

# **Post-Industrial Society: An Economic Analysis**

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# Post-industrial society

Daniel Bell, 1973, *The Coming Of Post-Industrial Society*

- an economy based on the transmission of information rather than the manufacture of goods
- an emphasis on service industries rather than industrial production

Alvin Toffler, 1980, *The Third Wave*

- a radical shift in civilisation
- comparable with the agricultural revolution, 10,000 years ago and the industrial revolution from about 1750.

# Employment change

- Manufacturing employment peaked in the US around 1950
- By 1980 professional employment in the US exceeded employment in all other industries
- Service sector employment in OECD countries now accounts for over 70% of total employment
- In Australia employment in STEM occupations grew at twice the rate of non-STEM occupations between 2000 and 2020
- Jobs requiring at least a university degree accounted for almost half of employment growth between 2000 and 2020

# Post-Industrialism, Globalisation and Urbanisation

- Post-industrialism has become global encompassing all countries, although at different stages, through interdependence and interaction
- Service employment is urban focussed
- In 1950, 30% of the world's population was classified as urban
- By 2018, global urbanisation reached 55%
- Urbanisation projected to reach 68% by 2050

# Growth of female employment

- Service employment is gender-neutral
- In Australia, females accounted for 40.9% of the total labour force in 1990
- Female employment rose to 43.1% of the TLF in 2000 and to 46.2% in 2020
- Females extended their education to gain the qualifications needed to enter para-professional occupations such as nursing and teaching and to pursue professional careers requiring university degrees
- The demand for female employment led to the development of “The Pill” in the 1960s and to greatly reduced total fertility rates (TFR)

# Increased personal automobility

- Increased car ownership has led to the three great social revolutions of the post-war period
- First, the car enabled families to choose more desirable residential locations independently of where they worked
- Second, the car enabled women, particularly those with dependent children, to enter paid employment giving them independence, financial security and social status
- Third, the car has allowed the increasing proportion of elderly to become more physically, socially and mentally active
- Cars enable firms to select a workforce better suited to their needs, thereby boosting productivity and contributing to economic growth
- Cars enable employees to access a wider range of jobs better suited to their skills and preferences

# Changing urban land use structures

- Cars have generated low density residential settlement by giving households greater choice in where to live
- Trucks and the container revolution have allowed manufacturing to move to more spacious industrial sites in the outer suburbs
- Retailing and many offices have followed the move to the suburbs, creating regional centres offering large areas for parking access
- Thus the structure of urban land use has shifted from the “concentric zone” model of the pre-industrial period to the “sector’ model of the industrial age and to the “multi-nuclei’ structure of the post-industrial era.

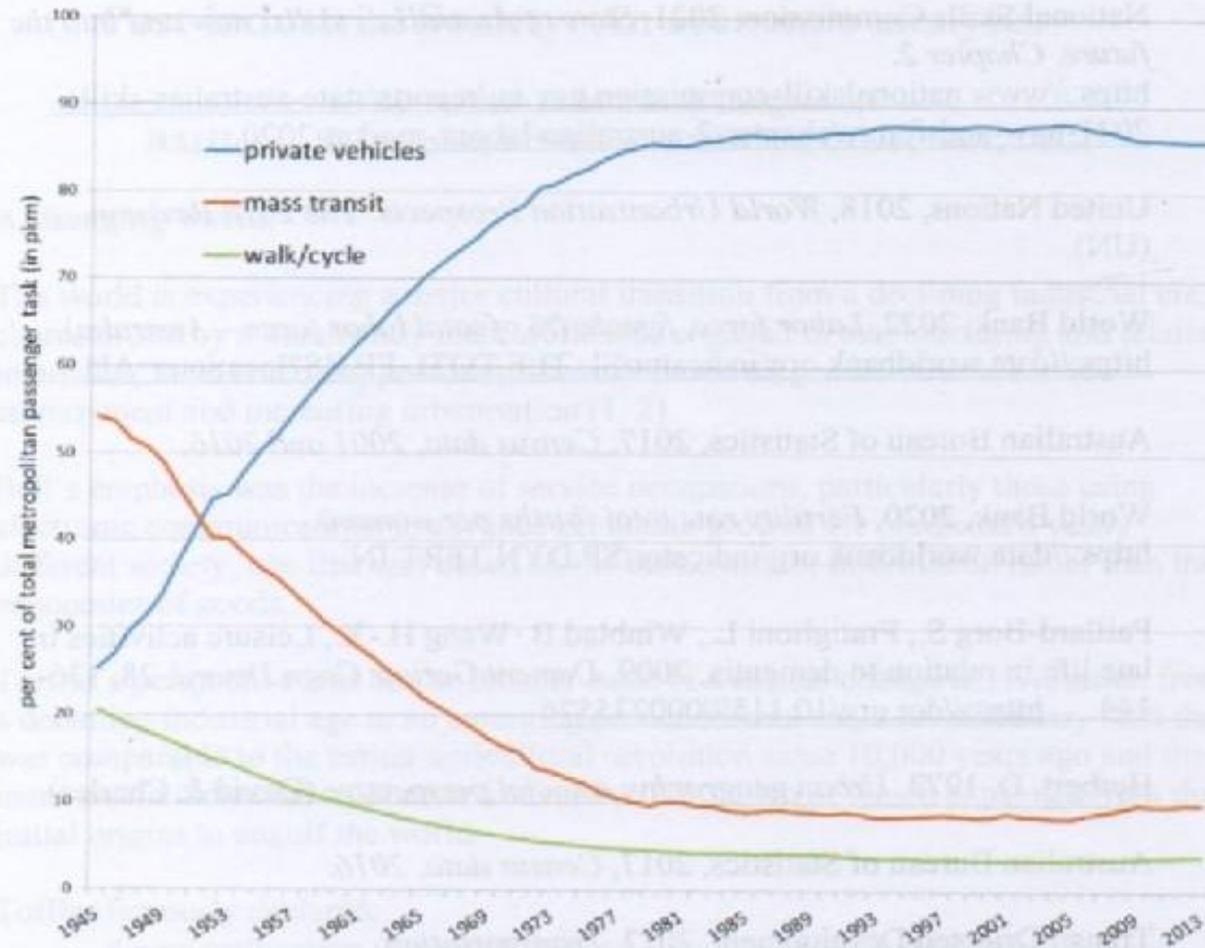
# Changing household urban travel behaviour

- The growth of female employment among mothers of dependent children has led to a radical change in household travel behaviour
- House and family responsibilities are more likely to be shared
- Hence, daily travel behaviours are more complex than in the days when married woman stayed home to attend to house and family
- Changed land use patterns mean that daily activities are more complex as well as being generally time-constrained
- Mostly, daily activities have to be done within the period from leaving home in the morning to returning home in the late afternoon

# Modes of transport

- The complexity of household travel and urban land use patterns has led to an increase in daily travel
- In Australia per 1,000 persons travel volumes increased from 5,800 km in 1961 to 10,580 km in 1986 and to 13,120 km in 2011, a 225% increase between 1961 and 2013 mainly as a result of increased car use rather than public transport (**Figure 1**)
- Overall, the ratio of cars to public transport in urban travel has remained relatively constant for the past 40 years at about 10:1(**Figure 2**)
- Amongst commuters, public transport use for the journey to work in 2016 was 22.8% in Sydney, 15.5% in Melbourne, 11.6% in Brisbane, 10.3% in Perth, 8.8% in Adelaide and 5.2% in Hobart





**Aggregate modal shares for passenger task within Australian capital cities, 1945–2013.**

*[Source:BITRE, 2014, Information Sheet Sheet 59, p.4]*

**Figure 2.**

# Planners' prescriptions versus reality

- From the 1960s, planners have prescribed a policy of re-designing urban land uses to create high density settlement aligned to public transport corridors
- Known as “transit oriented development” (TOD) the policy was intended to counter the twin “problems” of low density urban settlement and the high rate of car use in cities
- Yet, worldwide, motor vehicle registrations per 1,000 population have increased from 42 in 1960 to 122 in 1990 and to 194 in 2017
- In Australia the increase was from 594 in 1990 per 1,000 population to 651 in 2,000 to 777 in 2020
- Low density land use continues to spread in all countries

# Faults of the TOD paradigm

- Neglect of the changing urban land use patterns and household travel behaviour
- Failure to recognise time as a stock variable as well as a flow variable
- An emphasis on physical objects and structure rather than on travel behaviour and welfare
- Over-estimating the costs of urban travel and under-estimating the benefits
- Assuming that travel by public transport can be a substitute for personal automobility
- A focus on cars and passenger travel rather than trucks and freight transport
- Failure to recognise that cars carry personal freight rather than just the passenger

# Conclusions

- Society needs good urban planning but it must be based on an acceptance that cars and trucks are here to stay, and not some temporary aberration
- Pollution for motor engines can be reduced by transitioning from internal combustion vehicles to electric vehicles
- Congestion can be solved by increasing the supply of road space or reducing the demand for it, by the following measures
  - Substituting communications for transport, such as WFH, online shopping, telehealth
  - Redistributing travel demands over time to reduce peak loads, such as flexible working hours
  - Adopting policies to move employment from the CBD to dispersed regional centres
- Given continuing low density urban land settlement and motor vehicle use, it is time for economists to become more involved in the disjunction between what planners prescribe ideologically and what individuals do in practical reality