

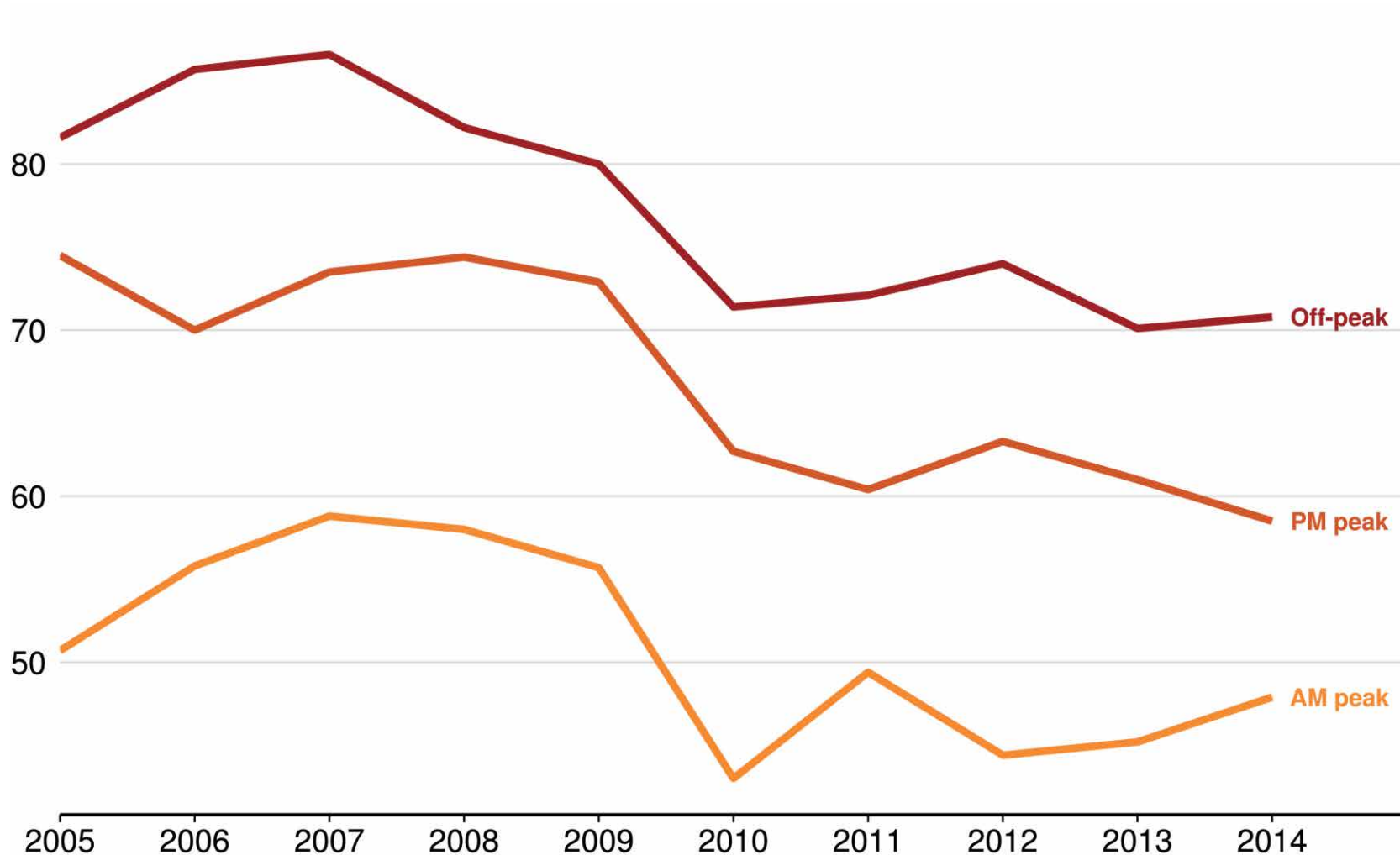


Stuck in traffic?
How bad is road congestion in Melbourne,
and what should we do about it?

Hugh Batrouney, Transport Program Fellow
Institute of Transportation Engineers, 26 June 2018

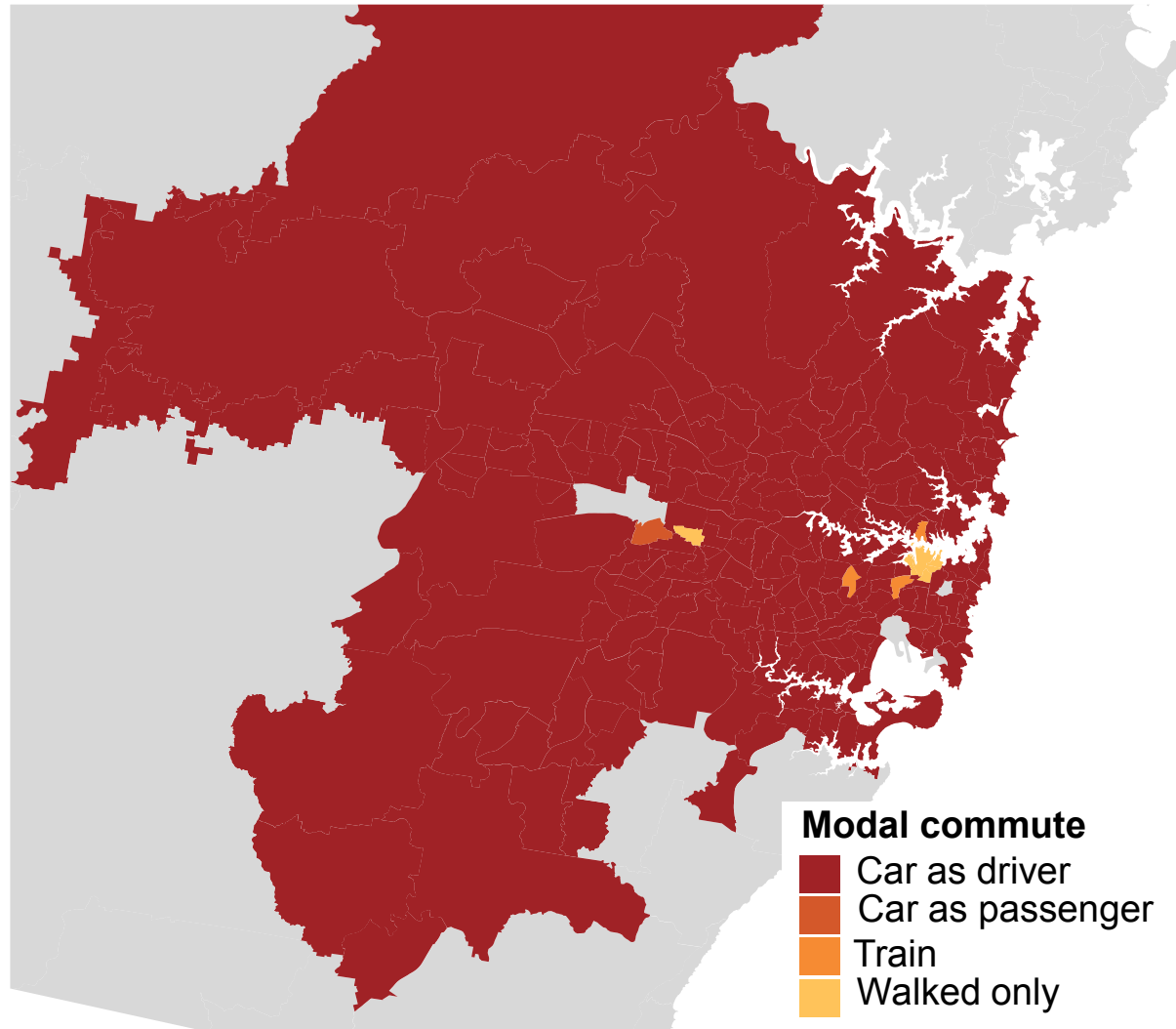
Travel speed on city freeways in Melbourne has declined

Km/hour

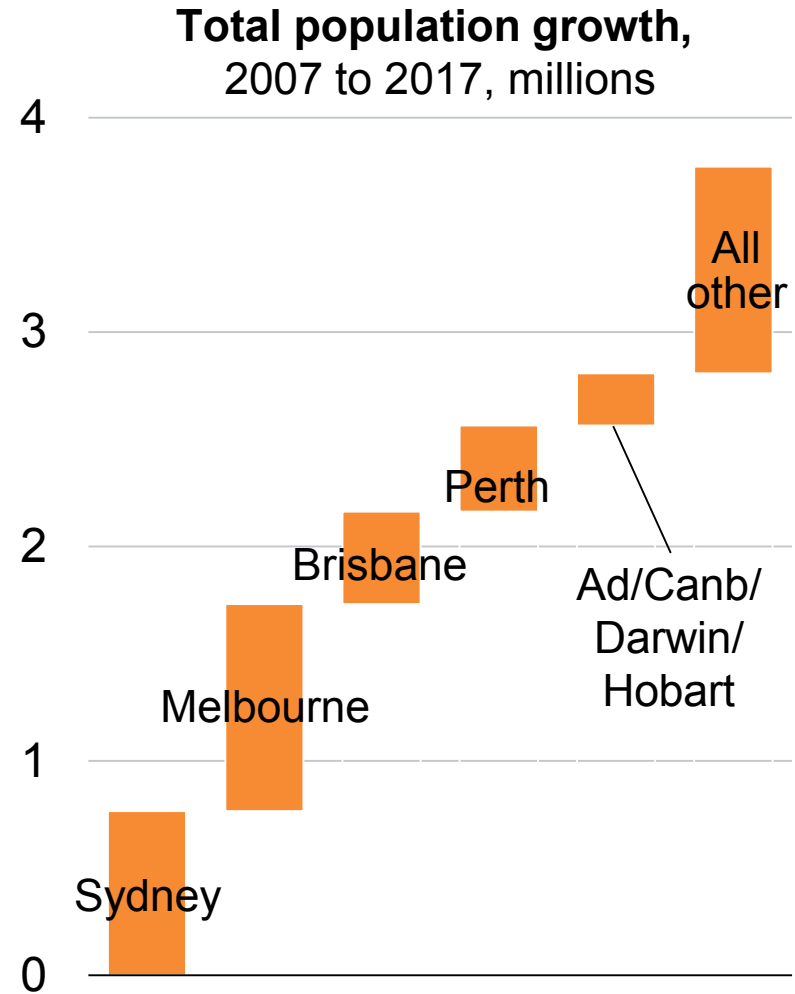
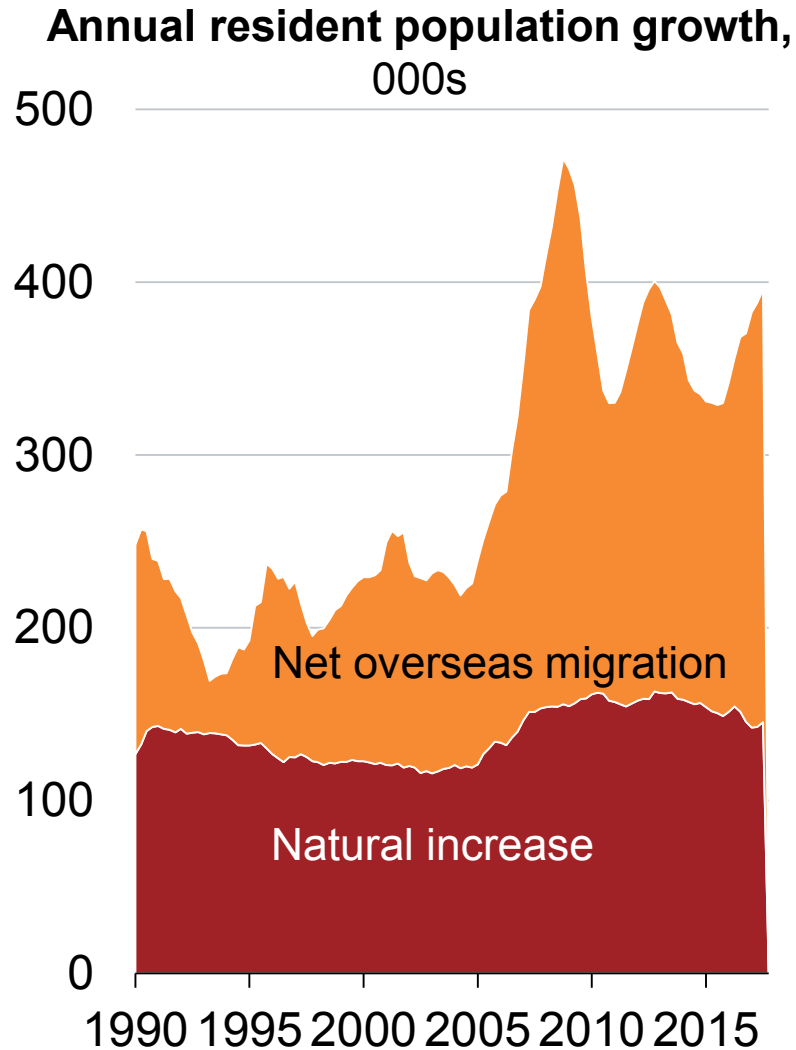


Most people take the car to work

Main mode of transport to work, by suburb of residence, Sydney



Population growth has been strong since the mid-2000s, especially in major capital cities



Notes: for left-hand side, series break in 2006 when 'net overseas migration' definition was changed

Source: ABS 3101.0 - Australian Demographic Statistics; ABS 3218.0 Regional Population Growth, Australia, 2016-17

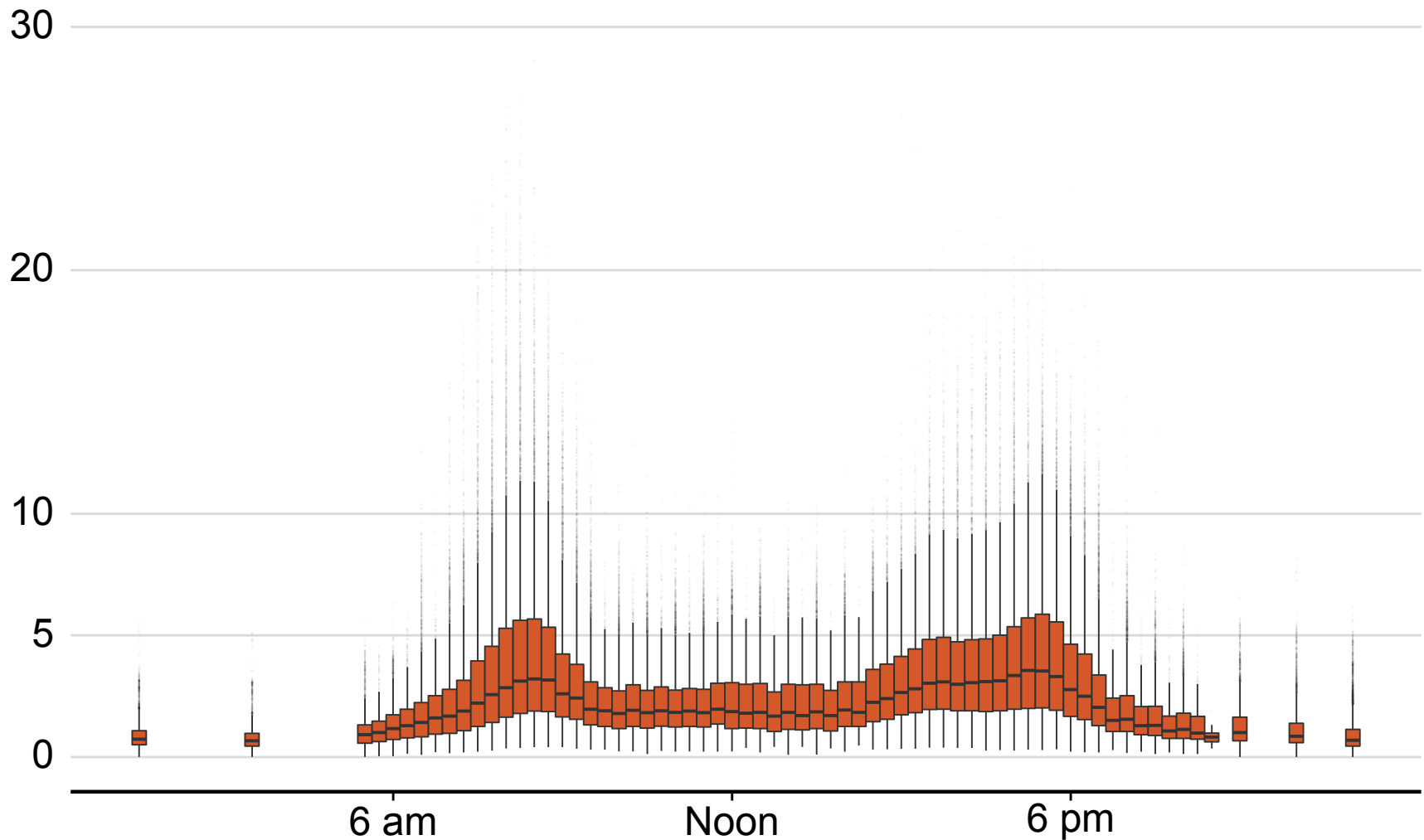
Melbourne CBD commuters face similar delays to Sydney's

Increase in travel time relative to free flow



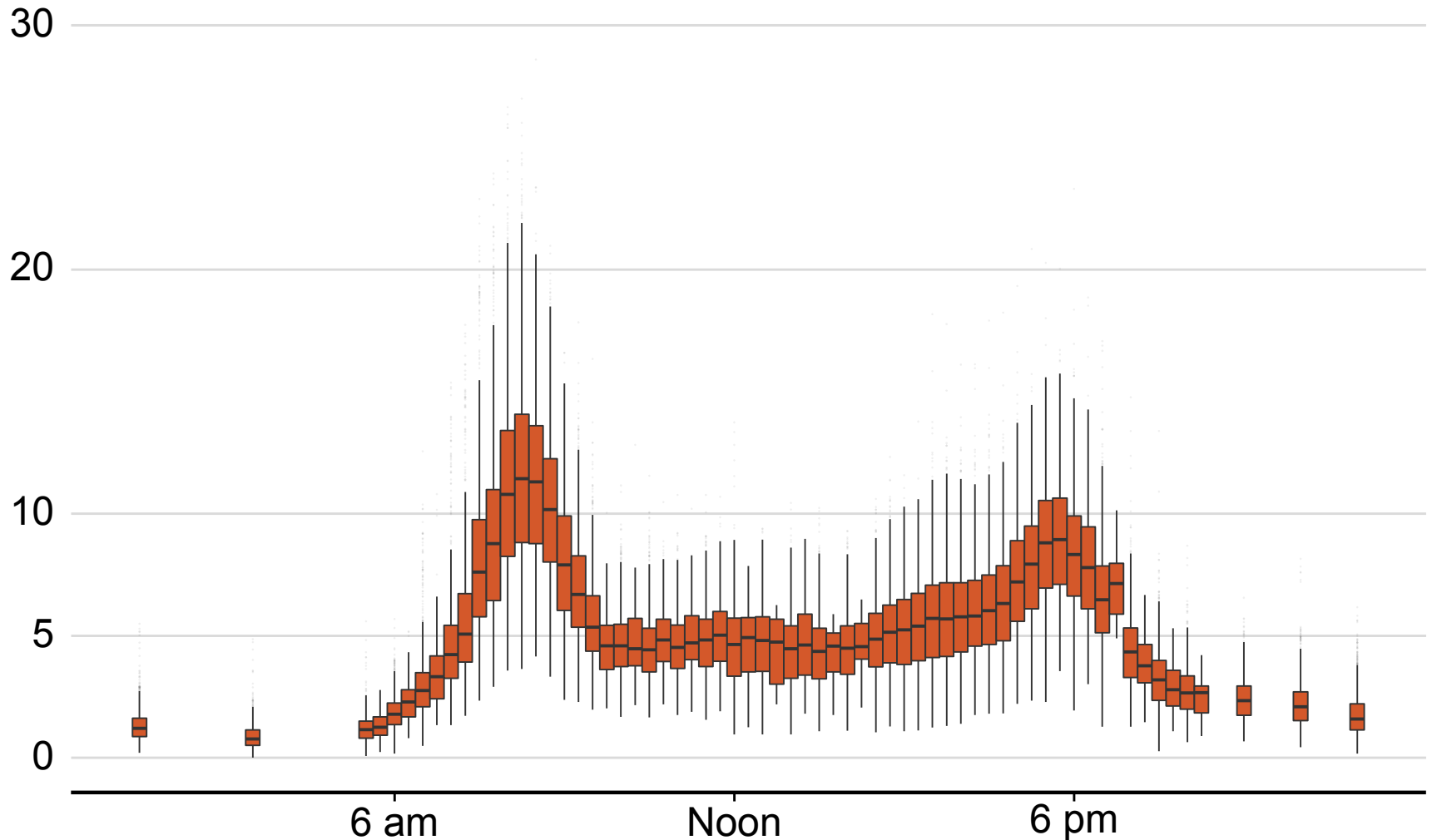
For many commuters, congestion is very modest

Additional minutes compared to free flow, journeys to work, Sydney



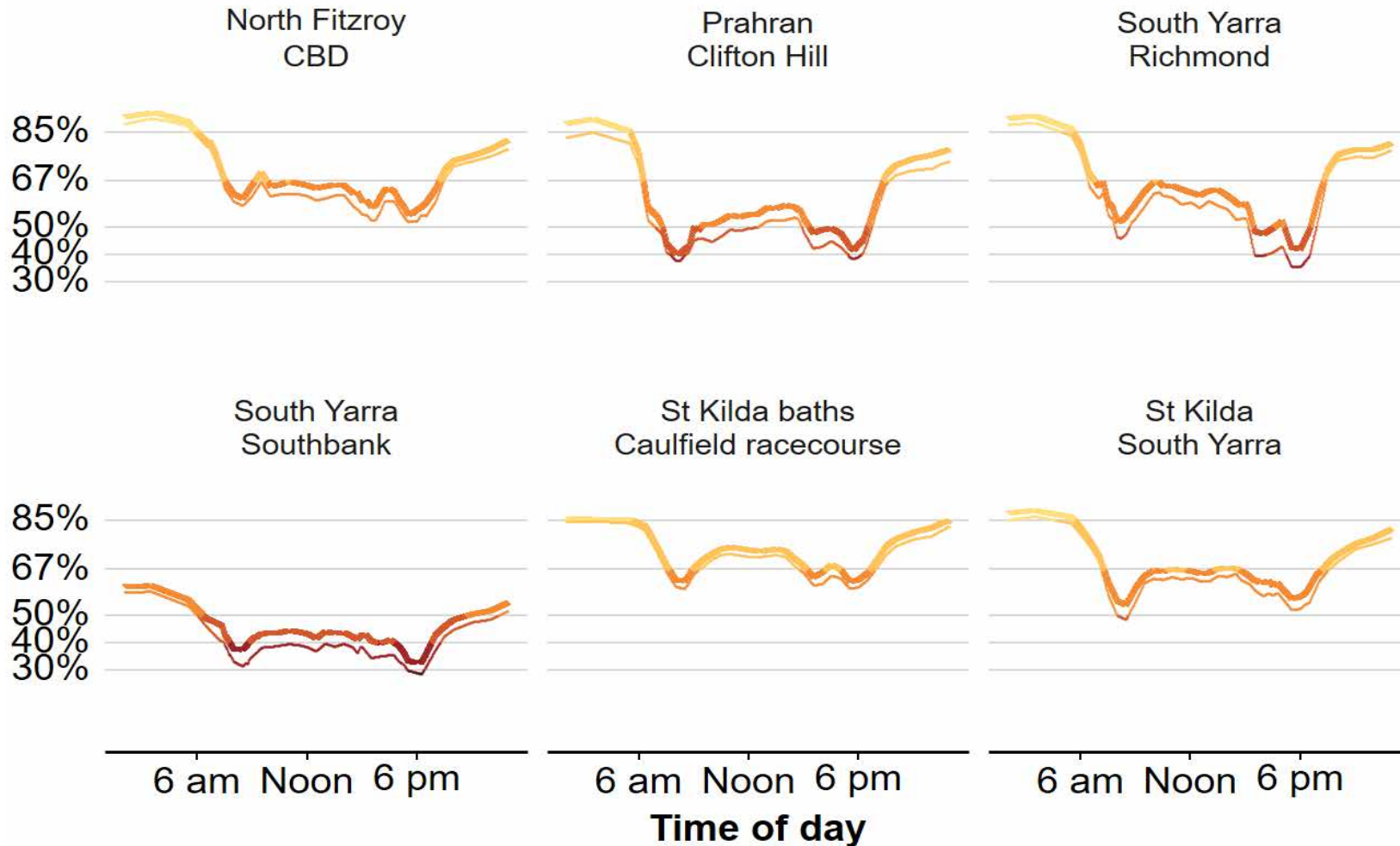
CBD commutes' typical delays are worse, but still only 11 minutes on average

Additional minutes compared to free flow, Sydney CBD commutes



Even on notoriously congested short routes, average levels of service remain good most of the time

Speed as a proportion of free flow speed, and level of service category

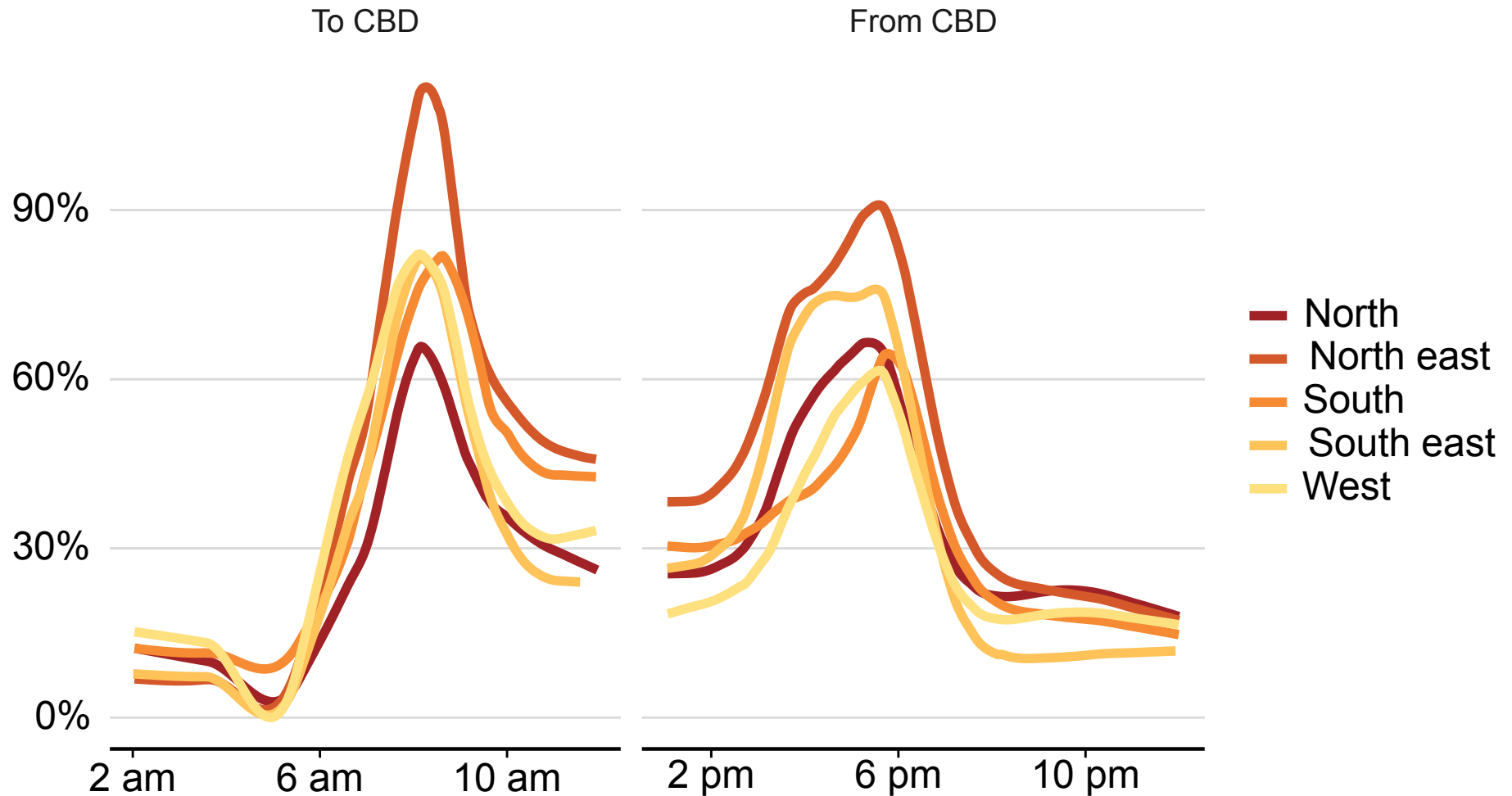


Level of service

- A: Free-flow conditions
- B: Manoeuvring between lanes only slightly restricted
- C: Manoeuvring between lanes restricted
- C: Manoeuvring between lanes restricted
- D: Less stable flow; speed 40-50% of free-flow speed
- E: Unstable operation and significant delay
- Typical day
- Worst day in a week

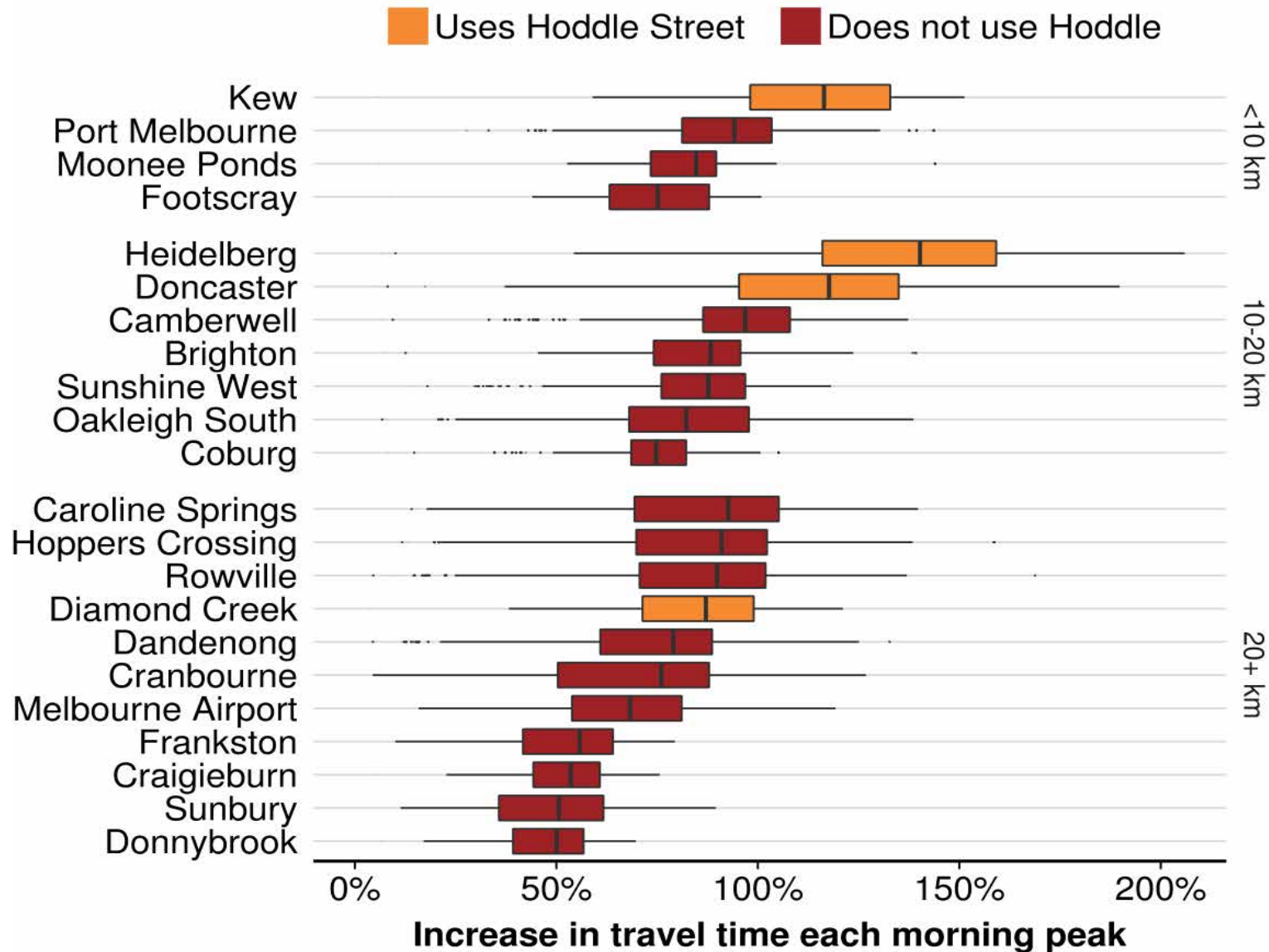
Travel delays are worst for commutes from the north east

Increase in travel time relative to free flow, CBD commutes



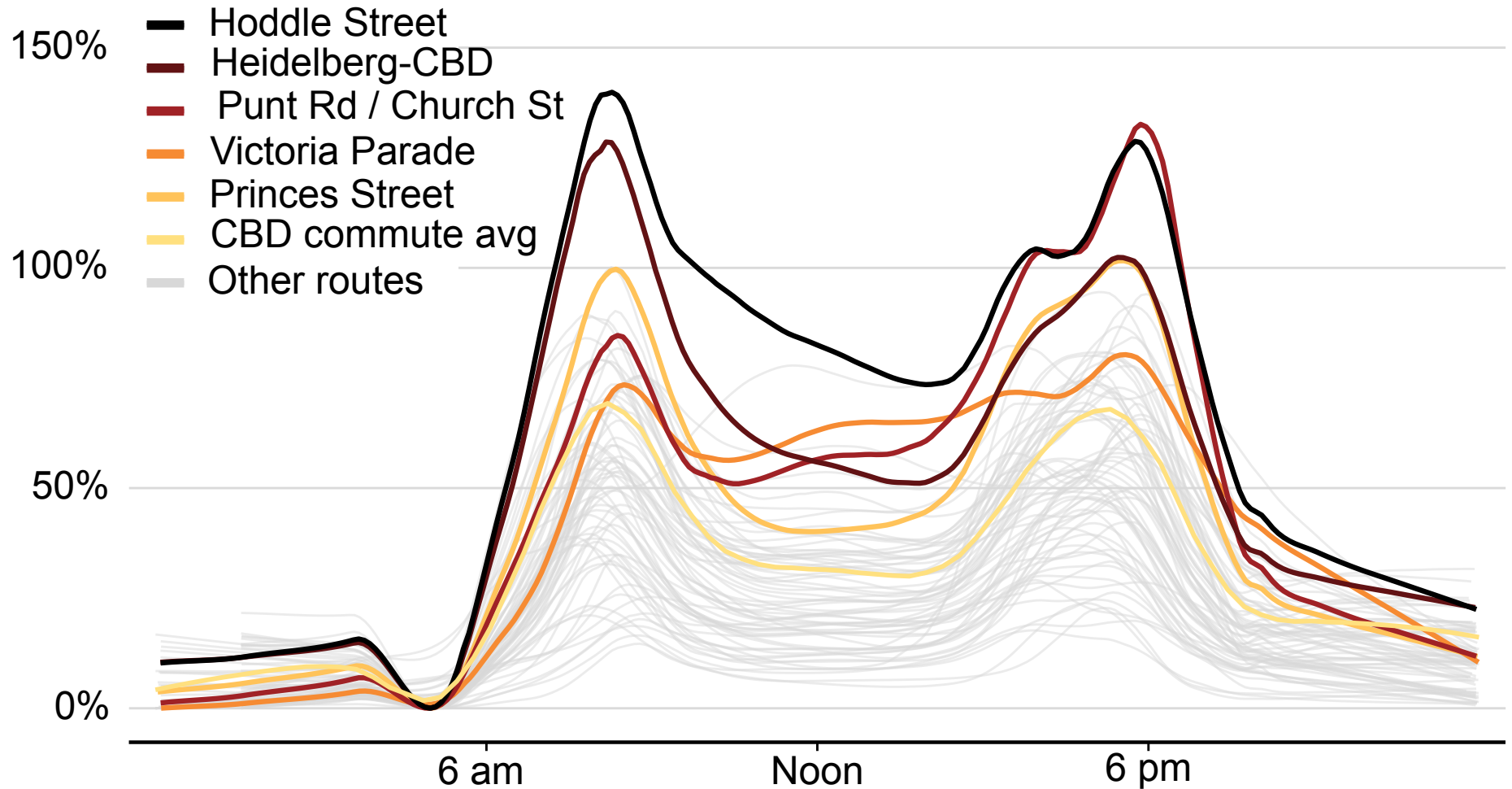
CBD commutes from the north east are less reliable

Increase in travel time as a proportion of free flow, weekday morning peak



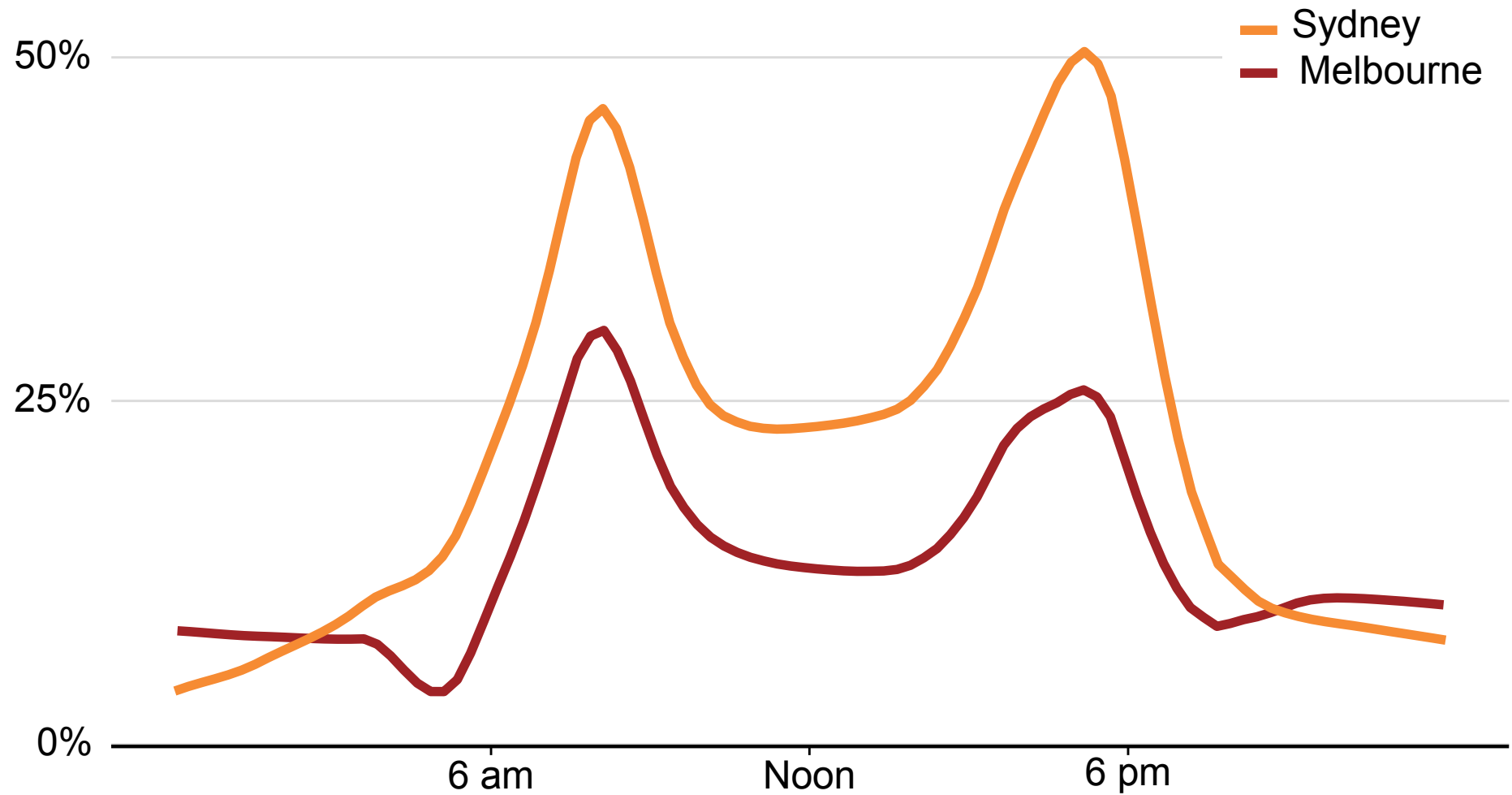
Arterial roads in suburbs immediately surrounding Melbourne's CBD are particularly delayed

Increase in travel time relative to free flow



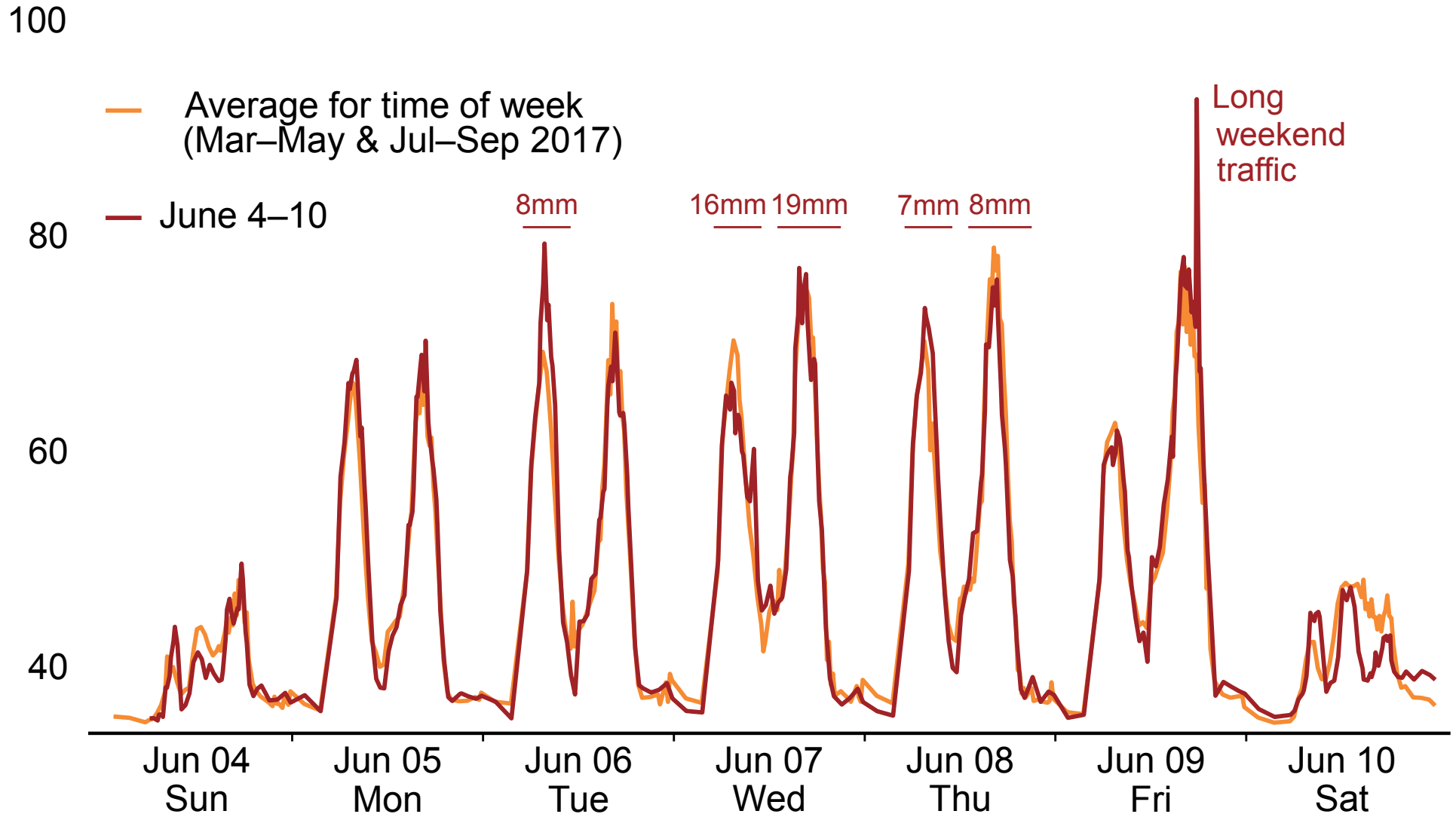
Sydney freight routes are more delayed than comparable freight routes in Melbourne

Increase in travel time relative to free flow, key freight routes



“Non-recurrent” causes: Sydney’s wettest week in six months did not have unusual congestion

Increase in travel time relative to free flow, Liverpool–CBD corridor



What we recommended, and what work remains to be done

Recommendations to act on in the next 12 months

1. More expensive parking in Melbourne's inner city
2. Cheaper off-peak fares on public transport
3. More frequent and detailed public information about road delays

Recommendations for better investment

4. Compare new expenditure on roads with non-construction alternatives

Recommendations for smarter pricing

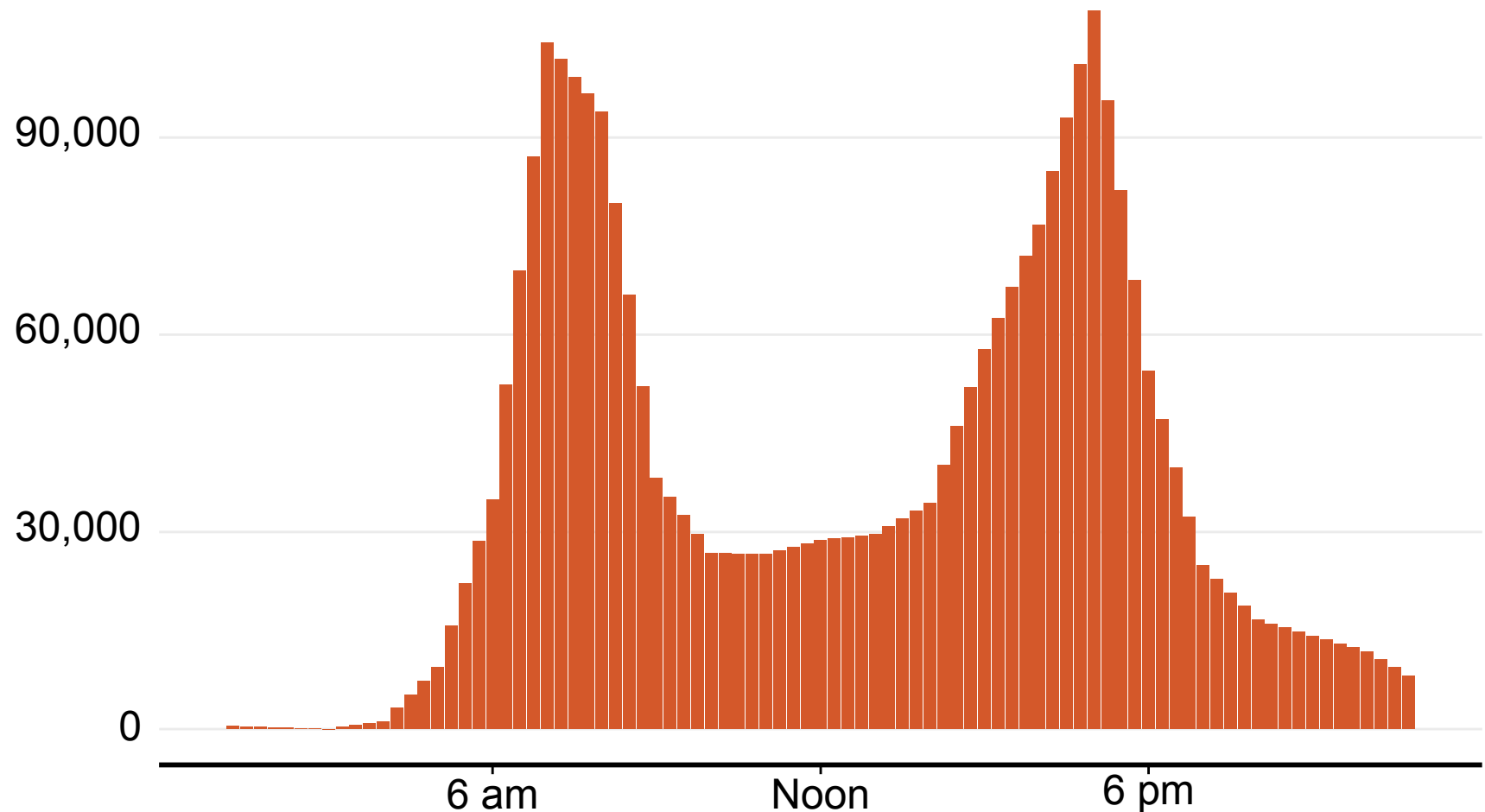
5. Think seriously about network-wide time-of-day congestion charging
6. Investigate independent regulation of future toll prices

Future work – scheme design

- Costs
- Technology
- Responsiveness of users
- PT capacity

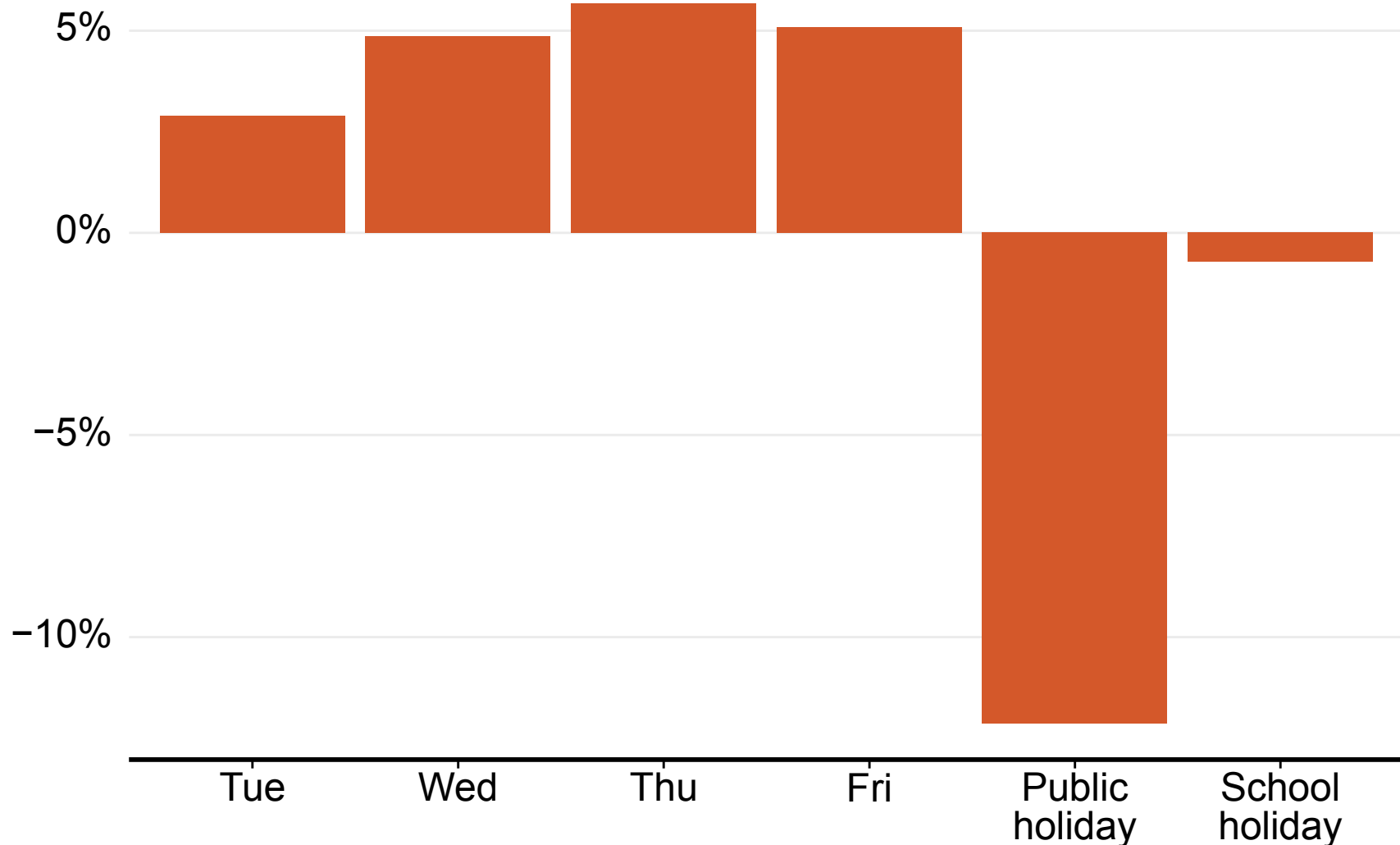
Public transport use is highly concentrated at peak periods

Avg. half-hourly weekday train boardings on Melbourne public transport



Public holidays make a difference to congestion; school holidays, not so much

Average effect of the day-of-week and holiday type on trip time



Notes: Linear model of peak trip duration for each morning and afternoon sampled, controlling for origin-destination and time of day. Estimates are with respect to non-holiday Monday mornings.
Source: Grattan analysis