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Supplementary Report on externalities for Sydney Ferries—report to IPART

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About the Author

Mike Smart is a director of Sapere Research Group in Sydney. He advises industry leaders in telecommunications, rail, gas, logistics, mining, electricity and aviation. Mike has given expert evidence in the Federal Court of Australia and the Australian Competition Tribunal. He is a member of the Competition and Consumer Committee of the Law Council of Australia and the Economics Society of Australia.

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About Sapere Research Group Limited

Sapere Research Group is one of the largest expert consulting firms in Australasia and a leader in provision of independent economic, forensic accounting and public policy services. Sapere provides independent expert testimony, strategic advisory services, data analytics and other advice to Australasia's private sector corporate clients, major law firms, government agencies, and regulatory bodies.

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1 Background

This supplementary report provides further information on two issues related to the estimation of external benefits of Sydney Ferries. The first is an estimation of the impact of road pricing on the published external benefit quantum. The second is an estimation of the potential impact on total externalities of a move to more fuel-efficient ferries, as was recommended in the LEK cost report (LEK 2012).

2 Road pricing

The most recent CityRail externality study (Sapere 2012b) presented road pricing as a separate line item that was deducted from the total external benefit of rail. For rail, this amount was $40m/yr or $0.14/rail passenger journey ($2011). Given the large total external benefits from rail, including road pricing resulted in a minor adjustment.

The situation is very different for Sydney Ferries, for which the relevant externality and road pricing figures are summarised in the table below.

	Ferry 2012	
	($/yr)	($/PJ)
Total ext ferry	1,939,133	0.13
congestion	6,735,562	0.46
air pollution	-4,353,090	-0.30
GHG	-443,339	-0.03
road pricing	*-2,341,518*	-0.16
PJ per annum	14,500,000	

The net annual external benefit for Sydney Ferries as a whole is only $1.9m, which represents a $6.7m congestion relief benefit that is partly cancelled by an emissions disbenefit of $4.8m (the sum of air pollution and greenhouse gases). This net benefit is only $0.13 per ferry passenger journey.

Road pricing for the car journeys that would be displaced by ferries is comparatively high. Travellers from Manly, Mosman, Neutral Bay and Taronga would almost all pay a toll to cross the harbour: $4/peak round trip peak and $3/interpeak round trip, or $2/PJ peak and $1.50/PJ interpeak on average. It is assumed that travellers from the other destinations would avoid this toll. All car journeys pay the fuel excise, adding to the average road pricing per journey. Since there is some uncertainty over

whether cars would park in the CBD, this calculation conservatively excludes the Parking Space Levy. Including it would increase the road price.

As noted in the Sapere report, only about 25% of commuter ferry journeys and 20% of other purpose ferry journeys displace a car trip (the remainder displace other public transport trips, mainly by bus). Taking this into account and performing a route-weighted sum of toll and fuel excise (net of road maintenance costs), the road pricing disbenefit of Sydney Ferries is $2.3m per annum or $0.16/ferry passenger journey.

In simple terms, this means that the ferry service leads to a loss of road pricing revenue to the Government that somewhat exceeds the net congestion and emission benefit of ferries. Where the road price is sufficient to compensate for external costs, there is no externality justification for subsidising competing modes.

One is bound to ask why the ferry situation is so different to rail? A larger proportion of ferry users than rail users would pay a toll on a harbour crossing due to the harbour-centricity of the ferry system. Car journeys originating from Northeast of the Harbour Bridge have no alternative harbour crossing. Car journeys originating from the Northwest can avoid the toll by using any one of several non-tolled bridges (Gladesville Bridge, Concord Road, Silverwater Road). The decongestion benefit of rail is profound, whereas it is not for ferries, which displace public transport more than cars and which experience half of their patronage (tourists) during non-peak times.

3 LEK Fuel savings

One submission (Mr. Flapan) criticised the Sapere ferry report (Sapere 2012a) for failing to take account of the optimised ferry fleet that LEK recommended Sydney Ferries purchase in the future. The characteristics of the fleet affect the marginal cost of ferry operations, but have only a very slight impact on the marginal and total external benefits. For example, fleet decisions are irrelevant to the congestion relief benefit created by ferries.

Fleet decisions only affect external benefits through fuel consumption, hence emissions, per passenger-kilometre travelled. The LEK report can be used to place an upper bound on this impact on total external benefits.

LEK notes (p. 44) that partial fleet renewal would achieve a $2.3m fuel cost saving per annum from FY2015 onward. The 'business as usual' cost forecast for fuel in FY2016 is around $10m. These figures imply that fleet renewal would achieve around a 25% reduction in fuel consumption for the same transport task.

Emissions are proportional to fuel consumption, so this fleet renewal would lead to around a 25% reduction in the calculated marginal external emission cost for Sydney Ferries. That would translate to an increase in the annual total external benefit from $1.9m to $3.7m.

While such an increase is significant in percentage terms, the resulting externality figure is still much smaller than the amount of Government subsidy to Sydney Ferries. Therefore the main conclusion of Sapere 2012a, that external benefits do not justify the high Sydney Ferries subsidy, is confirmed.

References

Submission by Mr. M. Flapan commenting on Sapere Research Group report, Sep 2012 (Mr. Flapan's submission).

L.E.K., **Sydney Ferries Cost Review Final Report**, Jan 2012 (LEK 2012).

Sapere Research Group, **External Benefits of Sydney Ferry services Final Report**, 23 Aug 2012 (Sapere 2012a).

Sapere Research Group, **External Benefits of CityRail services Draft Report**, 18 Sep 2012 (Sapere 2012b).