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Bass Strait **Passenger Vehicle** **EQUALISATION SCHEME**

BTRE MONITORING REPORT NO.6

2001–2002



**BASS STRAIT PASSENGER VEHICLE
EQUALISATION SCHEME**

**BTRE MONITORING REPORT NO. 6
2001-02**

Bureau of Transport and Regional Economics
Canberra
July 2003

Indemnity Statement

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FOREWORD

This report presents the results of the BTRE's sixth annual review of the Bass Strait Passenger Vehicle Equalisation Scheme. It covers the operation and impact of the Scheme up to (and including) 2001-02.

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

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EXECUTIVE SUMMARY

This report presents the results of the BTRE's sixth review of the Bass Strait Passenger Vehicle Equalisation Scheme, covering developments up to (and including) 2001-02.

TRANSPORT ACROSS BASS STRAIT

Around 930 000 adult visitors and Tasmanian residents travelled between Tasmania and the mainland in 2001-02. Approximately 17 per cent of these passengers used sea transport.

TT-Line provided the main Bass Strait shipping service for passengers and accompanied vehicles in 2001-02. It operated the *Spirit of Tasmania* and the *Devil Cat*. The other operators were Southern Shipping and Patrick Shipping.

THE SCHEME

The Bass Strait Passenger Vehicle Equalisation Scheme (the Scheme) provides a rebate against the fare charged by a ferry operator to transport an accompanied passenger vehicle across Bass Strait. Payments under the Scheme in 2001-02 totalled \$16.0 million, a 6 per cent increase from the figure in the previous year.

The BTRE is required to monitor the effectiveness of the Scheme on an annual basis. Key factors include movements in operating costs and revenue, and the number of eligible passengers and eligible passenger vehicles.

FARES AND TRAFFIC LEVELS

The introduction of the Scheme in 1996 resulted in an initial decrease of 25-30 per cent in the fares for a standard vehicle and two accompanying passengers using a standard cabin. The proportional reduction in net fares subsequently declined, as gross fares increased but the levels of the rebate remained constant.

Traffic has risen significantly since the introduction of the Scheme, with increases of 61 per cent in sea passengers and 114 per cent in vehicle numbers from 1995-96 to 2001-02. Fare reductions of the magnitude associated with the Scheme would be expected to stimulate increased sea travel across Bass Strait.

The number of passengers carried by TT-Line increased by 5 per cent in 2001-02 compared with the previous year. There was a rise of 6 per cent in vehicle traffic. Passenger fares and vehicle rates were unchanged during 2001-02.

Initial data indicate that the introduction of two replacement ships by TT-Line in September 2002 has facilitated a further, substantial increase in sea traffic across Bass Strait. Changes in passenger and vehicle traffic in 2002-03, and the contributing factors, will be explored in the BTRE's next monitoring report.

IMPACT OF THE SCHEME

An econometric model developed by the BTRE indicates that, up to the end of 2001-02, the Scheme had resulted in the movement of an extra 282 000 motor vehicle passengers across Bass Strait. This was an increase of 25 per cent relative to the likely situation without the Scheme. The detailed results of the model should be interpreted with some caution as it 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 in leisure travellers using sea transport on the route has been well above the rate of growth for leisure travellers using air transport.
- Sea passenger traffic on the route moved from stagnation to growth when the Scheme started, while air traffic moved from growth to stagnation.
- The number of sea passengers with an accompanying motor vehicle has increased, but the number of berth-only sea passengers 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 since 1995-96.

TT-LINE REVENUE AND EXPENSES

Traffic growth has facilitated a long-term increase in TT-Line's revenue. Operating revenue in 2001-02 was \$86.2 million, a record for the company and 5 per cent above the figure for the previous year. Payments under the Scheme were equivalent to around 19 per cent of TT-Line's revenue in 2001-02.

TT-Line's operating expenses have generally risen over time due to the introduction of additional capacity and increases in costs (e.g. fuel). Expenses totalled \$107.5 million in 2001-02, a 41 per cent increase from the figure in 2000-01. However, if the write-down of the value of the *Spirit of Tasmania* is excluded, operating expenses in 2001-02 were similar to expenses in the previous year.

TT-Line earned a trading profit of \$9.6 million in 2001-02. The write-down of the value of the *Spirit of Tasmania* resulted in an operating loss of \$21.3 million. This was TT-Line's first operating loss in the period that the Bureau has been monitoring the impact of the Scheme.

CHAPTER 1 INTRODUCTION

Tasmania is reliant 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 journeys between Tasmania and the mainland in 2001-02. Approximately 930 000 adult passengers travelled across Bass Strait in that year. They comprised 520 000 domestic and overseas visitors to Tasmania (56 per cent of total passengers) and 410 000 Tasmanian residents travelling to the mainland (44 per cent of total passengers).

Most of the domestic and overseas visitors travelled to Tasmania for holiday/leisure (50 per cent), to visit friends and relatives (23 per cent), or for business purposes (17 per cent). Around 79 per cent of visitors used air transport across Bass Strait, and 21 per cent travelled by sea.

Tasmanian residents who travelled to the mainland primarily went for holiday/leisure (37 per cent), to visit friends and relatives (27 per cent) or for business purposes (23 per cent). Around 88 per cent of Tasmanians travelled by air, and 12 per cent used sea transport.

SERVICES AND OPERATORS

TT-Line operated the two ferries that provided the main sea passenger services across Bass Strait in 2001-02. These vessels carried 17 per cent of adult passengers (air and sea) on the route, and most of their motor vehicles.

The *Spirit of Tasmania* transported around 89 per cent of the sea passengers moved across Bass Strait (TT-Line pers. comm. May 2003). This vessel, which commenced service on the route in November 1993, operated all year round and completed 367 voyages in 2001-02. It could carry around 1300 passengers and up to 360 vehicles and 70 standard shipping containers on each voyage. The *Spirit of Tasmania* was subsequently withdrawn from the Bass Strait route in September 2002 (i.e. after the period covered by this report).

The *Devil Cat* carried around 11 per cent of the sea passengers moved across Bass Strait. This high-speed catamaran operated over five months in summer and autumn, and completed 118 crossings in 2001-02. It had a capacity of nearly 700 passengers in aircraft-type seating, and could carry more than 200 cars (with a reduced passenger load). The *Devil Cat* was permanently withdrawn from the Bass Strait route in April 2002.

On the main Bass Strait route, TT-Line introduced two replacement vessels into service in September 2002. These vessels, the *Spirit of Tasmania I* and *Spirit of Tasmania II*, can each carry up to 1 400 passengers and provide substantially higher passenger and vehicle capacity across Bass Strait. The impact of these vessels will be considered in detail in the next BTRE monitoring report, which will cover developments during 2002-03.

In addition to the TT-Line vessels, two other ships carried small numbers of vehicles across Bass Strait in 2001-02. 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, 2001-02^a

<i>Purpose of travel</i>	<i>Air</i>	<i>Sea</i>	<i>Total</i>
Visitors to Tasmania			
Holiday/leisure	180 275	79 177	259 452
VFR ^b	102 775	17 676	120 451
Business	85 352	5 581	90 933
Conference	16 877	1 192	18 069
Other/not specified	23 745	7 254	30 999
Total visitors	409 024	110 880	519 904
Tasmanians			
Holiday/leisure	129 339	20 687	150 026
VFR ^b	95 858	13 252	109 110
Business	90 741	3 805	94 546
Conference	10 770	431	11 201
Other/not specified	35 221	10 051	45 272
Total Tasmanians	361 929	48 226	410 155
<i>Total passengers</i>	<i>770 953</i>	<i>159 106</i>	<i>930 059</i>

a. Excludes minors and day trippers/excursionists.

b. Visiting friends and relatives.

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. During 2001-02 it was administered in accordance with the Ministerial Directions that were 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 caravans, motor homes, vehicles of people with disabilities, and bicycles. The impact of these changes will be incorporated in the next BTRE monitoring report, which will cover 2002-03.

The Ministerial Directions are administered by Tasmanian Assistance Services (part of Centrelink). During 2001-02, direction and funding were provided by the Transport Programmes Division of the Department of Transport and Regional Services.

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 and eligible passenger vehicles carried by the operator.

The Bureau has prepared five previous reports on the Scheme, the most recent covering 2000-01. 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 sixth annual review of the Scheme, covering 2001-02. 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, calculation of the rebate, the method of payment, 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. Revenue and expenses are considered in chapter 5.

Chapter 6 provides some concluding comments.

Appendixes present the monitoring provisions in the 2001 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, calculation of the rebate, the method of payment, and payments under the Scheme.

COVERAGE

During 2001-02, the Scheme covered passenger vehicles (motor cars, buses and motorcycles) with an accompanying driver.¹ It applied to any ship operator providing passenger and vehicle services between Tasmania and mainland Australia, or carrying vehicles between King Island and the mainland.

The Ministerial Directions specify that a rebate may be available in exceptional circumstances when a driver is not able to travel on the same vessel as the vehicle. In this situation, the driver must travel on a commercial airline on or about the day that the vehicle is transported by sea. To qualify for a rebate under these provisions, the driver must be able to demonstrate that the circumstances could not have been foreseen and that he/she was only able to cross Bass Strait by air transport.

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 place as to how the Scheme would apply to new operators' services.

Three operators carried eligible vehicles across Bass Strait during 2001-02:

- TT-Line, operating the *Spirit of Tasmania* (Devonport—Melbourne) all year round and the *Devil Cat* (George Town—Melbourne) in December—April²;

¹ Motor cars also include vans, utilities, four-wheel-drive vehicles, campervans and station wagons. Buses include minibuses, coaches and buses, being motor vehicles equipped to seat more than eight adult persons. From 1 September 2002 (i.e. after the period covered by this report), the Scheme was extended to caravans, motor homes, vehicles of people with disabilities, and bicycles.

² The *Devil Cat* made its last Bass Strait crossing for TT-Line on 7 April 2002. The *Spirit of Tasmania* was subsequently withdrawn from service in September 2002 when TT-Line introduced two replacement vessels, *Spirit of Tasmania I* and *Spirit of Tasmania II*.

- Southern Shipping, operating the *Matthew Flinders* (Bridport—Port Welshpool via Flinders Island and Deal Island) all year round; and
- Patrick Shipping, operating the *Searoad Mersey* (weekly calls at King Island as part of a Devonport—Melbourne service) all year round.³

Southern Shipping received reimbursements totalling \$3 730 for 31 eligible motor cars in 2001-02 (Tasmanian Assistance Services, pers. comm. Apr. 2003). Patrick Shipping was reimbursed a total of \$22 350 for the carriage of 149 eligible motor cars. This report therefore focuses on the major operator, TT-Line.

CALCULATION OF THE REBATE

The rebate is intended to provide a net fare, for an eligible passenger vehicle plus its driver, that is comparable to the notional cost of driving an equivalent distance on a highway (the equivalent highway cost).

The net fare for an eligible passenger vehicle plus its driver is the sum of the vehicle and passenger gross fares⁴ less the appropriate rebate. It is the fare actually paid by the passenger. For the purposes of the rebate calculation in 2001-02, the adult fare for a 2-4 bunk inside cabin on the *Spirit of Tasmania* was used as the passenger fare benchmark. This type of accommodation represented approximately 50 per cent of the berths available on the *Spirit of Tasmania*. For the calculations, the rebate was based on the fare for a passenger vehicle of no more than five metres in length.

The equivalent highway cost is based on the sea distance between the pilot pick-up points of the ports of Devonport and Melbourne (427 kilometres) multiplied by the estimated running cost for an average family saloon. This provided an equivalent highway cost of \$170 for a one-way trip at the commencement of the Scheme. During 2001-02, the rebate continued to be capped at a maximum of \$150 per eligible vehicle and eligible passenger for a one-way trip. The rebate for a motorcycle was set at 50 per cent of the rebate applicable to a motor car or bus.

Due to the seasonal nature of demand, TT-Line's passenger and vehicle fares vary during the year (low, shoulder and high seasons). The rebate for the main Bass Strait route also varied on a seasonal basis in 2001-02.⁵ The largest rebate was applied during the high season and the smallest rebate was applied during

³ Patrick Shipping carried eligible vehicles between King Island and Melbourne, with eligible passengers travelling on a commercial air service.

⁴ 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.

⁵ After the period covered by this report, the seasonal structure for rebates was replaced by constant rebates throughout the year. The new structure applied from 1 September 2002.

the low season. Table 2.1 presents the rebates that applied on the main Bass Strait route in 2001-02. On the King Island route, there was a one-way rebate of \$150 (motor car, bus) or \$75 (motorcycle) all year round.

Table 2.2 shows TT-Line's net fares for accompanied vehicles at 30 June 2002. These fares are equivalent to the gross fare less the rebate for the relevant vehicle class. Seasonal variation in net fares is particularly noticeable for vehicles wider than 1.9 metres or greater than 6.0 metres in length, reflecting TT-Line's approach to encouraging efficient use of shipboard space.

TABLE 2.1 ONE-WAY TRIP REBATE FOR DRIVER WITH ELIGIBLE VEHICLE ON MAIN BASS STRAIT ROUTE, 2001-02

\$			
<i>Eligible vehicle class</i>	<i>Low season^a</i>	<i>Shoulder season^b</i>	<i>High season^c</i>
Motor car or bus	100	120	150
Motorcycle	50	60	75

a. 1 July 2001—31 August 2001 and 29 April 2002—30 June 2002.

b. 1 September 2001—7 December 2001 and 28 January 2002—28 April 2002.

c. 8 December 2001—27 January 2002.

Note The round-trip rebate is exactly double the one-way trip rebate, provided the northbound and southbound trips are undertaken in the same season.

Sources DOTARS (2001, p. 15). TT-Line (2001, pp. 20-21).

TABLE 2.2 TT-LINE ONE-WAY NET FARES FOR SELECTED VEHICLE CLASSES, 30 JUNE 2002

\$			
<i>Eligible vehicle class</i>	<i>Low season</i>	<i>Shoulder season</i>	<i>High season</i>
Push bike	21	21	27
Motorcycle	30	30	38
Motorcycle with side car/trailer	52	52	91
Vehicle ≤ 6 metres long, ≤ 1.9 metres wide			
1.0-5.0 metres long	40	40	55
5.1-6.0 metres long	67	67	93
Vehicle ≤ 6 metres long, > 1.9 metres wide			
1.0-6.0 metres long	87	168	171
Vehicle > 6 metres long			
6.1-7.0 metres long	134	221	239
7.1-8.0 metres long	181	274	308
8.1-9.0 metres long	228	327	377
9.1-10.0 metres long	275	380	446
10.1-11.0 metres long	322	433	515
Vehicle > 11.0 metres long ^a	47	53	69

a. Charge per metre.

Source TT-Line (2001, pp. 20-21).

The Minister reviews the levels of the rebate each year. The levels remained unchanged from the commencement of the Scheme until September 2002, when new Ministerial Directions were issued by the Minister for Transport and Regional Services (DOTARS 2002). As noted in chapter 1, the changes included the introduction of constant year-round rebates and expansion of the coverage of the Scheme. They will be covered in the next BTRE monitoring report, which will incorporate data for 2002-03.

METHOD OF PAYMENT

The rebate is provided to the driver of an eligible passenger vehicle as a reduction in the fare charged by the relevant service operator. The onus is on the service operator to determine the eligibility of the passenger for the rebate, apply the rebate to the passenger's gross fare, and claim reimbursement of the rebate from the Commonwealth. Tasmanian Assistance Services conduct quarterly audits of TT-Line claims.

The Ministerial Directions limit a service operator to no more than one claim for reimbursement in any one calendar month. The operator is allowed to claim:

- (a) for an eligible passenger who has travelled within the previous 12 months; and
- (b) subject to possible provision of a surety⁶, for an eligible passenger who has not yet travelled, but who has booked and paid for travel to be undertaken during the period for which the claim is made.

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.

PAYMENTS UNDER THE SCHEME

The level of payments under the Scheme is open-ended and varies with the number (and type) 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, from \$8.5 million to \$16.0 million (all operators) over this period. However, it should be noted that payments in 1996-97 covered only 10 months, from the start of the Scheme

⁶ The Secretary to the Department has discretion to request provision of a surety from an operator in order for the operator to be reimbursed for an eligible passenger who has not yet travelled.

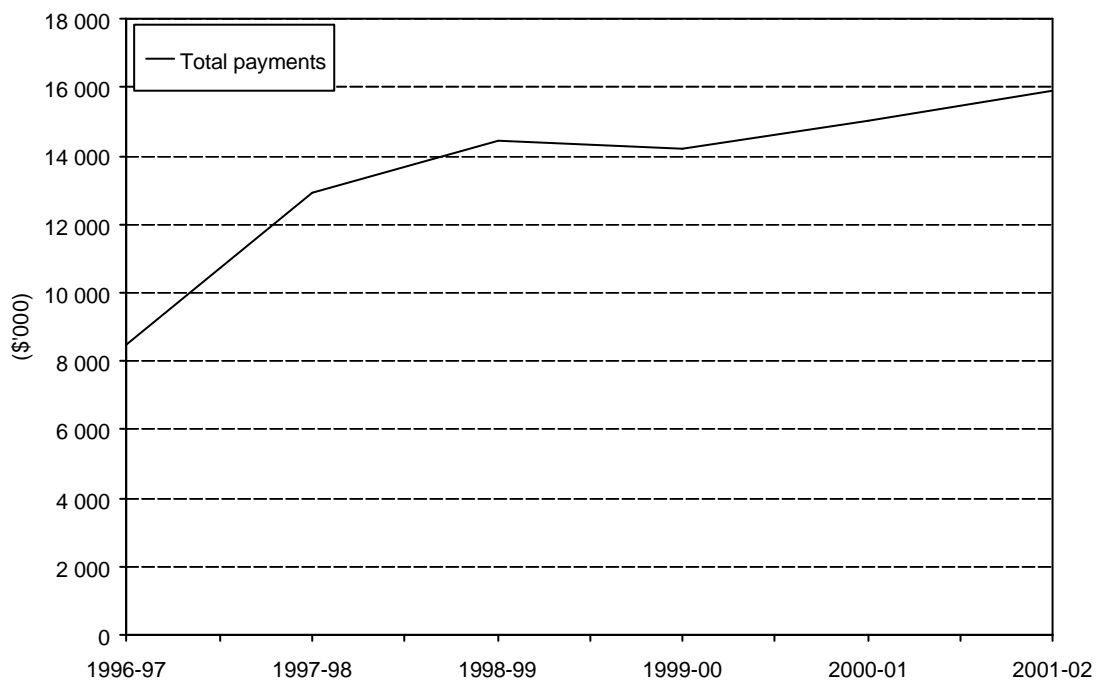
in September 1996. TT-Line accounted for 99.8 per cent of total payments in 2001-02.

Reimbursements increased over the most recent period in figure 2.1, with a rise of 6 per cent from \$15.0 million (all operators) in 2000-01 to \$16.0 million (all operators) in 2001-02. The payments to the three operators in 2001-02 involved 134 980 eligible vehicles—128 353 motor cars (95.1 per cent of eligible vehicles), 6 303 motorcycles (4.7 per cent) and 324 buses (0.2 per cent).

Table 2.3 presents data on reimbursements to TT-Line in individual claim periods during 2001-02 and the previous year. It indicates significant monthly variation in payments, reflecting the seasonal nature of traffic across Bass Strait and seasonal changes in the level of the rebate.

Figure 2.2 provides information on the timing of the reimbursements to TT-Line from the commencement of the Scheme to 2001-02. The pattern of payments over the last five years has been reasonably consistent, but differs significantly from the pattern in 1996-97. In particular, payments between December and April have typically been much higher over the last five years. This change reflects the introduction of the *Devil Cat* which provided increased capacity during December-April when the *Spirit of Tasmania* was heavily utilised.

FIGURE 2.1 REBATE REIMBURSEMENTS UNDER BASS STRAIT PASSENGER VEHICLE EQUALISATION SCHEME, 1996-97 TO 2001-02



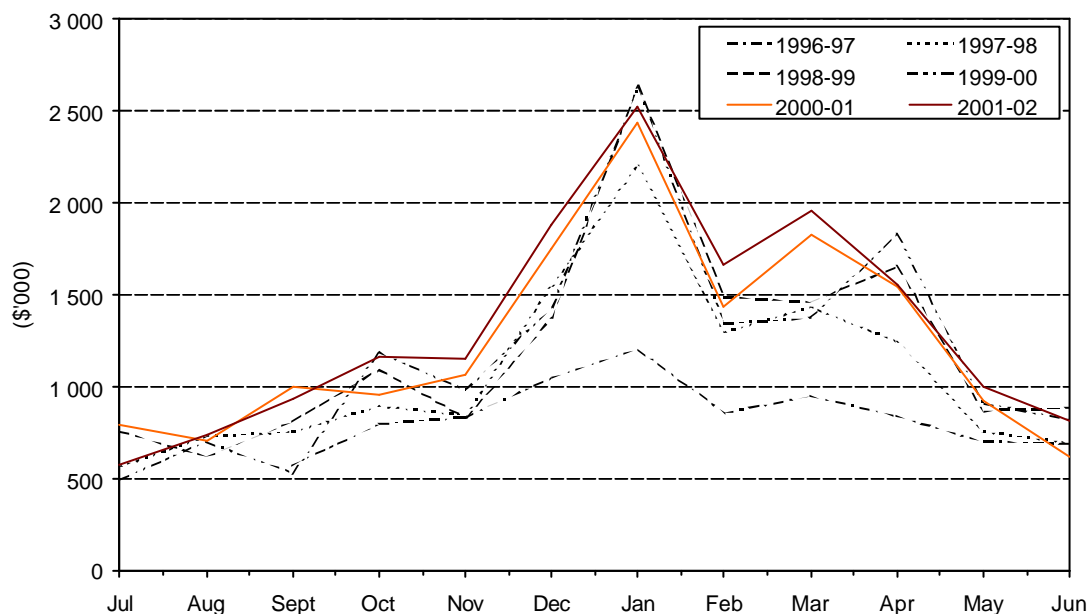
Source Tasmanian Assistance Services (pers. comm. Feb. 2001, May 2002, Mar. 2003).

TABLE 2.3 REIMBURSEMENTS TO TT-LINE BY CLAIM PERIOD, 2000-01 AND 2001-02

Claim period	2000-01		2001-02		Change in rebates (per cent)
	Claims (no.)	Total rebates (\$)	Claims (no.)	Total rebates (\$)	
July	7 933	788 150	5 726	569 550	-27.7
August	7 098	704 450	7 371	732 500	4.0
September	8 400	993 490	7 852	935 100	-5.9
October	8 163	959 100	10 009	1 163 040	21.3
November	9 123	1 058 820	9 855	1 151 220	8.7
December	12 354	1 751 610	13 174	1 882 440	7.5
January	16 881	2 435 490	17 574	2 519 760	3.5
February	12 394	1 433 760	14 694	1 657 080	15.6
March	15 746	1 823 280	16 975	1 953 300	7.1
April	13 280	1 542 120	13 336	1 558 280	1.0
May	9 308	918 200	10 059	997 350	8.6
June	6 258	622 200	8 175	812 550	30.6
Total	126 938	15 030 670	134 800	15 932 170	6.0

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

FIGURE 2.2 REIMBURSEMENTS TO TT-LINE, BY CLAIM PERIOD, 1996-97 TO 2001-02



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

CHAPTER 3 CHANGES IN FARES AND TRAFFIC LEVELS

The 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 number of eligible passengers and eligible passenger vehicles carried per annum by the operator.⁷

In considering the Scheme's effectiveness, it is also appropriate to take into account the aim of the Scheme, which is 'to reduce the cost of seagoing travel for eligible passengers'⁸ (DOTARS 2001, p. 3). In addition, when announcing the Scheme, the then Minister for Transport and Regional Development noted that it would help to kick-start the Tasmanian tourist industry and provide a boost to the Tasmanian economy as a whole (Sharp 1996, p. 1).

This chapter examines changes in fares and traffic. The Scheme's impact is analysed in chapter 4, and 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 passenger and vehicle fares as a result of factors such as increases in fuel costs.⁹

Impact of the rebate

Table 3.1 provides information on the impact of the rebate on fares paid by passengers with an accompanying vehicle on the *Spirit of Tasmania*. It covers the

⁷ This is the provision in the Ministerial Directions that applied during 2001-02. The Ministerial Directions issued in September 2002 added another component, 'number of passengers travelling under related bookings'.

⁸ 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.

⁹ These increases would have been partly offset by higher rebates for the low and shoulder seasons from 1 September 2002. The higher rebates will be covered in the next BTRE report.

total fare for a standard vehicle, the driver and one other passenger, as the rebate affects the total travel costs of the passengers (including the cost of transporting their vehicle). This reflects the average ratio of approximately two accompanying passengers per car on the route since 1996-97. The analysis is based on 'package' fares for adult passengers with a standard vehicle and 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 paid by the Commonwealth under the Scheme.

The data in table 3.1 indicate that the introduction of the Scheme resulted in an initial decrease of 25-30 per cent in the fares paid by travellers for the carriage of a standard vehicle and two accompanying adult passengers using a 2-4 bunk inside 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 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. Table 3.1 indicates that, at 30 June 2002, the rebate provided a 20-24 per cent reduction in the fares paid for the standard vehicle and two adult passengers (2-4 bunk inside cabin).

Changes in 2001-02

TT-Line's passenger and vehicle fares were unchanged during 2001-02 (TT-Line pers. comm. May 2003). There had been significant increases in the previous year due to the introduction of *A New Tax System* and rises in fuel prices.

TABLE 3.1 IMPACT OF REBATES ON ONE-WAY FARES FOR *SPIRIT OF TASMANIA*, 1996 AND 2002

<i>Period/payments^a</i>	<i>Low season</i>	<i>Shoulder season</i>	<i>High season</i>
1 September 1996			
Package gross fare ^b	405	435	505
Rebate	100	120	150
Package net fare	305	315	355
30 June 2002			
Package gross fare ^b	502	542	625
Rebate	100	120	150
Package net fare	402	422	475

a. For the purposes of the analysis, the fares are based on a 2-4 bunk inside cabin. The package gross fares and package net fares include two adult passengers and one standard motor vehicle.

b. Incorporates fares of \$125/\$145/\$185 for the standard vehicle and \$140/\$145/\$160 for each passenger in 1996, and \$140/\$160/\$205 for the standard vehicle and \$181/\$191/\$210 for each passenger in 2002.

Sources TT-Line (1996; 2001).

Table 3.2 presents benchmark passenger fares for the *Spirit of Tasmania* in the fare schedule that was current at the end of 2001-02.

TRAFFIC

The number of eligible passengers and eligible vehicles carried across Bass Strait by sea is a key element in the analysis of the Scheme. Traffic data are presented in table 3.3.

Changes since 1990-91

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 12 years to 2001-02. 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 (around three-quarters) that travel with an accompanying motor vehicle. There was a 97 per cent rise in vehicle numbers between 1995-96 and 1998-99.¹⁰

Over the longer period from 1995-96 to 2001-02, sea passenger traffic increased by 61 per cent and vehicle traffic rose by 114 per cent. The higher growth rate

TABLE 3.2 BENCHMARK ONE-WAY PASSENGER FARES FOR *SPIRIT OF TASMANIA*, END OF 2001-02^a

<i>Passenger type</i>	<i>Low season</i>	<i>Shoulder season</i>	<i>High season</i>
Adult	181	191	210
Pensioner	108	114	125
Senior	154	162	178
Tertiary student	134	144	160
Child/student	90	97	107

a. Fares are for an inside cabin (2-4 bunk). This was the benchmark accommodation for calculating the rebate.

Source TT-Line (2001, pp. 18-19).

¹⁰ 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.

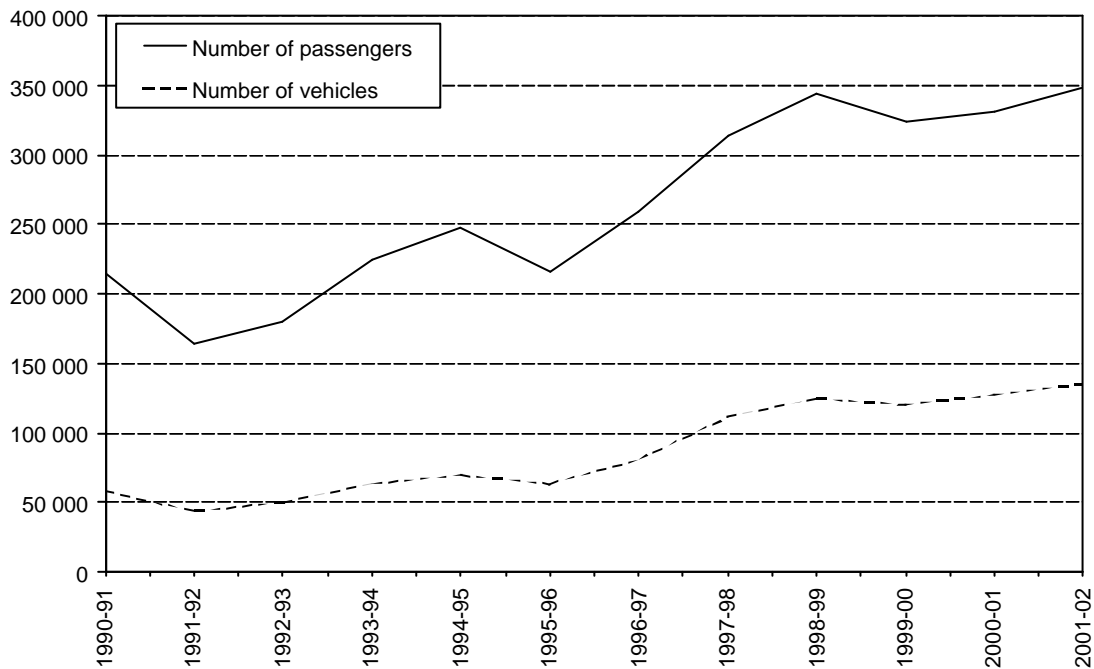
TABLE 3.3 SELECTED OPERATIONAL DATA FOR TT-LINE, 1995-96 TO 2001-02

Indicator	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Traffic							
Passengers (no.)	215 986	259 169	314 232	343 338	323 211	330 961	348 435
Vehicles (no.)	63 029	80 637	111 400	124 395	120 084	127 124	134 829
Freight (teus)	23 199	22 112	19 116	20 589	17 816	21 771	22 525
Voyages (no.)							
<i>Spirit of Tasmania</i>	295	313	323	334	347	379	367
<i>Devil Cat</i>	np	np	117	171	108	99	118
Total voyages	295	313	440	505	455	478	485
Traffic per voyage							
Passengers	732	828	714	680	710	692	718
Vehicles	214	258	253	246	264	266	278

np not applicable.

Sources TT-Line (2002) and earlier issues.

FIGURE 3.1 NUMBERS OF PASSENGERS AND VEHICLES (ONE-WAY) CARRIED BY TT-LINE, 1990-91 TO 2001-02



Note The passenger data in this figure are expressed in terms of one-way trips (i.e. one return journey is counted as two trips). They are not directly comparable with the passenger data in figure 4.1, which are expressed in terms of passenger journeys (i.e. one return journey is counted as one trip). There are also some differences between figures 3.1 and 4.1 in the treatment of travel by minors and day trippers/excursionists.

Sources TT-Line (2002) and earlier issues. TT-Line (pers. comm. Jan. 2001). PDC (1994) and earlier issues.

for vehicle traffic partly reflects the rising proportion of sea passengers travelling with an accompanying motor vehicle (see discussion in chapter 4).

Changes in 2001-02

The data in table 3.3 indicate that the number of passengers carried by TT-Line increased by 5 per cent in 2001-02 compared with the previous year. There was a rise of 6 per cent in vehicle traffic. Increases in passenger and vehicle numbers in 2000-01 and 2001-02 more than offset the earlier declines in 1999-2000.

The average number of passengers per voyage increased by 4 per cent in 2001-02 compared with the previous year. The figure for vehicles per voyage rose by 5 per cent.

Subsequent developments

The replacement of the *Spirit of Tasmania* (and the *Devil Cat*) by the *Spirit of Tasmania I* and *Spirit of Tasmania II* in September 2002 resulted in a significant increase in passenger and vehicle capacity on the Bass Strait route.

The additional capacity facilitated a substantial increase in sea traffic across Bass Strait. Table 3.4 indicates that the number of passengers carried by TT-Line in the December quarter 2002 was 49 per cent higher than traffic in the corresponding period of 2001. The increase for vehicle traffic was 63 per cent.

Changes in traffic in 2002-03, and the contributing factors, will be explored in the BTRE's next monitoring report.

TABLE 3.4 TT-LINE TRAFFIC, DECEMBER QUARTER 2001 AND DECEMBER QUARTER 2002

Traffic/month	Quarter		Change (per cent)
	December 2001	December 2002	
Passengers			
October	30 219	46 379	53
November	23 807	37 883	59
December	32 019	43 517	36
Total passengers	86 045	127 779	49
Vehicles			
October	11 412	19 740	73
November	8 941	16 266	82
December	11 954	16 750	40
Total vehicles	32 307	52 756	63

Source TT-Line (pers. comm. May 2003).

CHAPTER 4 IMPACT OF THE SCHEME ON TRAFFIC

Fare reductions of the magnitude associated with the Scheme would be expected to stimulate increased travel by sea across Bass Strait. They 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 or income growth. The BTRE has therefore developed an econometric model, as well as undertaking trend comparisons, to identify the impact of the Scheme.

ECONOMETRIC MODEL

The model developed by the BTRE was described in detail in the monitoring report for 2000-01 (BTRE 2002, pp. 16-17 and 31-36). It estimates the relationship between motor vehicle passenger numbers (i.e. eligible passengers plus their travelling companions) and changes in population, real household disposable income, the sea fare, and the air fare. The BTRE has now re-estimated the model using the original time-series data (1985-86 to 2000-01) plus data for 2001-02 (see appendix II).

The sea fare (own-price) elasticity estimated from the model can be used to calculate the net impact of the Scheme on motor vehicle passenger numbers. The estimated elasticity of -0.9 is lower than the elasticity (-1.3) in the Bass Strait Visitor Access Study (Tourism Council of Tasmania 2001, p. 36). It should be noted that the BTRE's elasticity is based on detailed analysis of data for the Bass Strait route, whereas the figure in the Access Study was obtained from observed market reactions and a literature review.

Table 4.1 presents estimates of the Scheme's impact based on the BTRE's re-estimated model. The analysis indicates that, in its first 10 months of operation, the Scheme resulted in the movement of an additional 33 000 motor vehicle passengers across Bass Strait. This represented an increase of 28 per cent, relative to the likely situation without the Scheme. Over the full period from 1996-97 to 2001-02, the Scheme resulted in an estimated increase of around 282 000 motor vehicle passengers (25 per cent).

Analysis by the BTRE indicates that around 43 per cent of the growth in motor vehicle passenger traffic between 1995-96 and 2001-02 was attributable to the operation of the Scheme. The remaining 57 per cent reflected the impact of increases in real household disposable income and other factors.

The econometric model probably provides a conservative estimate of the impact of the Scheme. If the sea fare (own-price) elasticity in the Bass Strait Visitor Access Study was used, the increases in motor vehicle passenger traffic would be around 42 600 passengers (39 per cent) in the first 10 months, and about 366 300 passengers (35 per cent) from 1996-97 to the end of 2001-02.

The model developed by the BTRE 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. For example, it covers a relatively short time period and does not include some potentially relevant variables (e.g. capacity constraints prior to the introduction of larger ferries).

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 directly affected by the Scheme with trends in related traffics that are not covered by the Scheme. Consistently superior growth in traffics directly affected by the Scheme would provide some additional evidence to support the view that the Scheme has contributed to increased sea traffic across Bass Strait. The available data indicate that around three-quarters of sea passengers (i.e. eligible passengers and their travelling companions) are directly affected by the Scheme.

TABLE 4.1 ESTIMATED IMPACT OF THE SCHEME ON MOTOR VEHICLE PASSENGER NUMBERS, 1996-97 TO 2001-02

Year	<i>Motor vehicle passenger numbers</i>			
	<i>Without Scheme</i>	<i>With Scheme</i>	<i>Difference</i>	<i>Change (per cent)</i>
1996-97 ^a	119 994	153 045	33 051	27.5
1997-98	182 401	231 098	48 697	26.7
1998-99	208 085	261 487	53 402	25.7
1999-00	198 681	248 745	50 064	25.2
2000-01	212 210	259 438	47 228	22.3
2001-02	223 240	272 922	49 682	22.3
All years	1 144 611	1 426 735	282 124	24.6

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

Note Estimates up to 2000-01 differ from figures in previous monitoring report as the estimates were obtained from a re-estimated model that incorporates data for an additional year.

Sources TT-Line data and BTRE analysis.

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 Tourism Tasmania data on the number of adult visitors to Tasmania, by purpose of travel and mode, over the six years to 2001-02.¹¹ The data are not directly comparable with TT-Line figures, which are expressed in terms of one-way trips and also include children.

Table 4.2 indicates that, for visitors travelling on holidays or to visit friends and relatives (VFR), the number of sea passengers (mainly covered by the Scheme) increased much more rapidly than the number of air passengers (not covered by the Scheme). In particular, the number of holiday/leisure travellers using sea transport rose by 60 per cent, while the number of these travellers using air transport grew by only 5 per cent. The comparable figures for VFR travellers were 37 per cent and -10 per cent. This pattern is consistent with the view that the Scheme has contributed to increased sea passenger traffic across Bass Strait.

TABLE 4.2 NUMBER OF ADULT VISITORS TRAVELLING TO TASMANIA, BY PURPOSE AND MODE, 1996-97 TO 2001-02^a

Purpose/mode	Visitors (no.)						Change over period (per cent)
	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	
Holiday/leisure							
Sea	49 563	71 712	85 258	86 000	77 950	79 177	60
Air	171 808	187 588	191 327	204 500	192 984	180 275	5
VFR ^b							
Sea	12 887	16 266	18 356	17 500	17 285	17 676	37
Air	113 579	102 104	106 932	95 800	114 757	102 775	-10
Business							
Sea	4 079	4 188	4 987	4 800	5 271	5 581	37
Air	75 886	71 490	70 320	80 300	63 810	85 352	12
Other							
Sea	7 384	4 497	5 536	3 900	9 208	8 446	14
Air	47 993	43 651	41 306	38 800	39 001	40 622	-15
Total							
Sea	73 913	96 663	114 137	112 200	109 714	110 880	50
Air	409 266	404 833	409 885	419 400	410 552	409 024	0

a. Excludes minors and day trippers/excursionists.

b. Visiting friends and relatives.

Source Tourism Tasmania (2003) and earlier data.

¹¹ Percentage changes in traffic over the six years should be interpreted with caution, as they are substantially affected by the initial and final years used in the analysis.

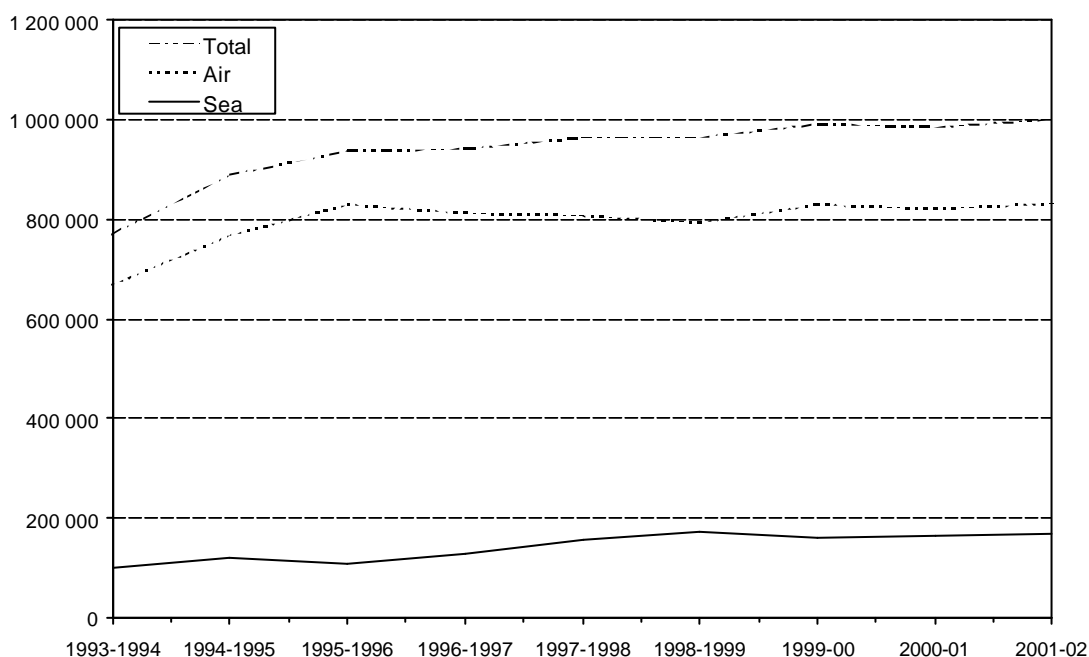
Air and sea traffic

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 was virtually unchanged. 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 most recent period (1998-99 to 2001-02) there was a marginal decline in sea traffic (1 per cent), at least partly due to special circumstances (i.e. the breakdown of the *Spirit of Tasmania*), and air traffic increased by 5 per cent.

The introduction 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 since 1998-99, the initial changes in trends are consistent with the view that the Scheme has contributed to increased sea passenger traffic between the mainland and Tasmania.

FIGURE 4.1 NUMBERS OF SEA AND AIR PASSENGERS CARRIED ACROSS BASS STRAIT, 1993-94 TO 2001-02^a



a. Includes day travellers, 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.

Categories of sea passengers

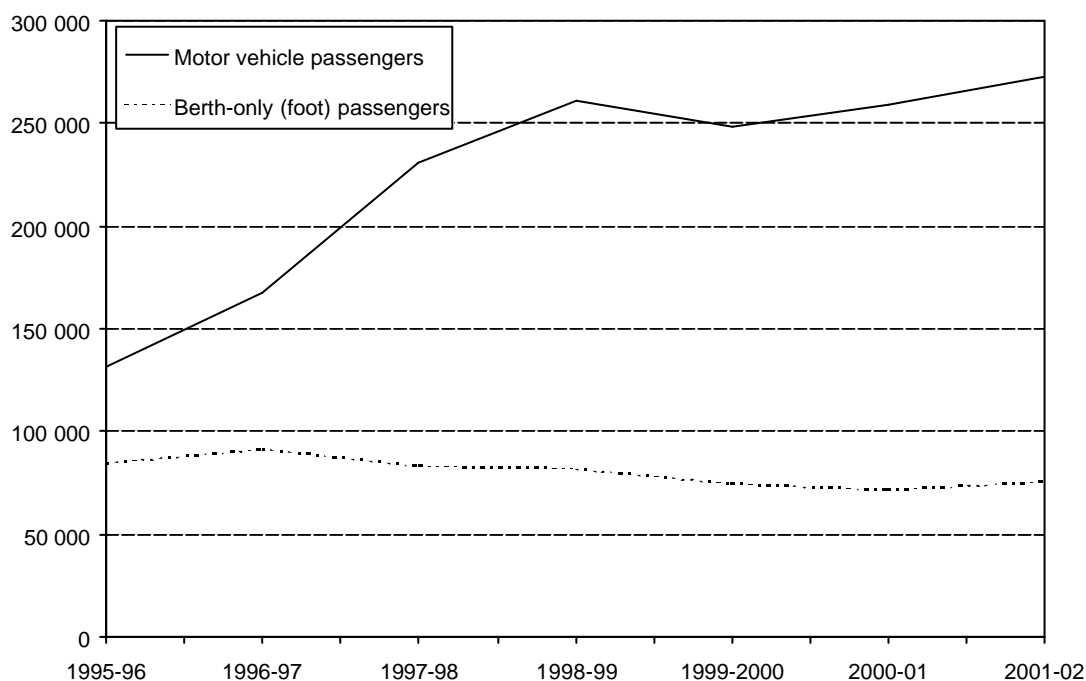
Figure 4.2 presents data on motor vehicle passengers (i.e. eligible passengers plus their companions) and berth-only passengers since 1995-96. As the average number of motor vehicle passengers per eligible vehicle has remained around 2.0 since the introduction of the Scheme, changes in the number of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

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 108 per cent between 1995-96 and 2001-02, and berth-only passenger traffic fell by 11 per cent.

The only exception to the upward trend in motor vehicle passengers occurred in 1999-2000, when there was a 5 per cent fall compared with the previous year. This decline, which was associated with the engine problems on the *Spirit of Tasmania*, was almost outweighed by a subsequent rise in 2000-01. The number of berth-only passengers continued to fall from 1998-99 to 2000-01, but then rose slightly in 2001-02.

The differing trends in motor vehicle passengers (directly affected by the Scheme) and berth-only passengers (not covered by the Scheme) suggest that the Scheme has contributed to traffic growth. 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.

FIGURE 4.2 NUMBER OF SEA PASSENGERS CARRIED ACROSS BASS STRAIT, BY CATEGORY, 1995-96 TO 2001-02



Source TT-Line (pers. comm. June 2002) and earlier communications.

ASSESSMENT

The BTRE's econometric model indicates that the Scheme has contributed significantly to increased sea passenger travel across Bass Strait. The detailed results should be interpreted with some caution as the model is affected by data limitations. The increased traffic includes Tasmanian residents and travellers diverted from air transport, as well as additional visitors to Tasmania.

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 sea passenger traffic.

CHAPTER 5 TT-LINE REVENUE AND EXPENSES

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

OPERATING REVENUE

TT-Line's total revenue has generally increased since the early 1990s, although there have also been two short-term declines (figure 5.1).

Changes since 1996-97

Table 5.1 provides information on TT-Line's revenue over the last six years. Annual operating revenue rose by 40 per cent (23 per cent in real terms) between 1996-97 and 2001-02. The largest increase (19 per cent) was from 1996-97 to 1997-98, when there was a rise of 21 per cent in passenger traffic (see table 3.3). These were also the first two years in which the Scheme operated.

Table 5.2 presents selected financial indicators for TT-Line. Average operating revenue per voyage fell by 10 per cent (20 per cent in real terms) between 1996-97 and 2001-02. It initially declined, and then partly recovered after 1998-99.

In previous monitoring reports, the BTRE has presented data for TT-Line's operating revenue on a per passenger and per vehicle basis. These indicators have now been discontinued, as they do not closely reflect changes in typical fares. For example, average passenger revenue per passenger did not change in 2000-01 compared with 1999-2000, although scheduled fares increased by 7.2 per cent in July 2000 and 4 per cent in January 2001 (BTRE 2002, p. 13 and p. 23). Conversely, average passenger revenue per passenger rose by 22 per cent in 2001-02 compared with the previous year, but scheduled fares were not changed over this period.¹² It appears that fluctuations in seasonal traffic patterns, together with the seasonal variations in scheduled fares, cause significant annual variations in the average revenue indicators.

¹² Calculated from data provided by TT-Line (pers. comm. May 2003).

TABLE 5.1 SELECTED FINANCIAL INFORMATION FOR TT-LINE, 1996-97 TO 2001-02
(\$'000)

Category	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Total operating revenue	61 766	73 325 ^a	80 607	77 511	81 842	86 236
Operating expenses						
Operations—general	22 357	22 724	33 932	40 865 ^b	42 864 ^b	42 402 ^b
Operations—write-down	0	0	0	0	0	30 887
Hotel services	15 296	15 464	17 783	16 924	17 782	18 130
Customer acquisition	4 893	4 698	6 015	5 900	6 261	6 680
Administration	6 098	6 219	5 707	4 889	6 871	7 462
Other ^c	10 556	22 406 ^d	9 793	8 697 ^e	2 696	1 958
Total operating expenses	59 200	71 511	73 230	77 275	76 474	107 519
Operating profit/loss	2 566	1 814	7 377	236	5 368	-21 283
Abnormals/extraordinaries	0	780	0	0	0	0
Profit/loss	2 566	1 034	7 377	236	5 368	-21 283

a. Includes \$8.0 million revenue from the *Devil Cat* and catamaran trial.

b. Includes depreciation and amortisation (previously in the 'other' category).

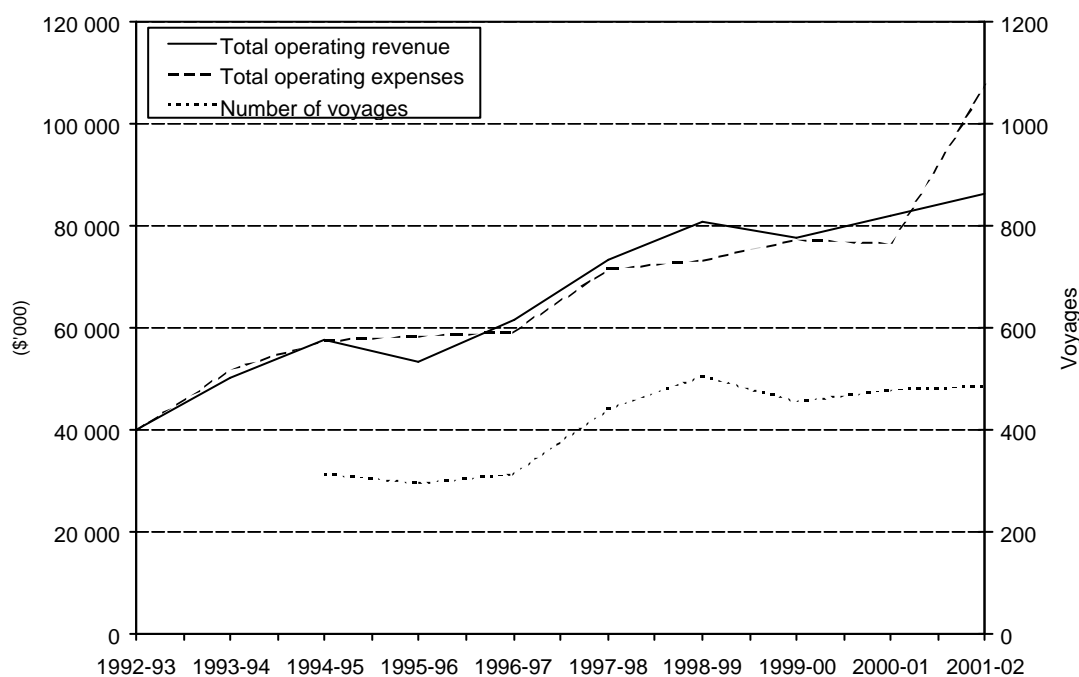
c. Depreciation was included in this category prior to 1999-2000.

d. Includes \$11.6 million operating expenses from the *Devil Cat* and catamaran trial.

e. TT-Line's 1999-2000 operating expenses were affected by the breakdown of the *Spirit of Tasmania*, which added approximately \$5.4 million to total operating expenses (i.e. above the expected insurance recovery).

Sources TT-Line (2002) and earlier issues. TT-Line (pers. comm. Jan. 2001).

FIGURE 5.1 TT-LINE'S OPERATING REVENUE AND EXPENSES, 1992-93 TO 2001-02



Sources TT-Line (2002) and earlier issues.

Changes in 2001-02

TT-Line's operating revenue in 2001-02 was \$86.2 million, a record for the company. It was 5 per cent (2 per cent in real terms) above the figure for the previous year.

Table 5.2 indicates that average operating revenue per voyage increased by 4 per cent (1 per cent in real terms) in 2001-02 compared with 2000-01.

Impact of the Scheme

Figure 5.2 illustrates the amount of TT-Line's operating revenue that is directly attributable to the Scheme (i.e. excluding the additional revenue flowing from increased traffic that is generated by lower fares). Rebates paid to TT-Line (and passed on to passengers in the form of lower fares for eligible vehicles) were equivalent to around 19 per cent of the Line's total revenue in 2001-02.

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 1999-2000.

Changes since 1996-97

Table 5.1 provides information on TT-Line's operating expenses over the last six years. Total operating expenses increased by 82 per cent (61 per cent in real terms) between 1996-97 and 2001-02. Almost two-thirds of the increase over this period occurred in 2001-02, when the value of the *Spirit of Tasmania* was written

TABLE 5.2 FINANCIAL INDICATORS FOR TT-LINE, 1996-97 TO 2001-02

	\$					
<i>Indicator</i>	<i>1996-97</i>	<i>1997-98</i>	<i>1998-99</i>	<i>1999-00</i>	<i>2000-01</i>	<i>2001-02</i>
Operating revenue						
Per voyage ^a	197 335	166 648	159 618	170 354	171 218	177 806
Operating expenses ^b						
Per passenger	228	228	213	239	231	309
Per voyage	189 137	162 525	145 010	169 835	159 987	221 689
Operating profit/loss						
Per voyage	8 198	4 123	14 608	519	11 230	-43 882

a. Total revenue divided by the number of voyages.

b. Incorporates expenses for passengers, vehicles and freight.

Sources Estimated from data in table 3.3 and table 5.1.

down. Other factors that have contributed to the increase in operating expenses since 1996-97 include the introduction of a second vessel (the *Devil Cat*), an increase in the number of voyages undertaken by the *Spirit of Tasmania*, and rises in fuel prices.

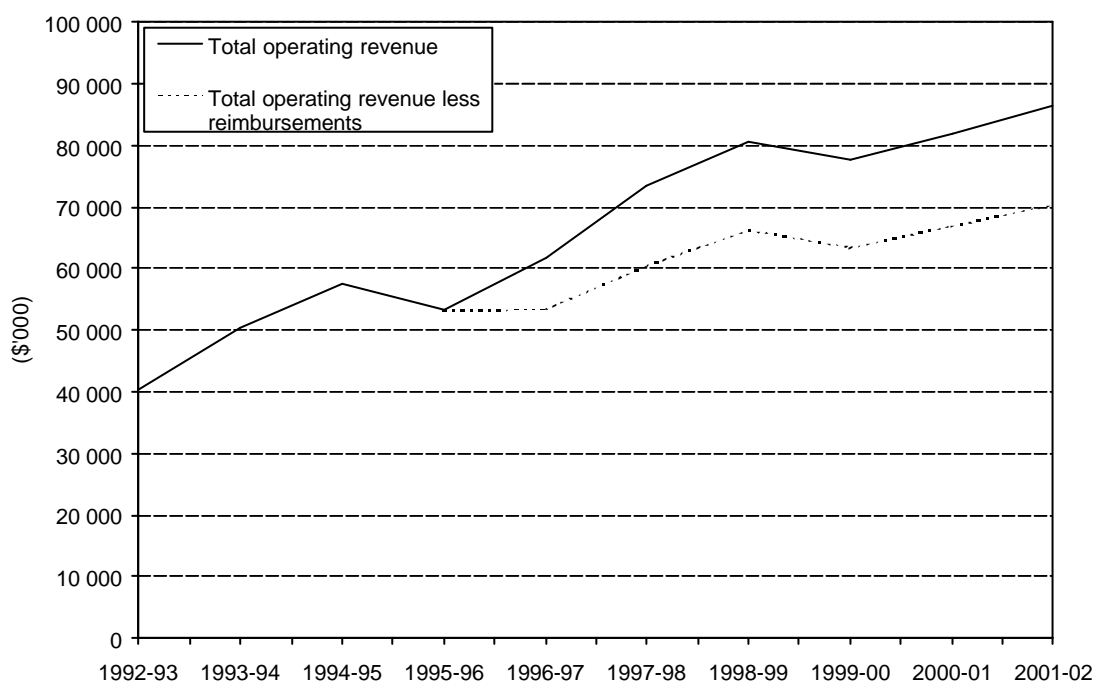
The data in table 5.2 indicate that average operating expenses on a per passenger basis increased by 36 per cent (20 per cent in real terms) between 1996-97 and 2001-02. Up to 2000-01 (i.e. before the write-down of the value of the *Spirit of Tasmania*), the increase was only 1 per cent (a decline of 8 per cent in real terms). The measure of operating expenses per passenger has some shortcomings as the operating expenses in the numerator also include expenses for vehicles and freight. However, it provides some useful information on trends in unit costs.

Average operating expenses per voyage increased by 17 per cent (4 per cent in real terms) between 1996-97 and 2001-02. Up to 2000-01 (i.e. before the write-down of the value of the *Spirit of Tasmania*), there was a decline of 15 per cent (23 per cent in real terms).

Changes in 2001-02

TT-Line's operating expenses in 2001-02 totalled \$107.5 million, a 41 per cent increase (37 per cent in real terms) compared with the previous year. Without the write-down of the value of the *Spirit of Tasmania*, operating expenses

FIGURE 5.2 TT-LINE'S REVENUE AND REIMBURSEMENTS, 1992-93 TO 2001-02



Sources: TT-Line (2002) and earlier issues. Tasmanian Assistance Services (pers. comm. Feb. 2001, May 2002, Mar. 2003).

would have totalled \$76.6 million in 2001-02. This is similar to the figure of \$76.5 million in 2000-01. Increases in fuel prices had significant effects on TT-Line's operating expenses in 1999-2000 and 2000-01 (BTRE 2002, p. 25).

The data in table 5.2 indicate that average operating expenses on a per passenger basis increased by 34 per cent (30 per cent in real terms) in 2001-02 compared to the previous year. The large increase reflects the impact of the write-down of the value of the *Spirit of Tasmania*. As noted earlier, this indicator should be interpreted with caution as it has some shortcomings.

Average operating expenses per voyage increased by 39 per cent (35 per cent in real terms) in 2001-02 compared to 2000-01.

PROFITABILITY

TT-Line incurred an operating loss of \$21.3 million in 2001-02 (table 5.1). A trading profit of \$9.6 million was more than offset by the write-down of \$30.9 million on the value of the *Spirit of Tasmania* (TT-Line 2002, p. 1). The operating loss in 2001-02 followed a profit of \$5.4 million in 2000-01, and was TT-Line's first operating loss in the period that the Bureau has been monitoring the impact of the Scheme.

Table 5.1 indicates that there has been significant variability in TT-Line's profitability. The major contributing factors prior to 2001-02 included one-off repair/maintenance costs, changes in passenger numbers (and hence revenue), variations in the number of voyages, and fluctuations in fuel prices.

CHAPTER 6 CONCLUDING COMMENTS

The introduction of the Scheme in 1996 resulted in a significant reduction in fares for motor vehicle passengers travelling by sea across Bass Strait. The proportional reduction subsequently declined up to the end of 2001-02, as gross fares increased but the levels of the rebate did not change. Increases in the rebates for the low and shoulder seasons from 1 September 2002 (i.e. after the period covered by this report) would have at least partly reversed the long-term decline in the proportional fare reduction.

There was substantial growth in the numbers of passengers and vehicles carried by sea across Bass Strait after the introduction of the Scheme. Fare reductions of the magnitude associated with the Scheme would be expected to stimulate increased sea traffic on the route. However, some of the traffic growth that has occurred is attributable to other factors such as increases in population and incomes.

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

The BTRE's comparisons of trends in different traffics provide further support for the view that the Scheme has contributed significantly to the growth in sea traffic. This analysis indicates that several traffics directly affected by the Scheme have generally grown more rapidly than other, related traffics.

TT-Line's revenue in 2001-02 was a record for the company. Operating expenses were generally similar to expenses in the previous year, but the write-down of the value of the *Spirit of Tasmania* resulted in a substantial increase in total operating expenses. TT-Line earned a trading profit in 2001-02, with the write-down resulting in an operating loss. This was TT-Line's first operating loss in the six years that the BTRE has been monitoring the impact of the Scheme.

Initial data indicate that the introduction of two replacement ships by TT-Line in September 2002 has facilitated a further, substantial increase in sea traffic across Bass Strait. Changes in passenger and vehicle traffic in 2002-03, and the contributing factors, will be explored in the BTRE's next monitoring report.

APPENDIX I MONITORING PROVISIONS IN 2001 MINISTERIAL DIRECTIONS

- 16.1 A *Service Operator* who claims reimbursement under *the Scheme* shall be subject to monitoring by the *Bureau*.
- 16.2 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* and *eligible passenger vehicles* carried per annum by the *Operator*.¹³
- 16.3 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.

¹³ This is the provision in the Ministerial Directions that applied during 2001-02. The Ministerial Directions issued in September 2002 added another component, 'number of passengers travelling under related bookings'.

APPENDIX II MODEL OF SEA PASSENGER TRAFFIC

The BTRE's previous 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). This appendix outlines the re-estimated model that incorporates data for an additional year.

THE MODEL

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

$$\ln V_t = b_1 + b_2 \ln Y_t + b_3 \ln P_t + b_4 \ln Q_t + b_5 D_t + u_t$$

where,

V = Per capita number of motor vehicle passengers;

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

P = TT-Line's one-way package sea fare (including reductions under the Scheme from 1996-97);

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

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

u = Error term;

β^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 original annual time-series data (1985-86 to 2000-01) plus data for 2001-02. 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 (previously 0.93) 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. All of the estimated coefficients 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 2.3 (previously 3.0). This means that a 1 per cent increase (decrease) in the level of per capita real household disposable income will result in a 2.3 per cent increase (decrease) in the number of motor vehicle passengers.

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

<i>Year</i>	<i>Passengers^a</i> (<i>'000</i>)	<i>Air fare^b</i> (<i>\$/passenger</i>)	<i>Sea fare^c</i> (<i>\$/package</i>)	<i>Real income^d</i> (<i>\$/b</i>)	<i>Population^e</i> (<i>million</i>)
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 ^f	328.8	17.7
1993-94	131.5	201	413 ^f	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	438.5	19.4
2001-02	272.9	302	475	465.6	19.7

a. Motor vehicle passengers carried by TT-Line.

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

c. Average one-way TT-Line 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 (2001) and earlier issues. TT-Line (2002) and earlier issues. TT-Line (pers. comm. Aug. 2002). ABS (2003). BTRE (2003).

The second most important variable is the sea fare (own-price), with an estimated elasticity of -0.9 (previously -0.8). 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 0.7) and is highly significant in terms of the standard statistical tests. 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 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 detailed results of the model should be interpreted with some caution, as the analysis is constrained by data limitations and other factors.¹⁴ For example, the time-series data cover a period of only 17 years, with just 6 years involving the period since the commencement of the Scheme. Despite these limitations, the model provides strong support for the view that the Scheme has contributed significantly to the increase in sea passenger travel on the Melbourne-Tasmania route since 1995-96.

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	-26.904	-4.05	0.01	
$\log Y_t$	2.305	3.06	0.01	N=17
$\log P_t$	-0.927	-3.21	0.01	Adjusted-R ² = 0.94
$\log Q_t$	0.911	2.81	0.01	DW = 1.94
D_{GWt}	-0.245	-2.14	0.05	

Source BTRE analysis.

¹⁴ These limitations are described in BTRE (2002, p. 36).

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