## Background

Rural depopulation because of persistent out-migration, declining fertility and population ageing, has become a pressing societal issue in most demographically advanced countries, (Johnson and Lichter, 2019). Dispersal policies that direct incoming humanitarian migrants to non-metropolitan regions have been presented as a potential solution to address this issue. Examples of such policies can be found in the United States, Sweden, Denmark and the United Kingdom (Stewart and Shaffer, 2015; de Hoon et al., 2021; Vogiazides and Mondani, 2021; Hagstrom and Pereira, 2023). Policies aimed at increasing the non-metropolitan settlement of refugees were also introduced in Australia in 2005 (Australian Government Department of Immigration and Citizenship, 2009). As a result, the proportion of rural settled humanitarian migrants has increased from below 10% in the early 2000s to 40% in the late 2010s (Hugo et al., 2019; Australian Government Department of Home Affairs, 2020).

One important policy consideration is whether humanitarian migrants remain in rural areas after initial settlement. In many developed countries, the retention rate of humanitarian migrants in metropolitan areas is higher than in non-metropolitan areas (Aslund 2005; Stewart and Shaffer, 2015; de Hoon et al., 2021; Vogiazides and Mondani, 2021). In Sweden, for example, about 18% humanitarian migrants leave rural regions within 8 years compared to less than 3% for major cities and 8% for large cities (Vogiazides and Mondani, 2021). However, largely due to a historical scarcity of appropriate data, little is known about the efficacy retention policies for humanitarian migrants in rural areas and the factors fostering retention, especially in the Australian context. In this study, we draw on migration theories, such as chain migration theory, network migration theory and spatial integration, (McDonald and MacDonald, 1964; de Haas, 2019) to understand the place-based and individual determinants of integration.

## Study Aim, Data and Methods

The aim of this study is twofold. First, it seeks to investigate changes in the settlement patterns of humanitarian migrants since 2006 and identify new destinations. Second, it aims to establish the level and determinants of non-metropolitan retention using survival analysis, considering both (a) individual-level determinants, such as employment, sex, country of birth, and age, educational attainment, having children or not, and (b) place-based characteristics, including co-ethnic networks size, the share of vote for far-right party, median rental price and unemployment rate.

To meet these aims, we leverage unique longitudinal administrative microdata from the Person Level Integrated Data Asset (PLIDA). PLIDA is contains information on government payments, income and taxation and population demographics (Australian Bureau Statistics, n.d.). The combined location module and the visa module enable us to obtain information on the address histories and visa histories of all Australian residents between 2006 and 2021. The data are integrated through a unique identifier and feature three core datasets: (1) Medicare Consumer Directory held by Service Australia, (2) Centrelink administrative data from the Department of Social Services, and (3) Personal income tax maintained by the Australian Taxation Office. This also enables us to link census data to place of residence.

## **Preliminary findings**

The findings suggest that the efficacy of policies promoting non-metropolitan settlement of humanitarian migrants is limited. There has not been a significant increase in non-metropolitan settlement, fluctuating between 35 to 45% since 2006. Despite not having a significant increase in non-metropolitan settlement, there has been a shift in initial settlement locations and an emergence of new non-metropolitan destinations, such as Toowoomba, Townsville and Riverina, which have experienced a 300% increase in arrivals during the observation period compared with a national average of 52%).

Our findings reveal that retention in non-metropolitan areas is lower than in Sydney and Melbourne, but higher than in Brisbane (Figure 1). More importantly, the further from a metropolitan centre a region is, the lower the retention level. In addition, regression results reveal that co-ethnic network size is a key determinant of retention, play a greater role than access to employment. Additionally, areas with a lower share of far-right voters, a proxy for migrant welcomeness, are more successful in retaining them in the long-term (Table 1).





Table 1: Cox Hazard Regression results (Hazard ratios)

	Model 1 (HBs)	Model 2 (HBs)
Age groups (ref. 15-25)	1000ELT (111/3)	
795 910000 1151. 19-201 26-35	1 011	1 035
36-45	0.934	0.937
46-55	0.925	0.976
56-65	0.724**	0.576
Sex (ref: Male)	0.724	0.710
Female	0 913*	0 923*
Country of Rirth (ref <sup>.</sup> Irga)	0.515	0.525
South Sudan	1 503*	1 702
Iran	1 877***	1 813***
Svria	1 336***	1 563***
Myanmar	0.688***	0.825
Afghanistan	1 356***	1 426**
Other	1.360***	1.279*
Labour force participation (ref: unemployed)	1.500	1.275
Employed	0 943	0 989
Not in labour force	0.913	0.847*
Income range (ref: Negative or no income)	0.010	0.017
\$1-\$149	0.857	0.959
\$150-\$299	1.008	1.008
\$300-\$399	1.184	1.049
\$400-\$499	1.145	1.076
\$500-\$999	1.077	1.040
\$1000 or above	0.802	0.817
Student status (ref: Not a student)		
Yes	1.284***	1.210**
Educational Attainment (ref: Secondary or below)		
Bachelor or higher	0.971	0.908
Other certificates	0.911	0.907
No data or not application	0.802	0.806
English Proficiency (ref: Poor)		
Well	1.075	1.041
Not available	1.161	1.157
Religion (ref: Islamic)		
Buddhism	0.757	0.895
Christianity	0.895*	1.002
Hinduism	0.412***	0.388***
Other religions	0.909	0.966
Secular and other spiritual beliefs	0.849	0.988
Tenure (ref: Ownership)		
Renting	1.370***	1.221
Other arrangement	1.604**	1.514
Having children (ref: No)		
Yes	0.875*	0.795**
Access to internet at home (ref: No)		
Have access	0.872**	0.931
SA4 below median income (ref: No)		
Yes		0.455***
SA4 below average unemployment rate (ref: No)		
Yes		0.674***
SA4 above average SA4 co-ethnic proportion (ref: No)		
Yes		0.613***
SA4 above average SA4 same religion proportion (ref: No)		
Yes		1.046
Outside SMB		
SA4 Median rent		0.996***
SA4 Proportion of renting		9.874***
SA4 Proportion of vote for One Nation		0.000
Settlement location (ref: Sydney)		
Melbourne		0.488***
Brisbane		1.596*
Outside SMB		0.780
Total observations	6,176	6,145

Note: Data Source: PLIDA. Statistical significance: \*p<0.05, \*\* p<0.01, \*\*\* p<0.001. HRs: Hazard Ratios

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