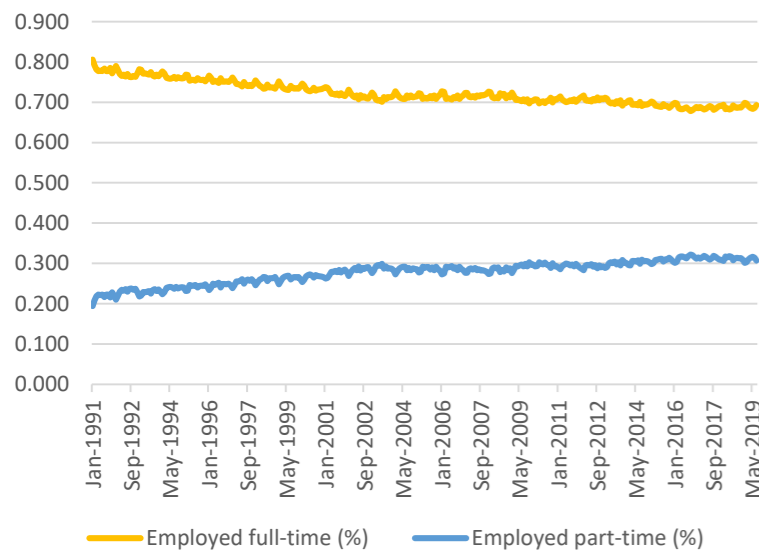


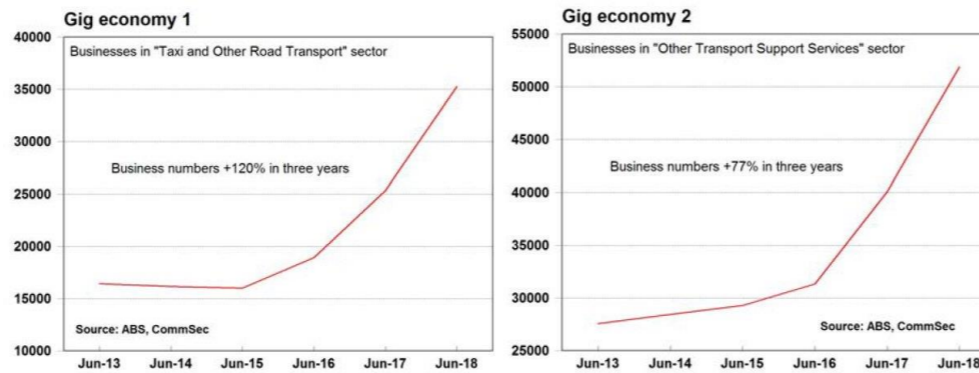
Transport and the Gig-economy: Understanding How Changes in Employment Arrangements Impact Travel Demand

Motivation

- Information and Communication Technologies (ICT) allow for flexible work arrangements and locations, as well as the temporal fragmentation of work activities.
- Evidence
 - Increase in the proportion of part-time jobs (Fig. 1).
 - Growth of gig-economy (Fig. 2)
- This transitional trend has great potential to change observed spatio-temporal travel patterns and, consequently, peak-travel.



Source: Australian Bureau of Statistics (ABS)
Fig. 1 Proportion of employment arrangement (Australia)



Source: Here's a provocative look at the impact of Uber and the gig economy on Australia's job market, David Scutt, Business Insider Australia, February 26, 2019.
<https://www.businessinsider.com.au/gig-economy-impact-on-australia-2019-2>

Fig. 2 Growth of gig-economy

Objectives

- Explore the evolution of employment and travel in the past two decades based on aggregate statistics and time-series analysis
- Model individual-level activity-travel patterns associated with different work arrangements to identify potential transportation effects of future changes in work

Discipline : Civil Engineering

Preliminary Results

Trend of flexibilities	part-time or full-time jobs		Had an flexible agreement		Usually work on other days set		Work on weekend only		Work less 5 days		Independent contractors or not		Had authority over own or Not	
	Part	Full	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Employed persons	↑	↓									△	△		
Employees	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓				
Without paid leave	△	△	↑	↓	↓	↑	↑	↓	△	△			↑	↓
With paid leave	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓			↓	↑
Self-employed	↑	↓	↑	↓	↑	↓	↑	↓	△	△				
Employers	△	△	↑	↓	△	△	↑	↓	△	△				
Non-independent contractors	↑	↓												
Independent contractors	↑	↓											↑	↓

Fig. 3 Summary of transitional trend of employment arrangement in Australia

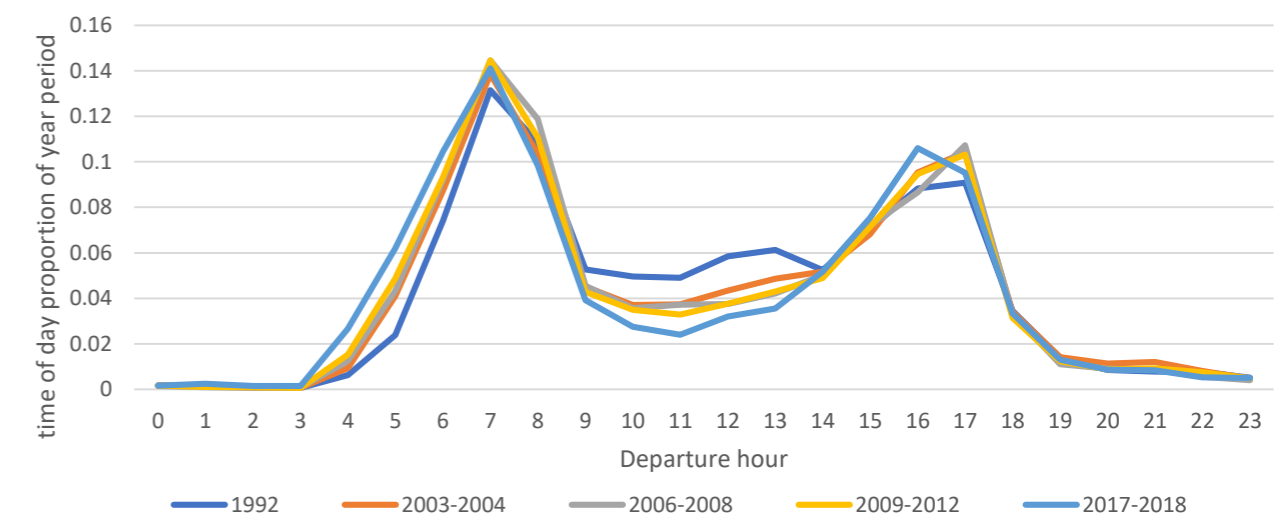


Fig. 4 Time of day proportion changes of region of Queensland (Greater Brisbane, Gold coast, and Sunshine coast)

More Information

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