

Sufficiency of Employment Self-sufficiency Targets in Reducing the Need to Travel

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Defining employment self-sufficiency

- Sufficient:
 - “right amount”, “adequate”
- Employment self-sufficiency:
 - enough local jobs to satisfy the local labour force
- Jobs-housing balance
- Co-location of jobs and houses
- Containment

Quest for self-sufficiency

- Planning and policy imperative
 - Since Garden Cities ideal, 1898
 - Evolved to more sophisticated forms – Urban Villages, TOD, New Urbanism, Smart Growth
 - Still common in current policies and plans – targets
- Purpose
 - Reduce need to travel
 - Environmental sustainability, energy efficiency driven
 - Economics – cost of congestion, deferring infrastructure, productivity
- Practice – targets seldom achieved

Sufficiency questioned

- Household side
 - Residential location choice – not focused on proximity to work
 - Affordability
 - Safety
 - Demographics
 - Dual worker-households
 - Skills/ income levels
- Travel side
 - Mobility of labour force
 - Mode of travel
 - Uneven patterns of accessibility
- Employment side
 - Not all jobs follow people
 - Skills matching
 - Part-time/full-time/term contracts
 - Not all jobs are location fixed – construction/trades/fifo
- Measurement issues
 - Boundaries and scale

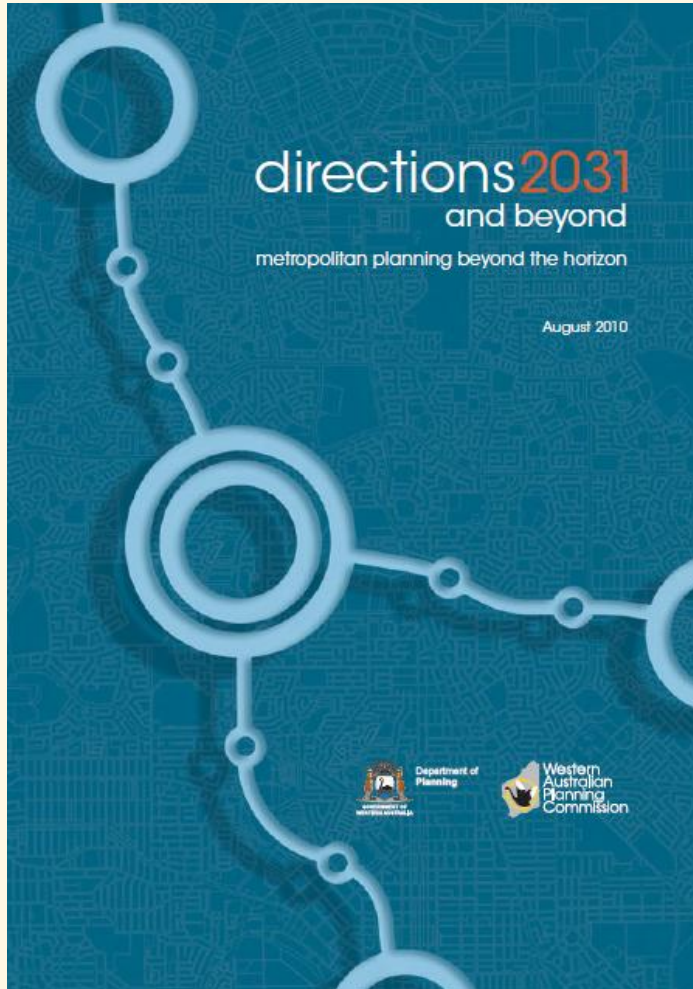
Employment self-sufficiency in Perth

- Metropolitan Perth strategic policy context
- 2011 ABS Census journey-to-work (JTW) data
- Focus on North West (NW) sub-region
- Focus on employment-side dynamics
- Preliminary exploration of self-sufficiency

Sufficiency in terms of:

- Measure
 - Appropriate for the planning objective or strategy
- Boundary
 - The more functionally-related an area, the higher the levels of sufficiency
 - The larger the “local” area, the higher the levels of sufficiency achieved
- Analysis
 - Nuanced understanding of employment dynamics
 - Disaggregated by industry and occupation

Planning Objective



- A Prosperous City with a “balanced”/ “equitable” employment distribution to
 - Reduce travel distance, cost, time
 - Reduce congestion
 - Reduce GHG emissions and fuel consumption
 - Increase opportunities for non-car-based commuting

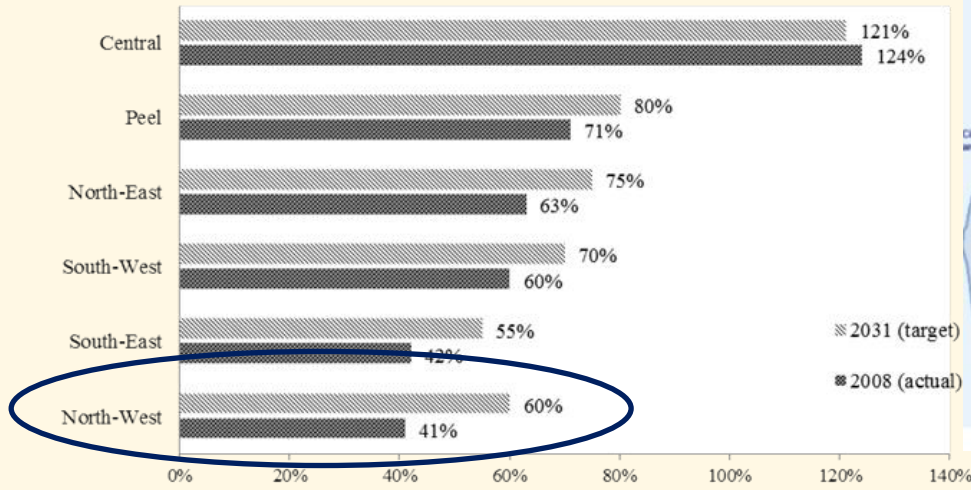
Planning Strategy



- Increase ESS in sub-regions outside city centre
 - Hierarchy of activity centres
 - Diversity and mix of activities
 - beyond retail
 - “Higher order”
 - “Population-driven”
 - Businesses/jobs to decentralise to other centres in the upper levels of the hierarchy

Sub-regional ESS targets

North-west sub-region characteristics		2008	
Urban and urban deferred area		20,500 ha	
Urban area already developed		13,000 ha	
Growth	2008	2031	Change
Population	285,000	395,000	110,000
Dwellings	107,000	172,000	65,000
Resident labour force	137,000	209,000	72,000
Jobs in the area	56,000	125,000	69,000
Employment self-sufficiency	41%	60%	



Measures

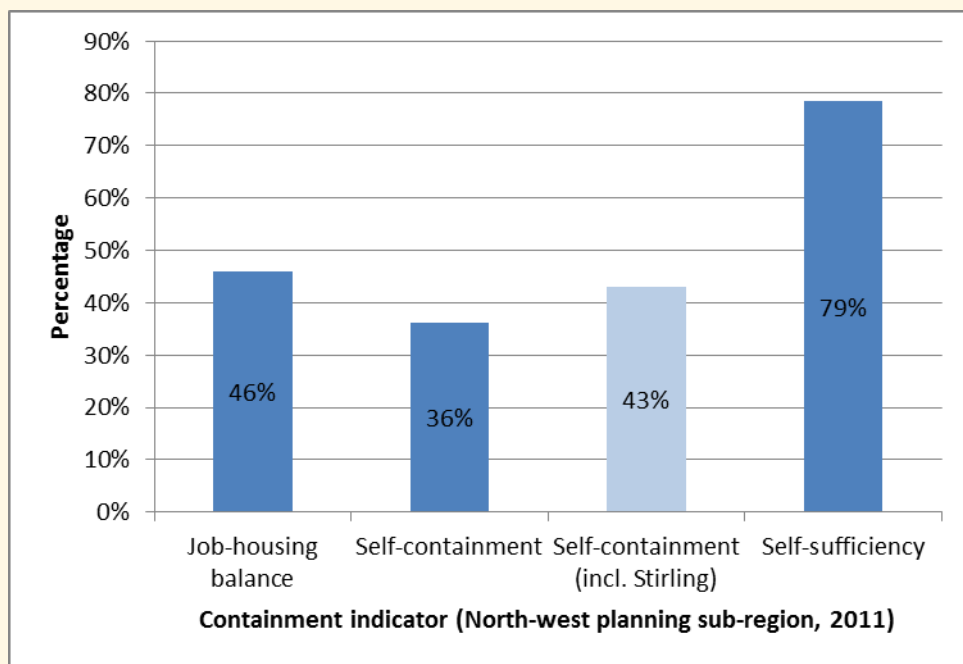
- Jobs-housing balance (JHB)
 - Ratio of jobs: labour force in defined area
 - Assumes
 - all local jobs filled by all local residents
 - perfect match between skills levels and job requirements
 - “Theoretical” or “potential”
- Employment self-containment (ESC)
 - Proportion of local labour force who have jobs in the local area
 - The greater the self-containment, the less the need to travel outside the local area to work
 - Typically, low ESC in outer suburbs - worker surplus, job poor
 - To increase self-containment, add more local jobs
- Employment self-sufficiency (ESS)
 - Proportion of local jobs filled by local residents
 - The greater the self-sufficiency, the less the need for inward travel into the local area
 - To increase self-sufficiency, add more housing
 - Typically low SS areas are inner city suburbs – job surplus

Sufficiency of measure?

- Jobs-housing balance used
- Called “self-sufficiency”
- Should be self-containment
 - Objectives
 - NW sub-region context
- Bigger challenge

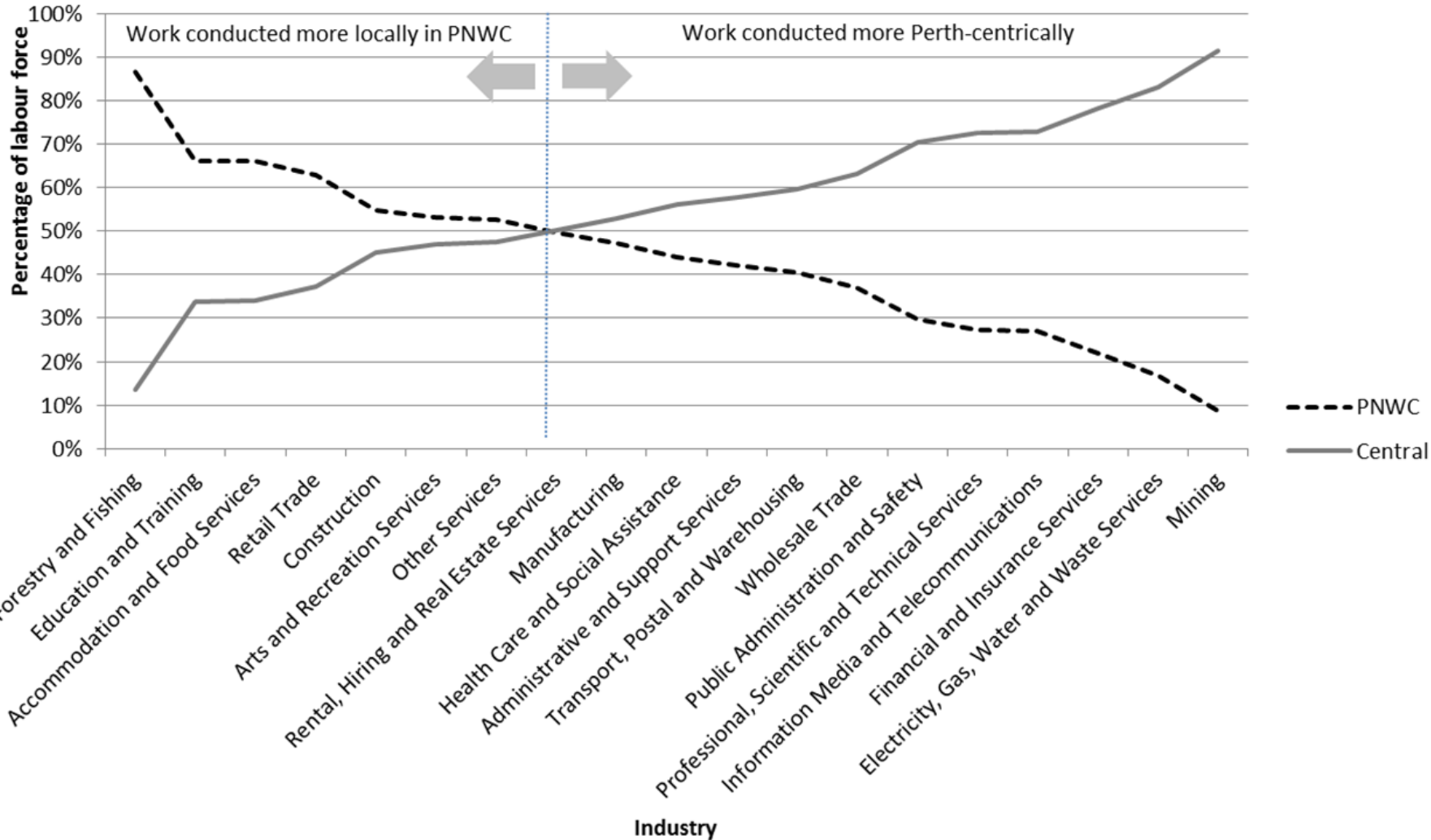
	Work in PNWC	Work in other sub-regions	Total PNWC labour force
Reside in PNWC	55212 (<i>a</i>)	97518	152730 (<i>b</i>)
Reside in other sub-regions	15018		
Total PNWC jobs	70292 (<i>c</i>)		
JHB (<i>c/b</i>) = 46%	ESS (<i>a/c</i>) = 79%	ESC (<i>a/b</i>) = 36%	

Sufficiency of boundary selection?



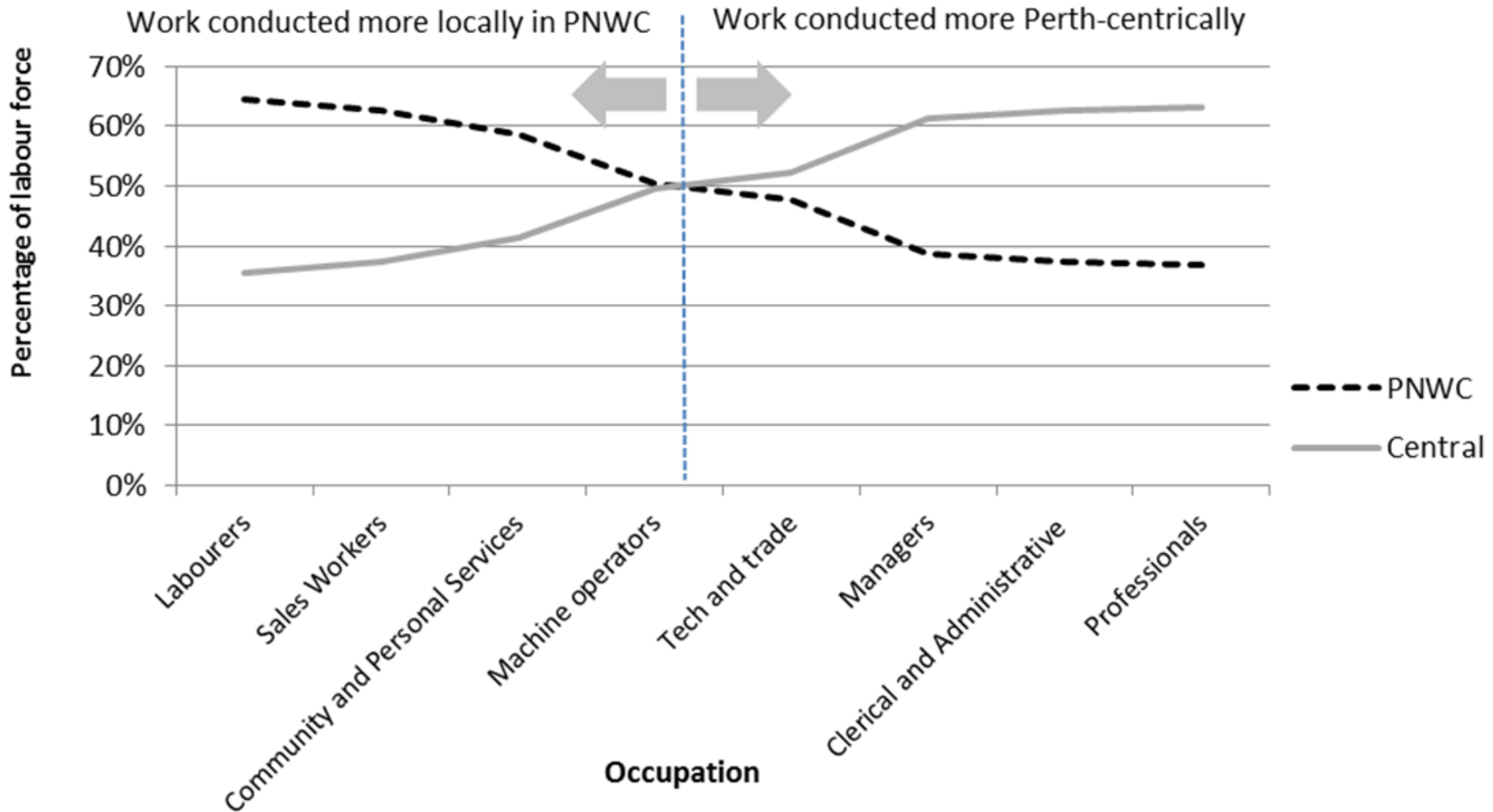
Sufficiently nuanced analysis?

Disaggregated: Industry

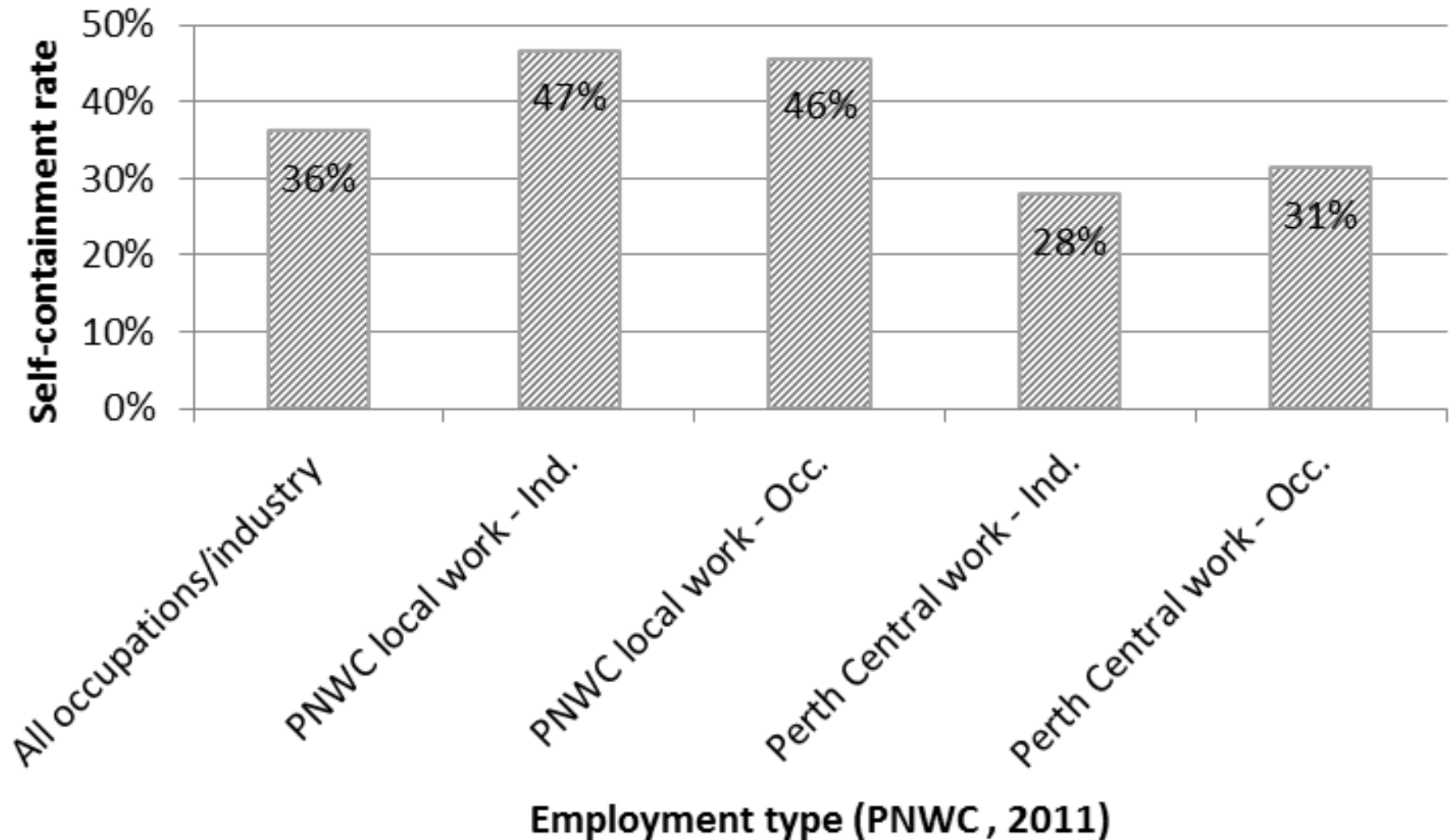


Sufficiently nuanced analysis?

Disaggregated: Occupation



Disaggregated self-containment



Conclusion

- Some have argued better ways to reduce need for travel than targets of employment self-sufficiency
- Still used in practice
- Improve sufficiency of use:
 - Get the measure right to support objectives and account for commuting patterns
 - Get the boundaries right to capture functional areas
 - Get the analysis right to ensure understanding of employment dynamics at a disaggregated level