Disentangling Ethnic Heterogeneity and Social Cohesion within the Neighbourhood: Evidence from An Australian Panel Data

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Introduction

With immigrant populations growing in many developed countries and heightened concern for inter-group conflict, social cohesion has become an increasingly critical issue today. Evidence suggests mixed relationships between ethnic heterogeneity and social cohesion at subnational levels, but are relatively consistent in support of a negative relationship for intra-neighbourhood social cohesion (van der Meer & Tolsma 2014). However, the majority of existing studies focus on North America or Europe. Also importantly, most prior studies are based on cross-sectional data, whereas longitudinal data and analysis have only recently been used to further explore such relationships (see, e.g. Laurence & Bentley 2016; Mendolia et al 2016; Dochow 2018).

In this paper, we use 21 years of panel data from Australia to further test and disentangle the relationship between ethnic heterogeneity and intra-neighbourhood social cohesion. Findings from this study will contribute to the ethnic heterogeneity and social cohesion debate, with further evidence at the neighbourhood level that warrants rigorous methodology design. It will provide evidence from both immigrant/ethnic minority and non-immigrant/ethnic majority groups, and control for unobserved heterogeneity at the individual level.

Background and theoretical focus

Australia has one of the highest levels and sizes of immigrant populations in the world. Recent statistics show that nearly 30 per cent of the Australian resident population were born overseas, over 28 per cent have non-Australian-and-European ancestries, and 23 per cent use a language other than English at home (ABS 2022). In such a highly diverse society, Australian people's high sense of belonging to the neighbourhood (82 per cent national average in 2022) and sense of community (66 per cent national average in 2022) are, however, uneven between Australian-born persons and overseas-born immigrants (O'Donnell 2022). Immigrants, particularly those born in non-English speaking countries, reported a lower sense of belonging. Cross-sectional data from Queensland suggest that the perceived social cohesion at the neighbourhood level and informal interaction with neighbours are lower when ethnic diversity increases, yet this relationship is less consequential for immigrants (Wickes et al. 2013).

With increasing proportions of immigrants coming from non-traditional (non-European) backgrounds over the last two decades and a growing share of skilled immigrants, we observe declines in residential segregation between new/recent immigrants and Australia-born persons (Guan 2023). A closer examination of the negative relationship between ethnic heterogeneity and social cohesion (Putnam 2007) is needed. More rigorously designed research and data controlling for unobserved individual characteristics are needed to test if the consistent relationships between ethnic heterogeneity and intra-neighbourhood social cohesion hold, and whether they hold for different population groups. To address the gaps in the literature, we ask the following two questions in this paper:

(i) How do the level and trajectory of one's perceived social cohesion relate to the ethnic heterogeneity at the neighbourhood level for Australians?

(ii) If, and how, do such relationships vary between immigrant/ethnic minority and non-immigrant/ethnic majority populations?

Data and methods

To examine the relationship between social cohesion and ethnic heterogeneity, we use panel data from the Household, Income and Labour Dynamics in Australia (HILDA) survey and population composition variables from Australian population censuses. HILDA is a national annual representative longitudinal study of Australians. There are currently 21 waves of data available, starting from 2001. The Australian population census is conducted every five years. The last one was in 2021. The two sets of data are linked at the neighbourhood/local community level, i.e. Statistical Areas Level 2 (SA2). There are 2,473 SA2s across Australia, with a population between 3,000 and 25,000 people (Australian Bureau of Statistics 2021).

Intra-neighbourhood social cohesion is measured using variables from HILDA. In HILDA's life satisfaction module, a neighbourhood satisfaction question has been asked in each wave:

1. Satisfaction with the neighbourhood in which they live (*losatnl*): 0 (totally dissatisfied) – 5 (Neither satisfied nor dissatisfied) – 10 (totally satisfied)

Respondents were asked to pick a number between 0 (totally dissatisfied) and 10 (totally satisfied). Other neighbourhood-level social cohesion measures are also available in HILDA but only available for a limited number of waves. These include variables measuring neighbourhood trust, support, and informal interactions. The key perceived social cohesion variables (and values) we will use include:

2. People in this neighbourhood can be trusted (*lslatr*): 1 (strongly disagree) – 7 (Strongly agree)
3. Community participation - Chat with your neighbours (*lsnwcht*): 1 (Never), 2 (Rarely), 3 (Occasionally), 4 (Sometimes), 5 (Often), 6 (Very often)

They capture the attitudinal and behavioural aspects of social cohesion at the neighbourhood level.

We use different ways to measure ethnic heterogeneity, as summarised in van der Meer and Tolsma (2014), to differentiate between the conflict/threat and inter-group contact mechanisms. Ethnic heterogeneity will be assessed as (i) ethnic diversity (measured by the fractionalisation index), (ii) relative ethnic group size, and (iii) level of segregation (measured by the dissimilarity index and coefficient of variation). They represent different connotations of ethnic heterogeneity, where the segregation measures the opportunity for positive inter-group contacts.

An array of census variables will be used to measure ethnic heterogeneity at the neighbourhood and local community levels. Though there is no direct question in the census asking ethnicity of the respondent, place of birth, parents' places of birth, ancestry, and language used at home will be used to proximate ethnicity and construct ethnic heterogeneity measures.

Multilevel mixed effects models will be used to test how neighbourhood ethnic heterogeneity affects an individual's intra-neighbourhood social cohesion. In the models, we will control for an individual's ethnicity/immigrant status as well as a range of alternative explanatory variables at both individual and neighbourhood levels. Individual's immigrant status/ethnicity is defined in HILDA using country of birth, language speaking other than English, and parents' country of birth variables.

Preliminary tests and expected findings

Before building the model, we did some preliminary analyses to test correlations between key social cohesion measures, and to examine levels and over time changes in different measures. A selection of intra-neighbourhood social cohesion variables are included in Table 1, together with two community-level social cohesion measures. Results from pair-wise Pearson's correlation tests show that neighbourhood and local community satisfaction and belonging (*losatlc*, *losatnl*) are moderately correlated within each person-wave. The two measures are only loosely correlated with variables on neighbourhood trust/support/informal interaction or community participation (for waves when the pair of variables were both asked).

Table 1. Pearson's Correlation coefficients between pairs of key social cohesion variables in HILDA

Pearson Correlation	losatlc	losatnl	lslanh	lslatr	lslaha	lsnwcht	lsnwce
losatlc	1.000						
losatnl	0.4971*	1.000					
lslanh	0.1514*	0.1165*	1.000				
lslatr	0.1228*	0.1472*	0.8469*	1.000			
lslaha	-0.0018	-0.0428*	0.7989*	0.8382*	1.000		
lsnwcht	0.1226*	0.1004*	0.8557*	0.8904*	0.8446*	1.000	
lsnwce	0.1027*	0.0710*	0.8188*	0.8787*	0.8542*	0.9191*	1.000

losatlc: Satisfaction - feeling part of your local community
losatnl: Satisfaction - The neighbourhood in which you live
lslanh: Neighbourhood - Neighbours helping each other out
lslatr: Neighbourhood - People in this neighbourhood can be trusted
lslaha: Neighbourhood – People being hostile and aggressive
lsnwcht: Community participation - Chat with your neighbours
lsnwce: Community participation - Attend events that bring people together such as fetes, shows, festivals or other community events

* Statistically significant at $p<0.05$ level

Note: correlation coefficients are calculated across all available person-waves. *losatlc* and *losatnl* are available in waves 1-21. *lslanh*, *lslatr* and *lslaha* are available in waves 1-4, and every other wave until wave 20. *lsnwcht* and *lsnwce* are available in waves 6, 10, 14 and 18.

Population-weighted means of three social cohesion variables (two neighbourhood ones and a community one) are presented in Figure 1 for available waves and three broad birthplace groups. Note that values for the two satisfaction variables (*losatlc*, *losatnl*) range between 0 and 10, whereas for the Neighbourhood trust variable (*lslatr*) between 1 and 5.

Lower levels of neighbourhood trust and satisfaction are observed for overseas-born immigrants from non-main English-speaking countries, in line with cross-sectional evidence (O'Donnell 2022). Weighted means of the two neighbourhood variables does converge between immigrants and Australia-born person over time, yet we need to build more rigorous statistical models to control for other explanatory variables. At the community level, the mean values of satisfaction/belonging are less varied between Australia-born and the two broad overseas-born groups. In fact, the two COVID years (waves 20-21) saw a higher community belongingness and satisfaction amongst immigrants from non-English speaking countries.

In our next steps using more rigorous statistical models, we expect to see general support for the consistent negative relationship between ethnic heterogeneity and social cohesion at the

neighbourhood level. However, we also expect differing mechanisms for non-immigrants and immigrants of different ethnic groups and lengths of residence in Australia, given the recent shifts in the types and origins of the country's immigrant population. For instance, knowing that recently arrived Asian skilled immigrants are more integrated spatially compared to their earlier-arrived counterparts (Guan 2023), we expect the positive effect of higher inter-group contact opportunities to attenuate the negative relationship between ethnic heterogeneity and intra-neighbourhood social cohesion, not only for Australia-born persons but also immigrants.

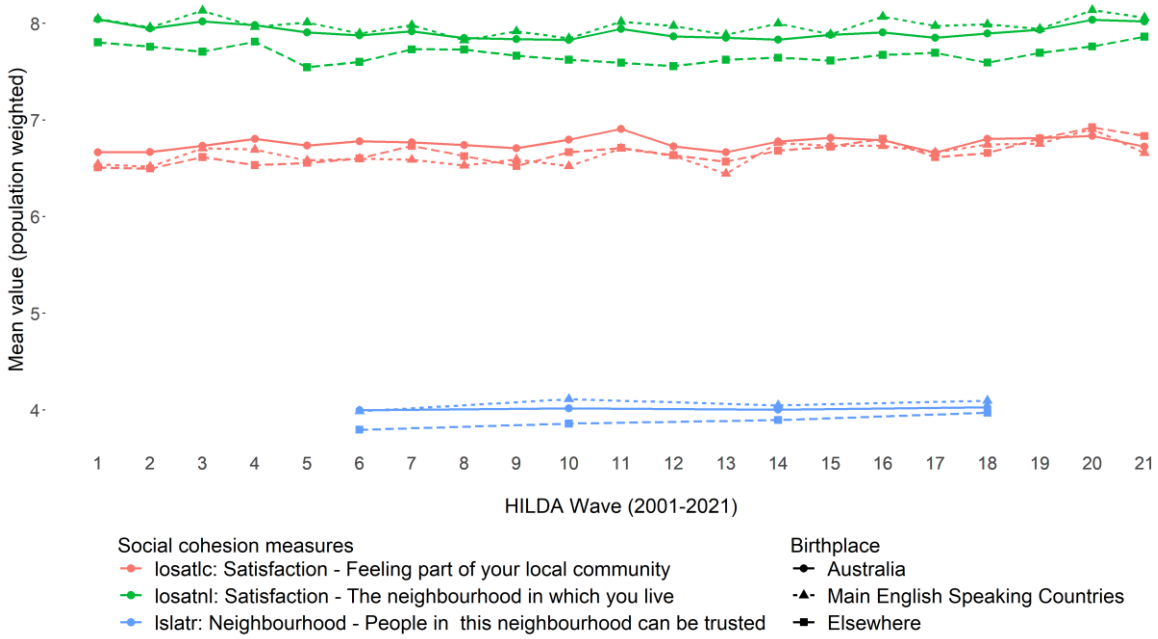

Figure 1. Changes in neighbourhood and community satisfactions, and neighbourhood trust: Population weighted means. Source: authors calculation using HILDA release 21

References

Australian Bureau of Statistics (ABS) (2021) Statistical Area Level 2 - Australian Statistical Geography Standard (ASGS) Edition 3 [Reference period: July 2021 – June 2026]. https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/main-structure-and-greater-capital-city-statistical-areas/statistical-area-level-2

Australian Bureau of Statistics (2022) Census of Population and Housing: Cultural diversity data summary, 2021 - Table 4. Ancestry by state and territory. Released 28 June 2022. Retrieved 30/08/2023 from https://www.abs.gov.au/statistics/people/people-and-communities/cultural-diversity-census/latest-release

Dochow S (2019) *Longitudinal perspectives on ethnic diversity and social cohesion: Mass media, neighborhoods and residential mobility* (Doctoral dissertation, Universität Bremen). Retrieved 31/10/2023 from https://core.ac.uk/download/pdf/211065159.pdf

Guan Q (2023) *Spatial Integration of China-Born Immigrants in Australia: 1981-2016*. (Doctoral dissertation, The Australian National University. https://doi.org/10.25911/QXT0-E744

Mendolia S, Tosh A, & Yerokhin O (2016) Ethnic diversity and trust: new evidence from Australian data. *Economic Record*, *92* 299, 648-665.

Laurence J & Bentley L (2016) Does Ethnic Diversity Have a Negative Effect on Attitudes towards the Community? A Longitudinal Analysis of the Causal Claims within the Ethnic Diversity and Social Cohesion Debate, *European Sociological Review*, *32*:1, 54-67, DOI: 10.1093/esr/jcv081

O'Donnell, J (2022) *Mapping Social Cohesion 2022*. Scanlon Institute. Retrieved 31/08/2023 from https://scanloninstitute.org.au/mapping-social-cohesion-2022

Putnam R D (2007) E pluribus unum: Diversity and community in the twenty-first century the 2006 Johan Skytte Prize Lecture. *Scandinavian political studies*, *30*:2, 137-174.

van der Meer, T. and Tolsma, J. (2014). Ethnic diversity and its effects on social cohesion. *Annual Review of Sociology*, *40*, 459–478.