

Northern Territory
Response to the
Commonwealth Grants
Commission -
Urban Transport Consultation
December 2018

The Northern Territory's views on the Jacobs Urban Transport Consultancy Stage 2 – Final Report are as follows:

1. The consultants (Jacobs) appear to have considered and incorporated the issues raised by the Commonwealth Grants Commission (the Commission) and states in developing an alternative model that captures the key drivers of urban transport expenditure.
2. Overall, Jacobs have adequately explained the modelling undertaken and the reasons for the inclusion and exclusion of possible variables. Proxy variables for demand and supply also appear to have been suitably assessed and observations that would potentially distort the model appropriately excluded.
3. The Northern Territory further notes:
 - the difficulties and constraints of the consultation and subsequent options for modelling due to limited data availability
 - while the 31 SUAs excluded from the model, on the basis of data not being reported or being derived using population, consist of relatively small populations, it appears the remaining 70 SUAs contain a reasonable number of small population areas. As such, the Northern Territory agrees with Jacobs' statement that "together the 70 SUAs cover 96.5 per cent of Australia's urban population indicating that the sample of the 70 SUAs is very likely to be representative for all 101 SUAs".
 - the preferred model resulting from the consultation uses population-weighted density rather than standard density with the report advising that it "more closely captures true urban density" and "is anticipated to provide a more comprehensive indicator of transport requirements". Richards (2018)¹ notes that the two densities measure different qualities and that population-weighted density cannot be regarded as inherently superior. Given this and that outcomes using alternative forms of other variables were modelled (for example, linear and natural logarithms of passenger variables, employment and slope), it is surprising that there was not, as part of the appendices, a comparison of modelled outcomes using standard density to evidence that population-weighted density was the most appropriate choice of measure.
4. Notwithstanding, the preferred model resulting from the consultation appears to be an improvement on the current assessment methodology for urban transport.
5. The Northern Territory considers the preferred model appropriate to adopt given the goodness of fit ($R^2=0.79$) and literature supporting the basis of the modelling including the log linear form.

¹ Richards J. *On Population-weighted Density*. DOI: 10.131140/RG.2.211789.44002. Accessed on 10 December 2018 at https://www.researchgate.net/publication/322992771_On_Population-Weighted_Density.