffic across Bass Strait includes Tasmanian residents and travellers diverted from air transport, as well as additional visitors to Tasmania.

TABLE 4.3 ELIGIBLE VEHICLES FOR WHICH REIMBURSEMENT PAID, 2001-02 AND 2002-03

| <i>Eligible vehicles</i>                      | <i>Number of eligible vehicles</i> |                | <i>Change<br/>(per cent)</i> |
|---|------------------------------------|----------------|------------------------------|
|   | <i>2001-02</i>                     | <i>2002-03</i> |                              |
| Motor cars                                    | 128 353                            | 196 871        | 53                           |
| Eligible vehicles with a caravan <sup>a</sup> | 0                                  | 7 359          | np                           |
| Motorcycles                                   | 6 303                              | 7 023          | 11                           |
| Motorhomes <sup>a</sup>                       | 0                                  | 5 991          | np                           |
| Push bikes <sup>a</sup>                       | 0                                  | 1 188          | np                           |
| Buses   | 324                                | 474            | 46                           |
| <i>Total<sup>b</sup></i>                      | <i>134 980</i>                     | <i>218 906</i> | <i>62</i>                    |

np not applicable

- a. Rebates under the Scheme were not available for these vehicles until 1 September 2002. Therefore, rebates were not provided during 2001-02.
- b. Total numbers of eligible vehicles in this table exceed all vehicles (eligible and non-eligible) in table 3.4. This probably reflects timing differences between the two data sets—Tasmanian Assistance Services data in this table record vehicles for which reimbursement claims were lodged by any operator during a financial year, whereas TT-Line data in table 3.4 record vehicles actually carried during a financial year.

Source Tasmanian Assistance Services (pers. comm. Mar. 2003, Sep. 2003).

## CHAPTER 5 TT-LINE REVENUE AND EXPENSES

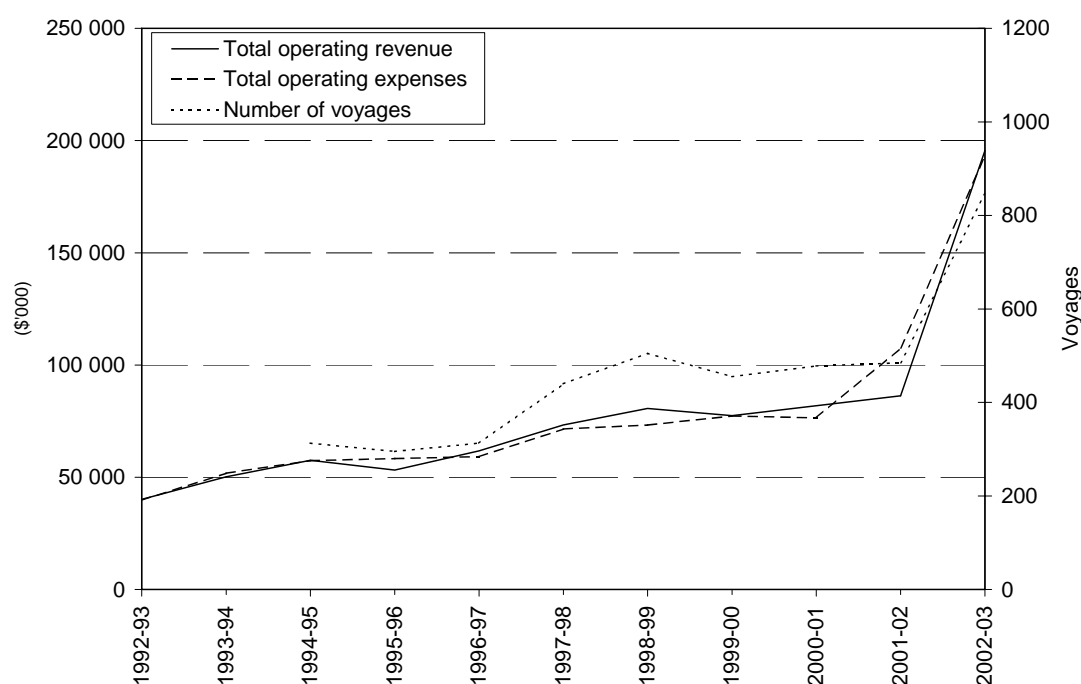
The Ministerial Directions require the BTRE's annual monitoring report to have specific regard to movements in a service operator's revenue and annual operating costs. This chapter focuses on the financial performance of TT-Line, which accounts for almost all of the payments under the Scheme.

### OPERATING REVENUE

TT-Line's total operating revenue has generally increased since the early 1990s (figure 5.1). With the exception of 2002-03, ferry operations have contributed well over 95 per cent of the company's total revenue in each financial year.

Table 5.1 presents information on TT-Line's operating revenue over the last seven years. Revenue in 2002-03 totalled \$195.5 million, substantially above the figure of \$86.2 million in the previous year. However, the 2002-03 figure

FIGURE 5.1 TT-LINE'S OPERATING REVENUE AND EXPENSES (UNADJUSTED), 1992-93 TO 2002-03



Sources TT-Line (2003) and earlier issues.

includes gross proceeds of \$61.2 million from the sale of the *Spirit of Tasmania*. Such one-off factors did not affect operating revenue in the previous year.

TT-Line's trading revenue in 2002-03 (i.e. total operating revenue less gross proceeds from the ship sale) was \$134.3 million. This was 56 per cent higher (51 per cent in real terms) than the comparable figure of \$86.2 million in 2001-02. The number of motor vehicles carried by TT-Line also grew by 56 per cent over this period, and passenger traffic increased by 45 per cent (see chapter 3).

The data for earlier years in table 5.1 indicate that TT-Line's annual operating revenue rose by 40 per cent between 1996-97 and 2001-02. This was an increase of 23 per cent in real terms. The largest increase (19 per cent) occurred between 1996-97 and 1997-98, when passenger traffic grew by 21 per cent (see table 3.4). This period incorporated the first two years of the Scheme's operation.

Table 5.2 presents selected financial indicators for TT-Line over the last seven years. Average revenue per voyage in 2002-03 (excluding ship sale proceeds) was 11 per cent lower (13 per cent in real terms) than the corresponding figure for 2001-02. This reflects the combined impact of a 56 per cent increase in revenue (numerator) and a 74 per cent rise in the number of voyages (denominator). Average revenue per voyage was at a seven-year low in 2002-03.

TABLE 5.1 SELECTED FINANCIAL INFORMATION FOR TT-LINE, 1996-97 TO 2002-03  
(\$'000)

| Category                 | 1996-97       | 1997-98       | 1998-99       | 1999-00       | 2000-01       | 2001-02        | 2002-03        |
|--------------------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| Operating revenue        |               |               |               |               |               |                |                |
| Ferry operations         | 60 333        | 71 061        | 78 213        | 76 514        | 80 756        | 85 106         | 133 425        |
| Ship sale gross proceeds | 0             | 0             | 0             | 0             | 0             | 0              | 61 249         |
| Other                    | 1 433         | 2 264         | 2 394         | 997           | 1 086         | 1 130          | 844            |
| <i>Total</i>             | <i>61 766</i> | <i>73 325</i> | <i>80 607</i> | <i>77 511</i> | <i>81 842</i> | <i>86 236</i>  | <i>195 518</i> |
| Operating expenses       |               |               |               |               |               |                |                |
| Operations—general       | 27 924        | 40 448        | 39 680        | 40 865        | 42 864        | 42 402         | 69 454         |
| Operations—write-down    | 0             | 0             | 0             | 0             | 0             | 30 887         | 0              |
| Ship sale carrying value | 0             | 0             | 0             | 0             | 0             | 0              | 62 732         |
| Hotel services           | 15 296        | 15 464        | 17 783        | 16 924        | 17 782        | 18 130         | 27 708         |
| Customer acquisition     | 4 893         | 4 698         | 6 015         | 5 900         | 6 261         | 6 680          | 11 437         |
| Administration           | 6 098         | 6 219         | 5 707         | 4 889         | 6 871         | 7 462          | 8 902          |
| Borrowing costs          | 4 989         | 4 682         | 4 045         | 3 267         | 2 696         | 1 958          | 12 673         |
| Other                    | 0             | 0             | 0             | 5 430         | 0             | 0              | 0              |
| <i>Total</i>             | <i>59 200</i> | <i>71 511</i> | <i>73 230</i> | <i>77 275</i> | <i>76 474</i> | <i>107 519</i> | <i>192 906</i> |
| Operating profit/loss    | 2 566         | 1 814         | 7 377         | 236           | 5 368         | -21 283        | 2 612          |
| Abnormal item            | 0             | 780           | 0             | 0             | 0             | 0              | 0              |
| <i>Profit/loss</i>       | <i>2 566</i>  | <i>1 034</i>  | <i>7 377</i>  | <i>236</i>    | <i>5 368</i>  | <i>-21 283</i> | <i>2 612</i>   |

Note Ferry revenue and operations-general expenses in 1997-98 include impact of *Devil Cat*/catamaran trial.

Sources TT-Line (2003) and earlier issues. TT-Line (pers. comm. Jan. 2001).

Figure 5.2 indicates the amount of TT-Line's total operating revenue that is directly attributable to the Scheme. It excludes additional revenue flowing from increased traffic that is generated by lower fares. Payments to TT-Line (that were then passed on to drivers with eligible vehicles) were equivalent to around 24 per cent of the company's trading revenue (i.e. excluding the gross proceeds from the ship sale) in 2002-03. This was well above the figure of 18 per cent in the previous three years, with the increase particularly reflecting the higher rebates for off-peak and shoulder-season travel in 2002-03.

## OPERATING EXPENSES

TT-Line's total operating expenses have generally increased since the early 1990s (figure 5.1). The only exception was a slight decline in 2000-01, after one-off expenses associated with a breakdown of the *Spirit of Tasmania* had been incurred in the previous year. The large increases in recent years reflect the write-down in the value of the *Spirit of Tasmania* (2001-02) and the carrying value at the time of the ship's subsequent sale (2002-03).

Table 5.1 indicates that TT-Line's operating expenses in 2002-03 totalled \$192.9 million. This was 79 per cent higher (74 per cent in real terms) than the figure of \$107.5 million in the previous year. However, total expenses for both of these years were affected by one-off expenses associated with the write-down and subsequent sale of the *Spirit of Tasmania*.

TT-Line's trading expenses (i.e. total operating expenses less expenses associated with the write-down and sale) were \$130.2 million in 2002-03 and \$76.6 million in the previous year. This represented an increase of 70 per cent (65 per cent in real terms), which exceeded the growth in motor vehicle traffic (56 per cent) and passenger traffic (45 per cent) over this period.

TABLE 5.2 FINANCIAL INDICATORS (ADJUSTED) FOR TT-LINE, 1996-97 TO 2002-03

|                         | \$      |         |         |         |         |                      |                      |
|-------------------------|---------|---------|---------|---------|---------|----------------------|----------------------|
| Indicator               | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02              | 2002-03              |
| Revenue                 |         |         |         |         |         |                      |                      |
| Per voyage <sup>a</sup> | 197 335 | 166 648 | 159 618 | 170 354 | 171 218 | 177 806              | 158 710 <sup>c</sup> |
| Expenses <sup>b</sup>   |         |         |         |         |         |                      |                      |
| Per passenger           | 228     | 228     | 213     | 239     | 231     | 220 <sup>d</sup>     | 258 <sup>d</sup>     |
| Per voyage              | 189 137 | 162 525 | 145 010 | 169 835 | 159 987 | 158 004 <sup>d</sup> | 153 870 <sup>d</sup> |

a. Total revenue divided by the number of voyages.

b. Incorporates expenses for passengers, vehicles and freight.

c. Incorporates adjusted revenue (i.e. excludes gross proceeds from sale of *Spirit of Tasmania* in 2002-03).

d. Incorporates adjusted expenses (i.e. excludes write-down in carrying value of *Spirit of Tasmania* in 2001-02 and carrying value of *Spirit of Tasmania* sold in 2002-03).

Sources Estimated from data in table 3.4 and table 5.1.

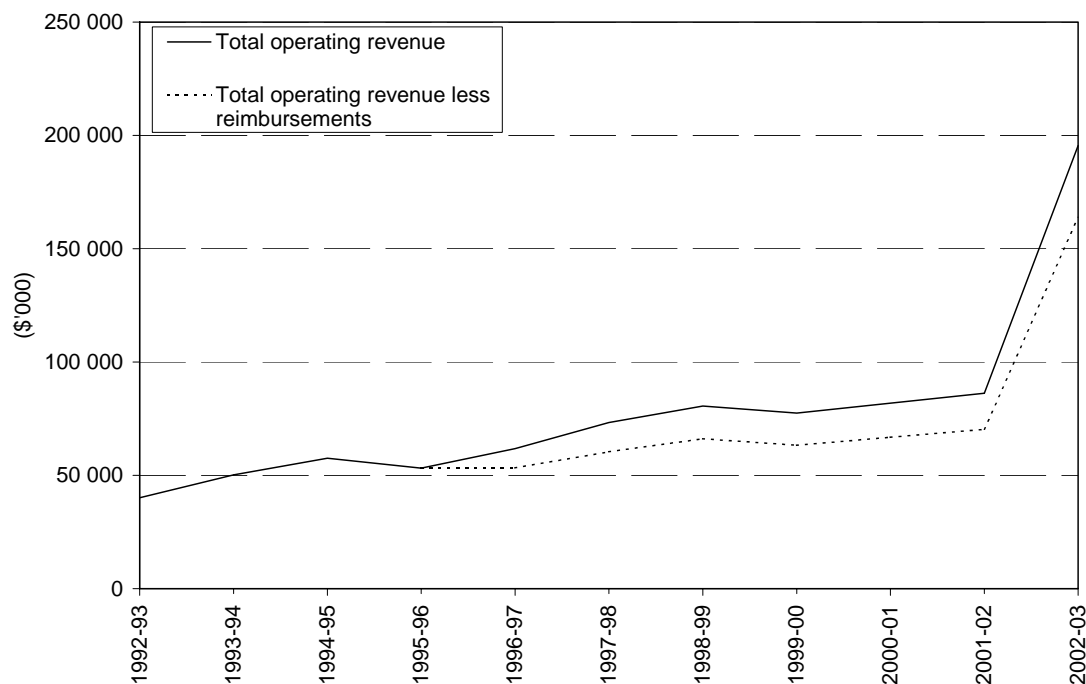
Table 5.1 also provides information on TT-Line's major expenses. The expenses, and the spending increases between 2001-02 and 2002-03, are:

- Borrowing costs (i.e. interest payments)—up 547 per cent (\$10.7 million), reflecting financing arrangements for the new ships;
- Customer acquisition costs—up 71 per cent (\$4.8 million), resulting from increased marketing activities;
- Operations (general expenses)—up 64 per cent (\$27.1 million) as a result of additional voyages, two large ships, and more than a doubling of depreciation and amortisation;
- Hotel services—up 53 per cent (\$9.6 million) in order to accommodate the substantial increase in passenger traffic; and
- Administration—up 19 per cent (\$1.4 million).

The increase in TT-Line's trading expenses in 2002-03 therefore reflected upfront costs to expand capacity, higher operating costs with two large ships and more frequent services, and higher borrowing expenses.

The data for earlier years in table 5.1 indicate that total operating expenses (unadjusted) increased by 82 per cent (61 per cent in real terms) between 1996-97 and 2001-02. Almost two-thirds of this increase occurred in 2001-02, when the value of the *Spirit of Tasmania* was written down. If the write-down is excluded from operating expenses in 2001-02, the increase over the period from 1996-97 falls to 29 per cent (15 per cent in real terms). Other factors that

FIGURE 5.2 TT-LINE'S REVENUE (UNADJUSTED) AND REIMBURSEMENTS, 1992-93 TO 2002-03



Sources TT-Line (2003) and earlier issues. Tasmanian Assistance Services (pers. comm. Sep. 2003) and earlier communications.

contributed to higher operating expenses include the introduction of the *Devil Cat*, increases in the number of voyages, and rises in fuel prices.

Table 5.2 includes selected financial indicators which incorporate trading expenses for 2001-02 and 2002-03 (i.e. total operating expenses less the write-down and sale expenses). Trading expenses on a per passenger basis increased by 17 per cent (14 per cent in real terms) in 2002-03 compared to the previous year. This increase reflected the combined impact of a 70 per cent rise in expenses (numerator) and a 45 per cent rise in the number of passengers (denominator). Expenses on a per passenger basis were at a seven-year high in 2002-03. If unadjusted figures (i.e. total operating expenses) were used in the analysis, the figures would be significantly higher at \$309 per passenger in 2001-02 and \$382 per passenger in 2002-03. This indicator should be interpreted with caution, as the operating expenses in the numerator include expenses for vehicles, freight and passengers, whereas the denominator comprises passengers only.

Trading expenses per voyage declined by 3 per cent (6 per cent in real terms) in 2002-03 compared to 2001-02. The fall reflected the combination of a 70 per cent rise in expenses (numerator) and a 74 per cent rise in the number of voyages (denominator). Table 5.2 indicates that operating expenses per voyage in 2002-03 were at their second-lowest level in seven years. If the unadjusted figures (i.e. total operating expenses) were used in the analysis, the figures would be significantly higher at \$221 689 per voyage in 2001-02 and \$228 021 per voyage in 2002-03.

## PROFITABILITY

Table 5.1 indicates that there has been significant variability in TT-Line's profitability over the last seven years. The major contributing factors have included changes in traffic levels (and hence revenue), variations in the number of voyages (and hence expenses), changes in ships, fluctuations in fuel prices and one-off repair/maintenance costs.

TT-Line's operating profit of \$2.6 million in 2002-03 was a substantial turnaround from the operating loss of \$21.3 million in the previous year. This was TT-Line's first operating loss over the period since 1996-97. The operating loss in 2001-02 reflected a trading profit of \$9.6 million which was more than offset by the write-down of \$30.9 million on the value of the *Spirit of Tasmania* (TT-Line 2002b, p. 1).

It appears that the sale of the *Spirit of Tasmania* had a net impact (i.e. gross proceeds less carrying value of the ship) of -\$1.5 million on TT-Line's financial position in 2002-03. This suggests that the underlying trading profit in that year was \$4.1 million (i.e. \$2.6 million plus \$1.5 million), compared to \$9.6 million in 2001-02. The apparent decline in trading profit reflects the relative growth of trading revenue and trading expenses over the year.



## CHAPTER 6 CONCLUDING COMMENTS

There were major changes in the ferry service across Bass Strait in 2002-03. The introduction of the *Spirit of Tasmania I* and *Spirit of Tasmania II* resulted in substantial increases in passenger and vehicle capacity. The new ships also provided improved facilities and more frequent services.

Increases in the existing off-peak and shoulder season rebates from September 2002 led to reduced fares for motor cars, buses and motorcycles during these seasons. In addition, the extension of the Scheme to cover additional vehicle types resulted in lower fares for motor homes, eligible passenger vehicles towing a caravan, and push bikes. These enhancements (and traffic growth) contributed to a substantial rise in expenditure under the Scheme in 2002-03.

The new fare schedule introduced by TT-Line in September 2002 provided lower fares for many passengers and vehicles, although the reductions for passengers partly reflected the removal of meals from the fares. Passenger fares was subsequently increased by 2.5 per cent, but vehicle fares were not changed.

These developments contributed to declines in the 'representative' fares paid by motor vehicle passengers for off-peak and shoulder travel. However, when meals are included, the costs for peak period travel increased. The rebates under the Scheme continued to provide substantial reductions in the total fares paid by motor vehicle passengers in 2002-03.

The fare declines and capacity increases contributed to substantial growth in the numbers of passengers and vehicles carried by sea across Bass Strait in 2002-03. This traffic growth (and higher payments under the Scheme) enabled TT-Line to earn record revenue, although expenses also rose with more frequent services and two large ships. TT-Line returned to profitability in 2002-03.

The BTRE's econometric model provides strong support for the view that the Scheme has contributed significantly to the growth in sea passenger traffic across Bass Strait since 1995-96. The model performs reasonably well in terms of standard statistical tests. However, the detailed results should be interpreted with caution as the model is affected by data limitations.

The comparisons of trends in different traffics provide further support for the view that the Scheme has contributed significantly to the growth in sea traffic across Bass Strait.





## **APPENDIX I MONITORING PROVISIONS IN 2002 MINISTERIAL DIRECTIONS**

- 17.1 A Service Operator who claims reimbursement under the Scheme shall be subject to monitoring by the Bureau.
- 17.2 The Bureau shall, on an annual basis, monitor the effectiveness of the scheme, with specific regard to:
- (a) movement in a Service Operator's annual operating costs;
  - (b) movement in an Operator's revenue; and
  - (c) the number of eligible passengers, eligible passenger vehicles and number of passengers travelling under related bookings, carried per annum by the Operator.
- 17.3 A Service Operator shall comply with all reasonable requests by the Bureau for information or access to documentation, in relation to the Bureau's monitoring function.



## APPENDIX II MODEL OF SEA PASSENGER TRAFFIC

The Bureau's fifth monitoring report provided a detailed description of the econometric model that was developed to estimate the impact of the Scheme (BTRE 2002, pp. 31-36). A re-estimated model was described in the sixth report (BTRE 2003, pp. 33-35). This appendix outlines the re-specified and re-estimated model that was prepared for the 2002-03 review.

### THE MODEL

The model is specified in terms of population, income, own-price and cross-price variables in the following equation:

$$\ln V_t = \beta_1 + \beta_2 \ln Y_t + \beta_3 \ln P_t + \beta_4 \ln Q_t + \beta_5 DGW_t + \beta_6 DSP_t + u_t$$

where,

V = Per capita number of motor vehicle passengers;

Y = Per capita real household disposable income of motor vehicle passengers;

P = One-way package sea fare (including reductions under the Scheme from 1996-97);

Q = One-way economy air fare from Melbourne to Hobart;

DGW = Dummy variable to take account of the influence of the Gulf War on the number of motor vehicle passengers;

DSP = Dummy variable to take account of the influence of an increase in the passenger capacity of TT-Line following the introduction of the *Spirit of Tasmania I/II*;

u = Error term;

$\beta^s$  = Regression parameters; and

t = Time period.

The influence of population on the number of motor vehicle passengers is included by specifying the model on a per capita basis using the population of Australia.

The BTRE re-estimated the model using the earlier annual time-series data (1985-86 to 2001-02) plus data for 2002-03. The time-series data are contained in table II.1.

## RESULTS OF RE-ESTIMATED MODEL

The estimated regression results are presented in table II.2. The adjusted  $R^2$ -value of 0.94 suggests that the model is a good fit. It indicates that 94 per cent of the variation in motor vehicle passenger numbers over the period is explained by the variables included in the model (population, income, sea fare, air fare, the Gulf War and ship capacity). Around 6 per cent of the traffic variation is therefore attributable to factors not specified in the model, such as:

TABLE II.1 TIME-SERIES DATA USED TO RE-ESTIMATE ECONOMETRIC MODEL

| <i>Year</i> | <i>Passengers<sup>a</sup></i><br>( <i>'000</i> ) | <i>Air fare<sup>b</sup></i><br>(\$/passenger) | <i>Sea fare<sup>c</sup></i><br>(\$/package) | <i>Real income<sup>d</sup></i><br>(\$b) | <i>Population<sup>e</sup></i><br>(million) |
|-------------|--|---|---|---|--|
| 1985-86     | 99.5   | 136   | 291   | 288.2                                   | 15.7                                       |
| 1986-87     | 100.3  | 148   | 317   | 288.9                                   | 15.9                                       |
| 1987-88     | 101.9  | 157   | 317   | 294.7                                   | 16.1                                       |
| 1988-89     | 114.8  | 166   | 353   | 311.6                                   | 16.8                                       |
| 1989-90     | 121.6  | 184   | 390   | 329.0                                   | 17.1                                       |
| 1990-91     | 117.8  | 201   | 427   | 322.6                                   | 17.3                                       |
| 1991-92     | 90.1   | 215   | 450   | 324.6                                   | 17.5                                       |
| 1992-93     | 103.6  | 199   | 413 <sup>f</sup>                            | 328.8                                   | 17.7                                       |
| 1993-94     | 131.5  | 201   | 413 <sup>f</sup>                            | 335.8                                   | 17.9                                       |
| 1994-95     | 144.1  | 216   | 445   | 350.3                                   | 18.1                                       |
| 1995-96     | 131.5  | 223   | 445   | 361.6                                   | 18.3                                       |
| 1996-97     | 167.8  | 238   | 355   | 374.0                                   | 18.5                                       |
| 1997-98     | 231.1  | 250   | 371   | 381.3                                   | 18.7                                       |
| 1998-99     | 261.5  | 260   | 392   | 401.6                                   | 18.9                                       |
| 1999-00     | 248.7  | 262   | 402   | 418.1                                   | 19.2                                       |
| 2000-01     | 259.4  | 292   | 475   | 435.8                                   | 19.4                                       |
| 2001-02     | 272.9  | 302   | 475   | 463.7                                   | 19.7                                       |
| 2002-03     | 432.5  | 273   | 497   | 469.2                                   | 19.9                                       |

a. Motor vehicle passengers carried across Bass Strait.

b. Average one-way economy air fare from Melbourne to Hobart.

c. Average one-way package net fare during peak season. Includes two adults and a standard vehicle.

d. Real household disposable income of Australians at 1999-2000 prices.

e. Population of Australia.

f. Representative passenger fare declined as a meal was not included in the price of a ticket in these two years. The lower fare is used in the analysis as it is the fare on which travellers based their travel decisions.

Sources TT-Line (2002a) and earlier issues. TT-Line (2003) and earlier issues. TT-Line (pers. comm. Aug. 2002). ABS (2004). BTRE (2004).

- movements in \$A exchange rates (affecting relative costs of Australian and overseas travel);
- changes in community perceptions of Australian and overseas security risks (affecting decisions about expenditure on travel and alternative activities, destinations, modes, etc);
- expenditure on tourism promotion activities for Tasmania and other parts of Australia; and
- aspects of local and overseas economic conditions such as unemployment, interest rates and fuel prices.

All of the estimated coefficients of the model have the expected sign and are highly significant.

In terms of the total impact on the number of motor vehicle passengers, the most important variable is per capita real household disposable income, with an estimated elasticity of 2.4 (previously 2.3). This means that a 1 per cent increase (decrease) in the level of per capita real household disposable income will result in a 2.4 per cent increase (decrease) in the number of motor vehicle passengers.

The second most important variable is the sea fare (own-price), with an estimated elasticity of -0.9 (previously also -0.9). The own-price elasticity indicates that a 1 per cent decrease (increase) in the price of sea travel will result in a 0.9 per cent increase (decrease) in the number of motor vehicle passengers.

The model indicates that the cross-price (air fare) elasticity is 0.9 (previously also 0.9). This implies that the air fare has an influence on the number of motor vehicle passengers travelling by sea on the Melbourne-Tasmania route.

The estimated coefficient of the dummy variable DGW indicates that the Gulf war in 1991-92, through its impact on global economic activity, adversely affected the number of motor vehicle passengers on the Melbourne-Tasmania route.

The influence of increased ship capacity on the number of motor vehicle passengers was analysed using the dummy variable DSP. The estimated

TABLE II.2 REGRESSION STATISTICS

| <i>Variable</i>   | <i>Estimated coefficient</i> | <i>t-ratio</i> | <i>Significance level</i> | <i>Other statistics</i>        |
|-------------------|------------------------------|----------------|---------------------------|--------------------------------|
| Intercept         | -27.744                      | -4.060         | 0.01                      |                                |
| logY <sub>t</sub> | 2.391                        | 3.091          | 0.01                      | N=18                           |
| logP <sub>t</sub> | -0.909                       | -3.141         | 0.01                      | Adjusted-R <sup>2</sup> = 0.94 |
| logQ <sub>t</sub> | 0.887                        | 2.702          | 0.02                      | DW = 2.00                      |
| DGW <sub>t</sub>  | -0.242                       | -2.130         | 0.05                      |                                |
| DSP <sub>t</sub>  | 0.504                        | 3.676          | 0.01                      |                                |

Source BTRE analysis.

coefficient for this variable indicates that the increased capacity provided by TT-Line's new ships (and possibly other one-off factors during 2002-03) positively affected the number of motor vehicle passengers on the Melbourne-Tasmania route.

The detailed results of the econometric model should be interpreted with some caution, as the analysis is constrained by data limitations and other factors.<sup>10</sup> For example, the time-series data cover a period of only 18 years, with the Scheme operating for just seven of these years. In addition, the data are annual rather than monthly or quarterly, and the sea fare and air fare data are based on a specific season and/or type of travel.

Despite these limitations, the model provides strong support for the view that the Scheme has contributed significantly to the growth in sea passenger travel on the Melbourne-Tasmania route since 1995-96.

---

<sup>10</sup> These limitations are described in greater detail in BTRE (2002, p. 36).

## REFERENCES

ABS 2004, Time-series AusStats data base, Australian Bureau of Statistics, Canberra.

BTRE 2002, *Bass Strait Passenger Vehicle Equalisation Scheme: BTRE Monitoring Report No. 5, 2000-01*, Bureau of Transport and Regional Economics, Canberra.

— —2003, *Bass Strait Passenger Vehicle Equalisation Scheme: BTRE Monitoring Report No. 6, 2001-02*, Bureau of Transport and Regional Economics, Canberra.

— —2004, Unpublished time-series data on air fares, Bureau of Transport and Regional Economics, Canberra.

DOTARS 2001, *Directions by the Minister for Regional Services, Territories and Local Government for the Operation of the Bass Strait Passenger Vehicle Equalisation Scheme*, Department of Transport and Regional Services, Canberra.

— —2002, *Directions by the Minister for Transport and Regional Services for the Operation of the Bass Strait Passenger Vehicle Equalisation Scheme*, Department of Transport and Regional Services, Canberra.

PDC 1994, *Annual Report 1993-94*, Port of Devonport Corporation, Devonport.

Sharp, J. 1996, *Bass Strait Passenger Vehicle Equalisation Scheme*, media statement by Minister for Transport and Regional Development, 23 August.

Tourism Tasmania 2003, Unpublished data on travel by Tasmanian visitors and residents, Tourism Tasmania, Hobart.

TT-Line 1996, *Passenger fares and accompanied vehicle rates*, 26 August, TT-Line Company Pty Ltd, Devonport.

— —2001, *Spirit of Tasmania – General Information, Passenger Fares and Vehicle Rates*, Brochure No. 10/01, TT-Line Company Pty Ltd, Devonport.

— —2002a, *Spirit of Tasmania – General information, passenger fares and vehicle rates: Rates valid 1 January 2003 – 25 January 2004*, TT-Line Company Pty Ltd, Devonport.

— —2002b, *Annual Report 2002*, TT-Line Company Pty Ltd, Devonport.

— —2003, *Annual Report 2003*, TT-Line Company Pty Ltd, Devonport.