



**Urban Research Program
A Griffith Research Centre**

Nathan campus, Griffith University
170 Kessels Road
Nathan, Queensland 4111
Australia

Telephone +61 (0)7 3735 7106
m.burke@griffith.edu.au
www.griffith.edu.au/urp

10 February 2016

Committee Secretary
Standing Committee on Infrastructure, Transport and Cities
PO Box 6021
Parliament House
Canberra ACT 2600

Submission to Senate Committee on “The role of transport connectivity on stimulating development and economic activity”

Introduction

I would like to provide the following submission to the Committee through my role as Deputy Director at the Urban Research Program (URP) at Griffith University and as lead Investigator for the ‘Funding on the Line’ study into value capture funding and financing. Our research at the URP seeks to improve understanding of, and provide innovative responses to, Australia's urban challenges and opportunities. We strive to achieve this by conducting and disseminating research, developing policies and programs, and by providing training, capacity-building, and technical assistance. We try to provide constructive research based advice and advocacy such as that provided in this submission

Transport accessibility, land development and economic activity

1. Transport and land use are inextricably linked. A large body of research in economics, geography and sociology has shown that transport accessibility is fundamental to the labour catchment for firms, the retail catchments of stores, the health and well-being of the labour force and community, the education opportunities provided to our children and young people, and many of the social opportunities for many Australians.
2. From the earliest phases of road and railway development in Australia, differential access to transport itself, and differential access to opportunities via transport systems, have helped shape the fortunes of households, firms, townships, and ports.
3. Australia moved to a primarily road-based transport planning model, both for intra- and inter-urban travel, in the 1960s. There has been over fifty years of under-investment in public transport systems as compared to road networks. This was underpinned at the national level by fuel excise, which

provided strong funding streams to support the national highway program and other uses. Australia's suburbia was founded on relatively cheap land on the outskirts of the cities being plugged in to transport networks, with factories and residential subdivisions lining key routes. But this came at a cost of increasing car-dependence, growth in travel times and in congestion.

4. Australians are now choosing to live in locations with higher levels of transport accessibility – especially public transport accessibility – and are willing to pay significantly for it. As the economy has changed to more knowledge-intensive work and services, the geography of labour markets and the nature of the markets themselves have changed. A decline in manufacturing in the inner-city, removal of ports down-river and the better accessibility to burgeoning work opportunities in Australia's central city areas has helped significant urban gentrification and densification – both of which are fuelled by the desire of these community to have an enhanced use of public transport access alongside increased densification to underpin its viability . BITRE analysis has shown that in every major city, except Adelaide, public transport users are no longer the poor but have higher weekly average individual incomes than drivers. The universities and their international student markets have placed a high value on transport accessibility, adding further to inner city demand. Land rents in the inner-cities have soared.
5. The need for increased public transport supply in the inner and middle city areas is becoming acute. Many scholars and practitioners now suggest that the central business districts of Brisbane, Sydney and Melbourne simply cannot accommodate more car traffic on their congested at-grade street networks. Already more than 50% of travellers to Australia's main CBDs use public transport. Motorway networks to bypass these sites have often failed to attract significant patronage (Cross City Tunnel – Sydney; Clem7 Tunnel – Brisbane) as they do not actually follow the desire lines of travellers, and have had very modest impacts on traffic congestion within CBD areas. Servicing additional residential and commercial development in these locations, which are at the heart of the knowledge economy, only appears possible through increased investment in public transport and, to a lesser degree, cycling.
6. While there are other options for dealing with some of these congestion issues at reduced cost, including employing employment decentralisation policies, there is a need to proceed with new capacity. And there is also a need to resolve funding of transport infrastructure in the greenfields development that is still occurring on the fringes of the cities.

Funding and financing

7. Tolls have allowed the development of public-private partnerships or asset-transfer to the private sector (i.e. the Legacy Way tunnel in Brisbane) that have either brought in capital to help pay for new road infrastructure or allowed it to slide of agencies balance sheets quickly. Though not publically

popular, user fees are likely to become a more and more common feature of Australian urban motoring. We may have no alternative but to increase registration fees and tolls as electric engines make fuel excise redundant. Indeed, maintaining ageing road infrastructure will be a significant challenge. Many US jurisdictions have announced reduced maintenance programs, abandoning hundreds of bridges and miles of surface roads to decay, due to transport financing shortfalls. We are likely to end up more like Japan where tolls are almost ubiquitous, including on major national highway links.

8. But user-fees aren't so helpful in funding public transport. PPPs involving patronage risk and fares for public transport failed in Australia (the Brisbane Airtrain and Sydney Airtrain projects). With fares representing only around a quarter to a third of operating costs for urban public transport, other sources are needed to fund infrastructure.
9. Retrofitting public transport systems into existing cities is expensive, as the Melbourne Metro, Brisbane Cross-River Rail and Capital Metro projects indicate. High speed rail lines for the East Coast will be especially difficult to fund and finance unless a more innovative approach to evaluation is taken which includes looking at the wider benefits and the economic impacts are included and new means of funding are explored.
10. As such, agencies look to combinations of local, state and Commonwealth funding to provide such infrastructure as well as alternative sources. Our new Australian Research Council project will be looking at the forms of funding and financing that relate *to land value capture*. Smith and Gihring (2006:752) describe property value capture as the appropriation of land value gains that result from the installation of specific public infrastructure improvements in a limited benefit area and the use of some or all of these revenues to fund the improvements. Examples include tax increment financing, which applies levies on future increments in property value within a designated area around a station, and special assessment districts, where authorities apply a more blanket charge in a designated area.
11. McIntosh and colleagues (2013) reported a 42% increase in values near stations along the Mandurah rail line in Perth over five years. A value capture scheme could have helped use a small portion of this uplift to help pay for the rail line. This is now widely recognised in Australia. Agencies such as Infrastructure Australia, state transport agencies, many local governments and the property sector are all in favour of value capture.
12. But there are challenges to using such funding models in Australia. These include a lack of understanding of the size, shape and timing of property value impacts from particular public transport modes in the Australian setting, understandings of stakeholder support and community willingness-to-pay, and the specific policy and legislative opportunities for value capture funding. It is also more difficult for agencies in certain states to consider specific approaches when they do not use broad-based land taxation. These challenges should not preclude attempts to use value capture

methods at present in Australian cities. But our research will seek to help the nation identify preferable pathways.

13. Our pilot research on the retrofitting of fast catamaran ferries in Brisbane showed that property value uplift occurred, as hypothesised, at a set of ferry terminals on the CityCat system where development opportunities were available. This suggests the transit-oriented development model being employed in Brisbane around these terminals, at sites such as the Regatta, Bulimba, Brett's wharf and Hamilton-North Shore is a sensible one. However, other than when developers have been asked to contribute to terminal costs (i.e. at the Regatta stop) there has been no use of a value capture mechanism to help fund the system.

Greenfields development issues

14. Providing road and public transport links into new land release areas is essential, especially given the low proportion of self-containment in master-planned estates in Australia. But provision is becoming more and more difficult for state and local governments. The shift to impact fees and developer contributions in the late 20th century has placed a greater proportion of the burden of providing transport accessibility onto developers, who in turn pass those costs onto home purchasers. These have helped though to increase housing prices in new release areas, though to what extent is highly disputed.
15. Different approaches are used across the states to use the increases in land value that accrue through urban designation and development approval to assist with the costs of providing transport infrastructure to services these developments. This includes value capture methods such as the Growth Areas Infrastructure Contribution (GAIC) in Victoria. The GAIC's charges effectively claim part of the windfall gains that rural landholders obtain when their land is designated as part of the urban footprint and uses them for transport infrastructure. Such models are highly commended.
16. But the proportion of costs for new transport infrastructure that are borne by existing local government rate-payers, or by state agencies, vs. that borne by the beneficiaries (incoming home purchasers) is not clear. States such as Queensland have introduced maximum impact fee measures to limit the amounts that local authorities can charge for infrastructure contributions. This assists developers and reduces end costs to home purchasers, but may have equity implications for less financially strong councils such as Logan City where road links worth many billions of dollars are likely needed to eventually provide for the two largest new release areas.

Modelling of transport, land use and economic development

17. Australian urban transport modelling has had an inglorious decade using traditional four-step models with scandals engulfing three major firms involved separately in the Lane Cove Tunnel, Clem7 and AirportLink PPPs. Improving our modelling capacity is a major need.
18. Four-step models as most commonly used in Australia do not deal well with the land use changes that transport systems tend to produce, such as increasing density and economic activity around new metro stations. A set of Land Use and Transport Interaction models (LUTI) have been developed in the last two decades, especially in the Netherlands, the UK and North America. Applying most conventional four-step models as used in Australia to explore public transport projects with city-shaping capacity is particularly fraught. Similarly, the models used for intercity links such as high-speed rail need strong land use and transport interaction capabilities. Catching up with the world leaders in such modelling practice is an important agenda for Australia.
19. Modelling also needs to better measure social exclusion effects caused by the transport and land use system, with outputs reporting on access to critical social needs required in addition to outputs on link-level congestion effects and travel times. Improving the set of accessibility indicators sought and report to decision-makers and the community will deliver better social and economic benefits than our current metrics.

I wish you well with the inquiry.

Yours sincerely

Associate Professor Matthew Burke

Australian Research Council Discovery Future Fellow