TASMANIAN FREIGHT EQUALISATION SCHEME

This paper reviews some history of the Tasmanian Freight Equalisation Scheme and comments on its current form. Because the existence of the scheme probably reflects political realities at the Commonwealth level, the paper does not argue for or against its continued operation, although it is obviously debatable whether government should give assistance to specific regions, or give it to some regions and not others.

Given the existence of the Freight Equalisation program, care should be taken that it does not offset market forces in such a way as to cause inefficiency in the Bass Strait transport industry or in the wider Tasmanian economy.

The paper is based on my experience working on TFES matters with the Bureau of Transport Economics and the Inter-State Commission. Comments on the current administrative arrangements are based on published material only.

TFES HISTORY

As I understand it, the 1960s were something of a "golden age" for Tasmanian interstate shipping. This was the period following the introduction of Ro-Ro ships and containers on the coast that gave a vast improvement in productivity and a long period of price stability.

The ships could carry road trailers but, after some operational experience, it was decided they would be more productive and efficient if most cargo were carried in containers. The ship operators put this policy into effect with a pricing schedule that encouraged shippers to use containers and, as I understand it, the result was a period of several years without increases in freight rates.

By the early 1970s, however, the series of reports on Tasmanian shipping suggest that the State was beginning to worry about actual or potential increases in freight rates.

- The State commissioned a report from consultants Pak Poy and Kneebone on all Tasmanian transport issues that was published in the late 1960s, and this was followed by reports on interstate shipping from the BTE and a Senate sub-committee.

- Later, the Nimmo Commission Report recommended, *inter alia*, the implementation of a freight equalisation scheme.

Possible causes of the State's problems at that time were said to be major increases in maritime and wharf labour costs and the very dominant position of the incumbent shipping lines (ANL and TNT) on the routes between Tasmania and eastern states. The shipping companies Holymans and Stateships provided services to South Australia and Western Australia, but they played minor roles in the trade.

Whatever the cause, in the two years prior to publication of the Nimmo Report, there had been two major increases in ANL freight rates for coastal trade, which the then Commonwealth Government had frozen in respect of Tasmanian trade. USS rates were not frozen with the result was that Hobart trade was being shipped to northern Tasmanian ports from which ANL operated. This was seen as a major distortion and a threat to the Port of Hobart.

The first TFES was implemented by the Department of Transport and the form of the scheme was ***based*** on the Nimmo report but with several major modifications and changes.

One of the major changes in the scheme related to the level of subsidy paid.

- As required by its terms of reference, the Nimmo Commission recommended subsidy rates calculated as Tasmania's transport disadvantage ***less*** the value of any locational advantages of operating in that State.

- The policy of the incoming Fraser Government was to pay subsidy rates that reflected full transport disadvantage, without any discount for the value of locational advantages, and such rates were calculated by the Department of Transport (DOT) (presumably with help from Nimmo Commission staff).

The stated aims of the Freight Equalisation Scheme, according to Nimmo, were to:

- Offset Tasmania's transport disadvantage
- To promote economic development in Tasmania and
- To promote the development of an efficient transport system.

In retrospect, the results of the BTE Landbridge report suggest that Nimmo also set the subsidy rates so as to support the continued operation of Hobart as an interstate container port, although that was not obvious at the time.

Nimmo raised the question of whether Tasmania deserved transport assistance that was not available to other remote areas of Australia. He answered in the affirmative on the grounds that Tasmania was a sovereign State and that, at Federation, the States had agreed to pool their resources to attain a consistent standard of living across the nation. The Nimmo Commission considered three forms of subsidy;

- Capital grants were rejected because there was no obvious project
- Across the board subsidies to all freight were rejected on advice from consultants who said they would go to some cargoes that did not need assistance.
- He recommended assistance to the specific area of need, namely non-bulk freight.

The form of the northbound subsidy scheme first introduced was similar to today's operation, albeit with some differences.

- A specific rate of subsidy was set for each commodity on each of six routes between Tasmania and the mainland.
- The six routes were defined by two Tasmanian "origins", and three mainland "destinations".
    - Northern Tasmania and southern Tasmania
    - (1) Victoria; (2) SA and WA and; (3) NSW, Qld, NT and ACT

For transport system to be efficient, Nimmo said that:

- Freight rates should reflect all costs
- Shippers should be free to choose between competing operators.

Nimmo implied that he considered reducing or withholding subsidy from cargoes where freight rates were a low proportion of the landed value or a very high proportion.

- Where freight rates are a very low percentage of value, it could be argued that they don't need assistance.
- Where freight rates are a high proportion, there is a risk that subsidies would stimulate inappropriate expansion.

Nimmo did not say exactly what action he took on these matters but, if I remember correctly, the initial scheme did not include zinc metal shipped on the *Zincmaster* (a vessel owned by the producer) or any of the other metals produced at Risdon (although this might have been a DOT initiative).

Nimmo also said he took account of the extra stocks Tasmanian firms were forced to hold on account of Bass Strait but did not give details. If I remember correctly, at least one large Tasmanian firm claimed an "inventory cost" disadvantage in 1984 when giving evidence to the ISC. Their claim was based on data compiled for the Nimmo Commission, and the ISC asked them to carry out a similar analysis for 1984. When giving evidence on a second occasion, the firm conceded that inventory costs had been greatly reduced as a result of improvements in transport and by other developments within its industry, such as faster production machinery, better forecasting methods, and better communications. It withdrew its submission that inventory costs should be taken into account. If this becomes an issue for the Productivity Commission inquiry, I suggest it ask for evidence to prove claims about inventory costs.

The Nimmo Commission encountered a number of problems during its inquiries and did not have time to design the southbound scheme. The Department of Transport therefore carried out the work of estimating the southbound subsidy rates.

During the early years of the scheme, there were a number of "problems" that set precedents for later years.

- At an early stage, it was found that some Tasmanian shippers could land cargoes in Perth for a lower net freight rate than consignments from Melbourne. Indeed,

for deadweight (high density) cargoes, the subsidy was often higher than the freight rate. WA was therefore broken out as a separate TFES region with separate subsidy rates. BTE calculated the figures using Melbourne to Perth as the comparison route.

- Several Tasmanian industries complained that the subsidy rates should be set at a level to either ensure Tasmania industries could make sales on the mainland, even in the face of import competition. The general response was that subsidy rates were set to reflect only transport disadvantage, as calculated by Nimmo. This policy was outlined in the BTE's recalculation of southbound rates. One company making such claims, the Tasmanian manufacturer of calcium carbide, eventually went out of business in response to competition from a Philippine company.

- DOT initially set the subsidy for apples on the assumption that they were shipped by refrigerated containers. In fact, a big proportion went by dry container but, with the higher level of subsidy, they dominated mainland markets. A lower rate of subsidy was set for non-refrigerated shipments.

- Tasmanian meat processing unions and their employers wanted a lower rate of subsidy because, they asserted, Victorian abattoirs were buying Tasmanian livestock and putting them out of business. The same matter was later put to the ISC and it compiled statistics showing Tasmanian livestock shipments to the mainland over the long term (several decades if I remember correctly). These showed a pattern of peaks and troughs and suggested that the then levels of shipment were consistent with the long-term pattern.

- One Tasmanian manufacturer wanted a subsidy so that its net costs into Melbourne and Sydney equalled those of its mainland competitors in Perth, which benefited from low backloading rates on rail. The request was rejected.

- Many Tasmanian firms wanted increases in subsidy rates to match increases in shipping line freight rates. In effect, they wanted subsidies set at a level that kept their net freight cost constant in nominal terms. The response was that shipping rates were often offset by increases in land transport costs, and that regular increases in subsidy rates would take away shippers' incentive to resist increases.

- Timber was the subject of several ongoing problems. Mainland producers complained of losing market share, while Tasmanian firms argued with DOT over the interpretation of the Nimmo Report as it applied to timber. Eventually this commodity group was split into two categories on the basis of density. They approximated green timber and dried timber.

Exclusion of International Cargoes

At the time TFES was implemented, several reasons were given or mentioned for excluding international cargoes from being eligible to receive the subsidy. I don't know which factors actually were taken into account by the government or which ones were the key reasons behind their decision.

Reason 1. *Paying TFES subsidies to export cargoes being transhipped across Bass Strait might be a breach of GATT regulations if it were deemed to be a subsidy to exports.* As far as I know, no one ever sought a firm legal opinion on this question or raised the matter with GATT. In any case, it does not explain the exclusion of southbound cargoes. It seems unlikely that any overseas country would complain about Australia paying a transport subsidy on their shipments to Australia.

Reason 2. *At the time TFES subsidies were introduced, the overseas shipping lines were meeting the cost of transhipping export and import cargoes across Bass Strait. If international cargoes were made eligible for the subsidy, the benefit would have gone to shipping lines rather than Tasmanian firms.*

This situation arose because, at that time, programs and policies were still in place that had been introduced to facilitate the introduction of containerisation to the Australian trade. Prior to containerisation, international ships called at the Australian port nearest the origin of the cargo. Because container ships are more capital intensive, and because they are more efficient, the shipping lines decided to rationalise (reduce) the number of ports receiving direct calls. As a generalisation, they reduced their port calls to capital city ports.

As a way of buying the cooperation of exporters, shipping lines introduced a policy of "cargo centralisation" under which a standard freight rate was charged ex Australian capital city ports. For example, Australian exporters sending containers to the UK paid the same freight rate, irrespective of whether they had previously consigned cargoes from metropolitan Sydney or, say Newcastle or Wollongong. In cases where it was necessary to tranship containers to an export port, the international shipping line met the bill. In the case of Tasmania, this meant that international shipping lines met the cost of any containers that had to be transhipped across Bass Strait.

Reason 3. *Paying TFES on export and import cargoes would induce foreign shipping lines to reduce their operating costs by centralising all cargo on Melbourne, thereby cutting out direct port calls to Tasmanian ports.*

At the time TFES subsidies were introduced, the Tasmanian Government was worried about a fall in the number of international shipping services making direct calls at Tasmanian ports. They were working to increase the number of direct, international, services. They seemed to believe that direct calls gave a better standard of service and, in any case, they generated extra revenue for port authorities and extra employment.

Reason 4. *It might have been physically impossible, although I don't know if DOT knew this at the time, or, if they did, whether it was a factor affecting their decision*.

Ships operating in the Bass Strait trade in 1976 had only a limited capacity to carry the type of containers used in international trade, namely 6.1 metre and 12.2 metre ISO boxes. These are containers based on specifications based on standards published by the International Standards Organization. (One 6.1 metre ISO box equals one TEU.)

The ships were originally designed to carry the first types of container used on the Australia coast, namely the "seatainer" and the so-called "5.08 metre" containers. Both types of unit are obsolescent and are no longer in general use.

The ships had only a limited capacity for carrying ISO boxes on their upper deck, and although it was physically possible to load them inside the ship, the practice was inefficient because they wasted a lot of space; they could not be double-stacked.

If TFES had been extended to export cargoes, and if this had resulted in a major increase for shipping 6.1 metre boxes across Bass Strait, then the existing ships might not have had the capacity to meet demand. The ship operators, ANL and USS (TNT), would have been forced to acquire new ships. Given they were in a very strong monopoly position and were both close to government, both would probably have lobbied against such a move. Both lines had a strong motive to maintain the status quo because their ships were specially built for the Bass Strait trade and would probably have sold at a loss. They were designed for a type of container that was not used anywhere else, and required special wharf equipment.

Southbound cargoes

There were main two reasons why southbound shipments of consumer goods were not made eligible for freight equalisation assistance. The decision was also influenced by possible administration problems.

First, the Nimmo commission commissioned the ABS to construct an experimental cost of living index to compare living costs in Tasmania with those on the mainland. The overall results showed that Tasmanian living costs were comparable with those on the mainland. Some items cost more in Tasmania, possibly because of transport costs, but they were at least partly offset by other items for which Tasmanian costs were less than those on the mainland.

Second, it was found that many companies operated a national "price equalisation" scheme for the products and commodities they sold. They charged a standard warehouse door price in all State capital cities. That is, they charged the same price in Hobart as in Melbourne, Sydney and the other capitals. In practice, this probably indicated that they had some monopoly power in their market and that they were "cross-subsidising" Tasmanian customers with revenue from other markets.

Given this situation, the payment of TFES subsidies on southbound consumer cargoes would have been a subsidy to the suppliers. Tasmanian consumers would not have benefited.

The existence of price equalisation schemes was also the reason why some specific industrial materials and inputs were excluded from eligibility for southbound TFES, eg, steel.

To digress, an interesting aspect of the southbound trade is that, in the 1970s and 1980s, a minor proportion of cargoes were shipped in overseas containers being relocated from the mainland to Tasmania. They were initially landed in eastern states with imports from overseas and, after unloading, international shipping companies paid freight forwarders to relocate them to Tasmania, where they were loaded with export cargoes and shipped overseas. For the movement across Bass Strait, forwarders usually loaded the containers with southbound domestic cargo. This was a good deal for the forwarders; they received payments for moving the domestic cargoes, payment for relocating the containers, and free use of the units to move domestic cargoes. I don't know what the arrangements are today.

When the Freight Equalisation Scheme began operations, Australian Customs regulations limited use of overseas containers to one loaded movement within Australia, and required the to be re-exported within about three months. If I remember correctly, a few years later, regulations were relaxed, allowing unlimited domestic use and allowing them to be kept in Australia for up to twelve months.

BTE Recalculation of subsidies

After the freight Equalisation Scheme was implemented, BTE was given the job of recalculating the subsidy rates. This was a difficult task because the Nimmo report did not spell out in detail how it had first estimated the subsidies.

DOT asked Commissioner Nimmo for a briefing but he declined to have anything more to do with Tasmanian shipping and went into retirement. DOT then tried to access the commission's files but found he had deposited them with archives and arranged for them to be given a very high classification. As I understand it, DOT managed to access the files many years later when the ISC was established, but they didn't get any significant additional details.

The methodology eventually adopted by BTE, albeit with reservations, was to calculate TFES subsidy rates as the difference between the freight rates charged for door-to-door consignments of freight on routes between Tasmania and the mainland and on the mainland comparison routes specified by Nimmo.

For example, the subsidy for shipments from Northern Tasmania to Victoria was calculated as the difference between door-to-door shipments:

- From Northern Tasmania to Melbourne and
- From Melbourne to Adelaide.

The calculations were based on the door-to-door freight rates for cargo shipped under the following conditions:

- Cargoes were consigned in full container loads ex Tasmania and in full truck-loads (trailers) on mainland routes; full container/trailer loads are the most efficient means of transport.
- There was one pick up and one delivery for each container/truck consignment without any consolidation or deconsolidation.
- Pick up and delivery points were within the metropolitan area of the origin/destination; any longer intrastate journey was deemed to be an intra-state disadvantage.
- The shipper usually consigned at least two to three container/truck loads each week.
- Accounts were paid within the normal time.
- No demurrage or insurance costs were included in the freight rate.

BTE calculations were based on the so-called 'low-gate" 5.08 metre container for high-density commodities and the "high-gate" container for most others.

For most commodities, subsidies were calculated in terms of a rate per tonne weight. Initial experience with the Nimmo approach of setting a subsidy rate "per cubic metre" gave rise to problems and uncertainties. Some shippers claimed subsidy for the entire internal volume of containers whereas Nimmo almost certainly meant the subsidy to be based on the actual volume of cargo.

BTE's recalculation of both northbound and southbound rates followed similar methodology except that the southbound rates included a "minimum payment" provision to take account of the wide range of freight rates paid across Bass Strait.

BTE Landbridge report

After the northbound and southbound recalculations were completed, BTE published the Landbridge report that analysed the difference between Tasmanian and mainland interstate freight rates.

The results showed the difference was a declining function of distance. This was not attractive to the Tasmanian or Commonwealth governments and was not adopted. Nevertheless, its general principles influenced the ISC and the current scheme. The Landbridge report showed the problems of trying to pay subsidies such that Tasmania's net interstate freight rates were reduced to a level for shipping cargoes over similar distances on the mainland. This was particularly the case in an environment where there were direct shipping services from north and south Tasmania to most mainland states.

In retrospect, the results of the Landbridge Report should have made it clear that a strict interpretation of "freight equalisation" was not feasible, and that some modification to the policy was required. This did not come, however, until the ISC was established.

The ISC

The ISC was set up in 1983 and asked to recalculate TFES rates. The ISC took the view that Tasmania's transport disadvantage comprised the extra costs it faced as a result of legislation, namely the *Navigation Act*, and recommended **one** subsidy rate for shipments across Bass Strait, irrespective of the origin or destination. The ISC philosophy was that Tasmanians should be compensated for the extra shipping costs that had been imposed on them by government, that is, by the *Navigation Act.*

The government accepted the subsidy rates recommended by the ISC and the administrative arrangements, but **not** the underlying philosophy.

Although the ISC set only one rate of subsidy for each type of container, it set separate minimum payment figures for each route. This was intended to avoid the risk of the TFES subsidy causing distortions by affecting shippers' choice of either transport mode or route.

Like the Nimmo Commission, the ISC did not publish details of how it set its recommended subsidy rates. The Commission expected that it would be responsible for any future recalculation of subsidy rates but, before this happened, it was effectively abolished by being "merged" with the Productivity Commission. The *administrative arrangements* for the ISC scheme centred on the wharf-to-wharf freight rate paid by shippers, but it should not be assumed that the Commission did not take door-to-door rates into account in making its decisions.

High density cargoes

High-density commodities have received lower subsidy rates from the start of the Freight Equalisation Scheme. This reflects the fact that high-density commodities suffered less transport disadvantage than those of medium to low density.

For example, a twenty tonne consignment of lead could easily be loaded onto one trailer for movement by road on the mainland, or into one 6.1 metre container for shipment across Bass Strait. At the other density extreme, a consignment of 60 cubic metres of ping-pong balls could also be loaded onto a 12-metre trailer, but to send it across Bass Strait would require two 6-metre boxes.

In this example, ping-pong balls and lead can both be shipped on the mainland for the same cost-the hire of one 12-metre container- but the ping-pong balls cost twice as much across Bass Strait. This is obviously a simple example, and real world situations could

well be more complicated by a number of other factors, but they generally do not change the result. For the period 1976 to 1985 at least, examination of shipment documents confirmed that high-density cargoes suffered a lower level of transport disadvantage.

The following table gives a hypothetical example that demonstrates this in more detail. The table compares shipment of cargoes by trailer on a mainland route and by 6.1-metre container across Bass Strait. The example is based on the assumptions that:

- The trailer can carry 25 tonnes weight with a maximum of 70 cubic metres, and that the door-to-door freight rate on a mainland comparison route is $1,000.

- The container can carry 20 tonnes weight with a maximum volume of 30 cubic metres, and that the door-to-door freight rate across Bass Strait is $2,000.

HYPOTHETICAL EXAMPLE OF TASMANIAN TRANSPORT DISADVANTAGE

Cargo stowage	***Tasmanian container***		**Mainland truck**		***Tasmanian***
factor	***Payload***	***Freight cost***	***Payload***	***Freight cost***	***disadvantage***
(m3/t)	***(Tonnes)***	***($/t)***	***(Tonnes)***	***($/t)***	***($/t)***
1.4	20.0	100.0	25.0	40.0	60.0
1.5	20.0	100.0	25.0	40.0	60.0
1.6	18.8	106.7	25.0	40.0	66.7
1.8	16.7	120.0	25.0	40.0	80.0
2.0	15.0	133.3	25.0	40.0	93.3
2.2	13.6	146.7	25.0	40.0	106.7
2.4	12.5	160.0	25.0	40.0	120.0
2.6	11.5	173.3	25.0	40.0	133.3
2.8	10.7	186.7	25.0	40.0	146.7
2.9	10.3	193.3	24.1	41.4	151.9

The weight and volume constraints of the shipping container enable it to carry a full weight load of 20 tonnes of any commodity with a stowage factor up to 1.5 cubic metres per tonne. For such commodities, the freight rate is $100 per tonne. For commodities stowing more than 1.5 cubic metres per tonne, the volume limit keeps the payload less than 20 tonnes, with a corresponding increase in the freight rate per tonne. For example, for a commodity stowing 2.0 cubic metres per tonne, the payload is 15 tonnes and the freight rate is $133.30 per tonne. At 2.6 cubic metres per tonne, the payload is 11.5 tonnes costing $173.30 per tonne.

The greater volume of the truck enables it to carry a full 25 tonne payload of any commodity stowing 2.8 cubic metres or less per tonne, at a freight rate of $40 per tonne. For commodities stowing over 2.8 cubic metres per tonne, the weight of payload is reduced, and the cost per tonne increased.

The right hand column in the table shows freight disadvantage as a function of stowage factor, calculated as the difference between fright rates per tonne for cargo carried in the Tasmanian container and the truck. They show disadvantage increasing with stowage factor.

In this example, the disadvantage per tonne starts to increase for cargoes stowing above 1.5 cubic metres per tonne because calculations are based on a 6.1 metre ISO container. Calculations carried out by Nimmo, BTE and the ISC were all probably based on the low-gate 5.08 metre container, giving a figure of 1.1 cubic metres per tonne. The 5.08 metre unit is now out of service, but there are "half-height" 6.1 metre containers designed for high-density cargoes available, although I don't know if they are used in the Tasmanian trade.

For the first recalculation of TFES subsidies in 1978, BTE carried out a detailed examination of claims for each commodity, then set a subsidy rate based on the average tonnage shipped in the most efficient type of container: namely 5,08 metre low-gate container for high density commodities, 5.08 metre high gate containers for other dry commodities, and 6.1 metre refers for frozen and chilled products. A difference of a few tonnes in the average consignment weight could make a difference in the level of subsidy.

A somewhat similar procedure seems to have been followed by the Nimmo Commission, although it is difficult to tell because details of its calculations were never released. The ISC calculations, however, would appear to have been "broadbanded", with commodities divided into two groups, high density and others, and subsidies set for the average of each. The ISC followed the Nimmo Commission practice of not releasing details of how it calculated its subsidies.

Last, it should be noted that it is not logical to estimate Tasmania's transport disadvantage by comparing the cost of shipping containers across Bass Strait with the cost of transporting containers over the same distance on the mainland. Cargoes sent by road over short to medium distances on the mainland are rarely, if ever, loaded into containers, unless they are to be transhipped for onforwarding by rail or sea. Rather, such cargoes are generally loaded direct onto trucks or railers. Containerising cargo to be sent by road would reduce the net payload by about 2.5 tonnes for a single container or 5 tonnes for two units. It would also involve the extra cost of moving empty containers and possibly the cost of specialised cargo handling equipment.

COMPETITION AND EFFICIENCY

When the then Australian Government implemented the Tasmanian Freight Equalisation Scheme in 1976, the major Bass Strait container trades were dominated by two companies: ANL and USS (a subsidiary of TNT). Other services were provided by Holymans to Adelaide and Stateships to Western Australia.

ANL and USS dominated the trade and exercised a great deal of market power because they were effectively protected from competition by various laws and regulations. The *Navigation Act* prevented foreign resident shipping lines from operating in the trade, while potential Australian resident operators faced barriers to entry in the form of policies designed to assist and protect Australian ship builders (except for short-term, developmental purposes).

The regulations in force at that time effectively prevented second hand ships from being imported for use on the coastal trade. Any would-be new entrant into the Tasmanian trade would have had to either buy a new ship - from an overseas or Australian shipyard - or acquire a second hand ship already on the Australian register. It was not possible to import a second hand ship from overseas.

Taken together, these regulations effectively stopped small and medium size companies from entering the trade. Apart from those owned by ANL and USS, there were few, if any, suitable ships on the Australian register available for purchase, while the cost of a new ship was too high to be commercially viable and possibly beyond the resources of small operators.

Potential new entrants into the trade were also likely to face opposition from trade unions and regional interests within Tasmania. The former opposed initiatives that might reduce employment of seafarers, while the latter were opposed initiatives to rationalise port operations. For example, there was a strong public campaign against the proposal by Gordon Barton of IPEC to build two high-speed container ships to operate between northern Tasmania and Victoria (the so called “Tiger Line”). (Attachment I gives details of entry attempts over the decade after freight Equalisation was implemented.)

The result of this situation was that the Tasmanian shipping service of the 1970s did not meet best practice technical standards of the day. Rather, the containers used in the trade were obsolescent, the ships were obsolescent, and the cargo handling was obsolescent.

In an open trade, competition would have solved this problem. The incumbent shipping lines would have faced the options of either investing in more efficient equipment, or of being driven out of business by new entrants with better equipment and lower operating costs. It is likely that open competition would also have forced some rationalisation of the trade, probably concentrating it in the northern ports, with a consequent reduction, or termination, of direct services to Hobart.

If the incumbents had been forced out of the trade by competition, their ships would have had little value on the open market because they were designed to carry special containers that were not in use anywhere else, and required special wharf ramps. In the protected Tasmanian trade, however, both lines were able to continue using their obsolescent equipment until about 1985. This minimised their own capital outlays but effectively imposed extra costs on shippers that was, in turn, offset by TFES payments.

The Tasmanian ships could not double-stack the 6.1meter ISO containers then in common international use, so USS and ANL adopted pricing schedules that effectively forced shippers to continue using the old 5.08 metre containers. The ships did have some capacity to carry 6.1 metre ISO containers, so domestic shippers could use this type of unit if they wished, albeit at a cost penalty.

What capacity there was for 6.1 metre containers was effectively reserved for transhipping international cargoes between Tasmanian and mainland ports. For example, an export container might be carried from northern Tasmania to Melbourne by ANL, and then transhipped to another vessel to take it overseas. Because international shipping lines had some countervailing power, it is likely that their transhipment cargoes were carried at a lower freight rate than domestic cargoes. If ANL or USS charged too much, international lines could send their ships direct to Tasmanian ports.

The lack of competition in the trade was also manifest in a number of other ways. For example:

- Not only were the two USS ships not capable of double stacking 6.1 meter containers, they were also powered by gas turbines. This was probably a worthwhile innovation when the ships were originally built for a low fuel cost environment, but the first oil shock greatly increased their running costs. Further, one of the ships faced on-going engine problems that were never really fixed; the ship was able to keep sailing but its fuel costs were further increased.

- Contrary to practice in most other container trades, USS and ANL only provided containers for major shippers with strong market power. Containers for small and medium size shippers were provided by freight forwarders.

All this changed in 1984-85 when Brambles entered the trade operating between northern Tasmania and Melbourne. It took advantage of regulations that allowed it to import a second hand ship from overseas for “developmental” purposes for a short time period (12 months), after which it was supposed to export the ship and either buy a new ship or acquire a ship already on the Australian register. As it turned out, these regulations were later changed, allowing ship operators to import second hand ships for the coastal trade.

The change in regulations that allowed Brambles to import second hand ships did not, however, entirely remove barriers to competition from other Australian operators. Anyone importing a second hand ship at that time had to have its accommodation areas

upgraded to meet the standards stipulated in awards applying to Australian seamen. The work was usually carried out in an overseas shipyard but it nevertheless cost several million dollars. The owner also had to meet the costs of a voyage to and from the shipyard, and the ship would be out of service for some time and not earning revenue.

Whatever money was spent on upgrading accommodation facilities a sunk cost. The reasoning was that the money spent upgrading accommodation would not increase the value of the ship in the world market because Australian standards were higher than those required overseas.

This meant that the Bass Strait trade was not entirely contestable. Even with a second hand ship, anyone entering the trade would have to spend money on upgrading its accommodation, and this money would be lost if the venture were not a success and the ship had to be sold on the world market. Another Australian operator might possibly be willing to pay some premium for an upgraded ship, but this was a very small and uncertain market.

The entry of Brambles into the trade saw an overall improvement in technical efficiency. The Brambles service used a relatively modern ship, designed to carry 6.1 metre containers, and modern cargo handling methods. Whereas the USS and ANL services used forklifts to carry containers on and off ships, one at a time, Brambles used dock trailers, capable of moving, if I remember correctly, four at a time.

In following years, there were other improvements that lead to further improvements in efficiency, including rationalisation of port calls, rationalisation of shipping operations, the introduction of modern containers and reform of maritime crewing arrangements and stevedoring, all of which presumably cut costs.

The great improvements in the trade after 1985 suggest that a large part of Tasmania's transport disadvantage over the previous decade was caused by obsolescent equipment and inefficiencies, that were able to persistent due to lack of effective competition and, probably, resistance to rationalisation. It is not true to say that the almost total reliance on sea transport was the sole cause of the disadvantage. Given the great number of improvements in the trade, it is also curious that Tasmania's transport disadvantage appears to be increasing, at least as it is measured by TFES payments.

THE REVIEW AUTHORITY SCHEME

In 1998, the TFES Review Authority devised a new method for calculating TFES subsidies that the government subsequently adopted.

Under the new method, subsidies are calculated as the difference between;

- The actual wharf-to-wharf freight rate paid for shipping cargoes between northern Tasmania and Victoria, and

- The estimated cost of shipping similar cargoes over the same distance by road transport, taken to be 420 kilometres.

The scheme is based on six groups of "parameters" that are derived from the TFES database.

The 420 km

The Advisory panel did not say exactly how it derived the figure of 420 km but it equals the distance between the pilot pick-up and drop-off points for a voyage between Burnie and Melbourne. These points are about 4 km offshore from Burnie and 89 km offshore from Melbourne. At best, they measure the distance between the Tasmanian and Victorian waterlines.

Further, the distance is measured as the crow flies, that is, a dead straight line. A more realistic approach would be to measure the straight-line distance plus a nominal percentage for the twists and turns found in all long distance roads.

Last, the 420 km measures the shortest distance between major ports. It does not take account of the extra distance that trucks would have to drive over this hypothetical landbridge for consignments from Hobart or North-eastern Tasmania. The wharf-to-wharf distance from Bell bay to Melbourne is about 568 km and, if another 20 per cent is added to simulate actual road distances, the distance becomes 682 km, almost equal to the Melbourne to Adelaide road distance (which was the mainland comparison route used by the Nimmo Commission).

The Road freight Equivalent (RFE)

The Advisory panel report does not say whether its estimate of the "road freight equivalent" was intended to reflect the cost of shipping cargoes via freight forwarder, the cost of operating a truck over the specified distance, or the cost of a shipper hiring an owner operator to carry a cargo. If it is the rate for hiring an owner operator, then it is probably the lowest possible rate. In the real world, freight forwarders handle a significant proportion of full truckload freight, and virtually all less than truckload consignments.

Having estimated the "RFE", the advisory panel reduced the amount by 8 cents per kilometre to give a "pure" line haul cost that did not include loading and unloading charges. It is unclear whether the 8c per kilometre is meant to represent the cost of physically moving cargo on and off the truck, or the cost of "waiting time" while the truck is loaded and unloaded. (Although it's unlikely to represent the cost of physically loading and unloading, because that implies a total cost of $33.60.) A discount for waiting time would not be realistic as that is an unavoidable cost.

If the RFE is based on either truck operating costs or the estimated rate for an owner driver, then it is a method designed to maximise TFES payments and not entirely realistic. In the real world, a substantial proportion of consignors would probably send freight via freight forwarders. Those that choose to arrange their own transport, either by owning their own trucks or direct hiring of sub-contractors, would have to employ staff to manage the operation, and such costs are not picked-up in the current method.

Estimating wharf-to-wharf rates

Unlike the previous Nimmo and ISC arrangements, the Advisory panel version of the scheme calculates subsidy rates on the actual freight rates paid on each consignment across Bass Strait. The calculations are supposed to be based on the wharf-to-wharf freight rate but the Advisory Panel allowed, almost encouraged, shippers to submit claims with supporting documentation that shows only the door to door freight rate paid for shipment across Bass Strait. This is then converted to a nominal wharf-to-wharf rate by subtracting stipulated amounts that represent the costs of delivering containers to the wharf in Tasmania and from the wharf to the consignee on the mainland.

In reality, however, the method used to derive a wharf-to-wharf freight rate from a door-to-door charge could often greatly overstate the figure. That is, the *derived* wharf-to-wharf freight rate would be significantly greater than the *actual* wharf-to-wharf rate. This would occur in cases where;

- The pick-up or delivery points lie outside the port hinterland, but rather involve a long intrastate movement.

- The consignment is less than a full container load (LCL). TFES documentation seems to suggest that LCL freight rates are adjusted on a *pro rata* basis to a full container load (FCL) to calculate the amount of TFES subsidy. LCL freight rates are generally higher than those charged for FCL shipments, both on a per tonne or per cubic metre basis, because they include the extra costs of collecting cargo from the consignor and delivering it to the forwarder's depot, and consolidating it into a full container load before delivery to the wharf, and the reverse procedure at the destination. There are also extra administration and documentation costs, and forwarders have much greater market power in pricing LCLs because it is difficult, or impossible, for consignors to make their own arrangements. (Australia Post is probably the only real alternative.) If this is indeed the procedure currently used, then TFES subsidies for LCL cargoes are being calculated as the difference between LCL rates across Bass Strait and full truckload rates on the mainland.

- The shipment across Bass Strait includes other services, such as priority service, delivery to several destinations, or storage.

The current scheme therefore goes beyond its aim of basing subsidy payments on a comparison of line haul freight rates. Rather, in many cases, payments would also include

a payment that effectively equals any extra freight paid for long distance pick-ups or deliveries, and for the extra charges for LCL consignments.

The fixed cost disadvantage

The Review Authority report does not give details of the specific cost items that are included in the "fixed cost disadvantage". To be valid, they should comprise costs not faced by mainland consignors, or be additional to any equivalent costs faced on the mainland.

Trailers

The BTE calculations of TFES rates in 1978 and 1979 were based on the most efficient cargo unit for sending freight across Bass Strait. At that time, for dry freight, it was the 5.08 metre container. This approach was adopted to encourage efficient practices in shipping. A 12-metre trailer occupied the space of four containers but provided only a fraction of their freight capacity, either in tonnes weight or volume.

Cargoes shipped by trailer were eligible for assistance, but the amount paid was based on calculations for containers. A similar approach was probably followed by Nimmo in setting the initial subsidies, and later by the ISC.

The current arrangements, however, do not seem to have taken account of the relative efficiencies of the various cargo units.

Supporting documents for TFES claims

When BTE began work on TFES matters in 1976, it was common practice for forwarders to deface the consignment notes so that shippers could not see the wharf-to-wharf charge. This was done by cutting away that section of the consignment note that showed the wharf-to-wharf charge or blacking out the details with ink.

The aim of this practice was to stop small to medium size shippers from finding out exactly how much they were paying to the shipping company and how much went to the freight forwarder. Whenever the freight forwarder increased their charges, they were in a position to blame the shipping company, and the shipper didn't have enough information to check.

This practice worked because the schedule of freight rates published by the shipping lines was very difficult to interpret. It did not show the total charge per container, but rather showed the rate charged per square metre of deck space occupied according to the height of the cargo.

The BTE reports on fright equalisation published the actual freight rate charged for each type of container, and some forwarders later complained this increased customer resistance to increases in their charges.

The Review Authority report suggests that forwarders no longer give details of the wharf-to-wharf rate to shippers. If so, this is a backward step because it reduces the information available to shippers and weakens their ability to resist increases of rates by forwarders. Indeed, some might see it as folly to operate a subsidy scheme based on wharf-to-wharf freight rates, and yet at the same time support arrangements which restrict the public dissemination of information on the level of those rates.

The TFES Review Authority supported arrangements under which wharf-to-wharf rates are not disclosed to shippers on the grounds they are commercial in confidence. This is an unlikely excuse. From 1976 to at least 1985, the Bass Strait trade operated quite well with shipping lines publishing their freight rates. Furthermore the transport companies involved in the trade almost certainly know each other's secrets; there is probably a constant movement of staff between companies, and in past years they certainly monitored each other's activities in a very active way.

Changes in freight rates

As I understand it, TFES subsidies are currently calculated as the difference between actual freight rates paid (as adjusted by the procedures defined by the Review Authority), and the estimated freight rate for an equivalent distance on the mainland. I further understand that the mainland road freight equivalent has not been adjusted for some time. If this is so, it means that any increases in freight rates are immediately offset by an increase in subsidy payment. The disadvantage of this arrangement is that it reduces the incentive of shippers to bargain for lower freight rates.

An overall view

The present system of calculating TFES subsidies is too complex and hence likely to be unreliable. For example, a freight shipment to Sydney would go through at least three "adjustment processes": the freight rate would first be adjusted to a wharf-to-wharf basis, second it would be adjusted to a Tasmania to Victoria figure, and third it would be factored up to a TEU equivalent. Overall, there are six groups of parameters used to make adjustments. It's all very Heath Robinson.

The adjustment process seems to apply the same parameters to all shipments, even though it is likely that significant difference exists between the freight rates paid by different shippers, even for consignments of similar cargoes. Such differences can exist because of differences in bargaining power or skill, or a number of other factors. The outcome could be different subsidy payments for consignments that are exactly the same. If any of the adjustment parameters are derived from the TFES database, then there is a risk of a "feed-back" loop, where errors go back into the database and affect future calculations.

If the Productivity Commission recommends continuation of the Freight Equalisation Scheme, it should devise a simpler and more robust method of calculating subsidy rates.

This might be a simpler task than in previous years because rationalisation of shipping services and port operations seems to have reduced, or even eliminated, some of the issues that faced Nimmo, BTE and the Inter-State Commission. For example, less attention would have to be given to the avoiding "distortions", that is, the risk that the subsidy scheme would affect decisions of shippers; for example, influencing them to ship direct by sea to Sydney rather than via Melbourne, of through northern ports rather than out of Hobart. The removal of obsolescent containers from the trade would also make the job easier.

Ideally, a new scheme should have the following characteristics:

- Simplicity; a minimum number of freight classifications, say high and low density dry freight, high and low density refrigerated cargo, livestock, etc.

- A rate per tonne or per container shipped.
- One subsidy rate for shipments across Bass Strait, irrespective of origin or destination.
- Characteristics designed to promote competition between forwarders and shipping lines. Consideration might even be given to introducing competition from foreign ships[1].
- Characteristics designed to encourage consignors to bargain for lower freight rates.

SECOND BEST ISSUES

As the PC Issues Paper notes, there is a perception that charges on heavy vehicles do not fully cover their costs on roads and other infrastructure. This may well be true for the road system as a whole but, for TFES purposes, comparisons should be concentrate on interstate transport. Most road freight shipments between mainland states are probably carried over highways, the roads that, in general, are built to the highest standards and maintained in the best condition. For trailers and B-doubles running on national highways, it seems reasonable to assume that there is less under-recovery of costs than for the whole national road system. Indeed, it is not even certain whether there is over or under recovery from road operations on these routes. (As I understand it, this question is scheduled for future research by the National Transport Council.)

In past years, mainland rail deficits have also been cited as a justification for the freight Equalisation Scheme. This must be qualified. The available evidence suggests that a large share of the deficits incurred by government rail were incurred in providing urban and

[1] Getting foreign shipping into the trade might involve trade-offs of lower freight rates against service reliability. Perhaps entry could be conditional on operators contracting to provide a minimum service level. In any case, foreign container ships could carry standard 6.1 metre ISO units but not carry trailers or the special 6.1 metre "domestic" containers used in Australia. These must be carried on Ro-Ro vessels.

country passenger services. Interstate rail container services were the "Cinderella service" while under state government control (BTCE 1995). Indeed, unpublished figures compiled by BTE for the Australian Rail Industry Advisory Council for 1992-93 show that government rail services incurred a deficit of $869 million on urban passenger services, $324 million on country passenger services, and $208 million on all freight services, including both interstate and intrastate operations.

FREIGHT FLOWS

The Productivity Commission's terms of reference for this inquiry include a direction to report on the characteristics of the freight task between Tasmania and the mainland. In carrying out this part of its task, it is suggested that the Commission should compile an analysis of the cargo units moving across Bass Strait, including a count of empty containers and transhipments of cargoes carrying international cargoes. Tonnage statistics might be easily available, but relating trade to shipping operations requires details of cargo unit movements, that is, the numbers of containers and trailers shipped.

ATTACHMENT I ENTRY ATTEMPTS

In the ten years after the Freight Equalisation Scheme began in 1975, at least four companies considered starting new container services in the Bass Strait trade before Brambles actually started operations in 1985.

1. IPEC Transport announced plans to implement a high sped container service between northern Tasmania and Melbourne using two, specially built, ships designed for operations with small crews, comprised mainly (or entirely) of officers. The proposal was strongly opposed by union interests, first because the ships would employ few, if any, seamen (the plan was to operate the ships with officers only), and second, because the proposed service would not operate into Hobart. Regional interests from the south of the state also seemed to oppose the proposal and argued the state government not to support it. IPEC commissioned design work but the proposal was eventually terminated.

2. A small company actually started a container service between northern Tasmania and Melbourne that operated for about two years before it ceased operations. This was something of an "accident".

ANL sold some second hand refrigerated containers into the domestic market and they eventually came into the possession of a company that had previously not been involved in Bass Strait transport[2]. It decided to enter the trade but was only able to acquire a small ship that was not well suited to this route.

ANL assumed that the ship would not be able to maintain regular services during the period of rough, Winter, weather, so it initially took no commercial action against its new competitor. As it turned out, it was a mild Winter that year and services were not interrupted.

The competitor then ran into problems acquiring sufficient cargoes and it went out of business. It was said the company did well in securing northbound shipments of refrigerated cargoes, on which it offered competitive freight rates, but had trouble securing any where near full consignments of southbound cargoes. This was probably due to a combination of factors: refrigerated containers are not optimum for carrying dry (non-refrigerated0 cargoes, and strong commercial competition from ANL targeting southbound cargoes in particular.

3. In the 1980s, a large Australian company considered entering the Bass Strait trade. It studied the economics of buying and operating ships in the trade but, in the event, it did not proceed with the proposal. Rather, it used the results of its study in negotiations with one or more of the incumbent operators to negotiate better arrangements for the cargoes it shipped between Tasmania and Victoria. As far as I am aware, the project did not become public knowledge.

4. The Australian Government invited private sector operators to submit expressions of interest to operate a passenger service between northern Tasmania and Melbourne to replace the service operated by ANL. TNT put forward a proposal to build two new ships for the trade. Although not highlighted in publicity, the proposed ships would have had a large cargo capacity and advanced cargo-handling techniques. TNT did not proceed with the proposal. If it had been implemented, it would very likely have reduced or eliminated services to Hobart.

BTE, *Tasmanian Freight Equalisation Scheme: Recommended Northbound Assistance Rates at 1 January 1978,* AGPS Canberra, 1978

BTE, *Tasmanian Freight Equalisation Scheme: Recommended Rates of Assistance for Southbound Cargoes, Livestock, and Timber at 31 January 1979,* AGPS Canberra, 1979

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