Residential movement within New Zealand: Quantifying and characterising the transient population

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Disclaimer

Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975.

The results presented in this study are the work of the authors, not Statistics NZ.

Outline

Research summary

Background

Data from the IDI

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- The study characterises the transient and vulnerable transient population in New Zealand.

- Transience is defined based on frequency of movement, direction of movement, and socio-economic status of neighbourhoods at both origin and destination of move.

- The research uses a wide range of data sets in the IDI to track individuals' residential movements and to evaluate the potential drivers of transience.

- The analysis finds that 4 percent of the population can be categorised as vulnerable transient (VT), and a further 1.3 percent can be categorised as transient (T).

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Background

What is transience?

- Transient means temporary or short-lived. Superu defines transience as *"Repeated disruption of key social support mechanisms (including residence) which is associated with negative impacts on social, health, education, and/or employment outcomes."*

- 'Repeated disruption' has different implications for different population group of interest.

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The need to identify the scale of transience

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- The likely reasons for strong associations between residential movement and poorer outcomes can potentially be the drivers behind a move, rather than simply the move itself.

Types of residential movements

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- The nature of residential relocation are largely dependent on distance moved, neighbourhood qualities (at origin and destination) and frequency of move (Statistics NZ 2006; Exeter et al. 2015; Lupton 2016).

Data from the IDI

2013 Census evidence

- The Census is one of the commonly used data sources in the literature to capture information on residential movements.

- The study uses responses from two Census 2013 questions to identify movers and non-movers within five years and one year prior to the survey.

Residential move within 5 years	Duration of residence
Question: *'Where did you usually live 5 years ago, on 5 March 2008?'*	**Question:** *'How long have you lived at the address you gave in Question 5?'* [5]
Response codes: 1 Same as usual residence 2 Elsewhere in NZ 3 Not born 5 years ago 4 Overseas 5 No fixed address 5 years ago 77 Response unidentifiable 99 Not stated	**Response codes:** Integer values 0–98 representing the number of years a person lived in their current address 777 Response unidentifiable 999 Not stated

Notes: Sourced from the 2013 Census Data Dictionary.

Population movement: 5 years prior to 2013 Census
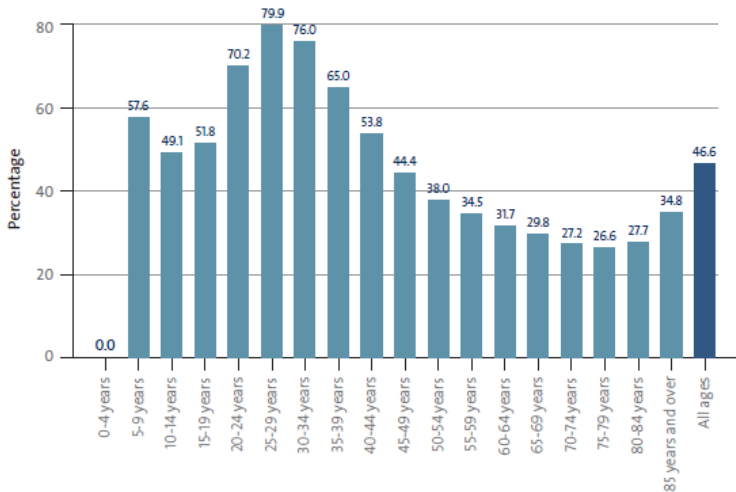
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Census versus the address notification table

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- Address records are collected from eight sources (spanning six agencies): PHO registers (MOH); NHI records (MOH); MSD residential; MSD postal addresses; MOE records; ACC client addresses; IR tax registration addresses; and the 2013 Census.

- Addresses are geocoded by Stats NZ and prioritized in the above order.

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- Potential disadvantage is it is based on notification date.

# Comparing census to the address notification table
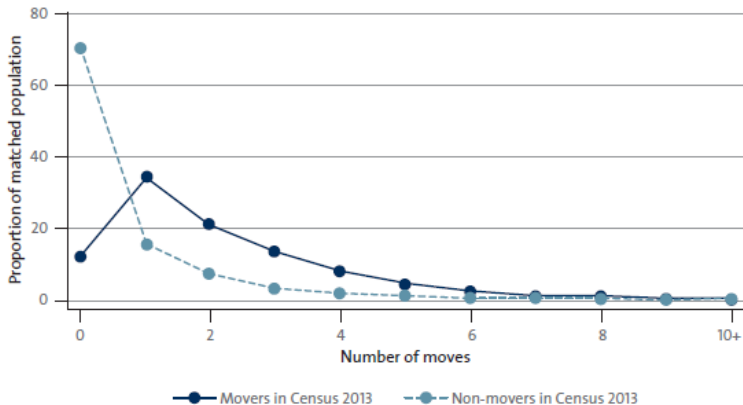
Source: Matched population between Census 2013 and the address table in the IDI. Number of moves is based on information from the address table.

5 years prior to Census 2013 date

Populations of interest

- **Reference period**: 01 August 2013 to 31 July 2016
- The following exclusions are applied:
  - Death records during the reference period (DIA; MOH data).
  - Non-resident and non-citizens (MBIE immigration data).
  - Spent $< 50\%$ of time in NZ during reference period(Stats NZs international travel and migration data).
  - Born after the start of the reference period (DIA data).
  - Missing deprivation information.
- Final sample equates to 3,857,433 unique NZ residents who lived through the entire reference period for our analysis.

Defining residential movement groups
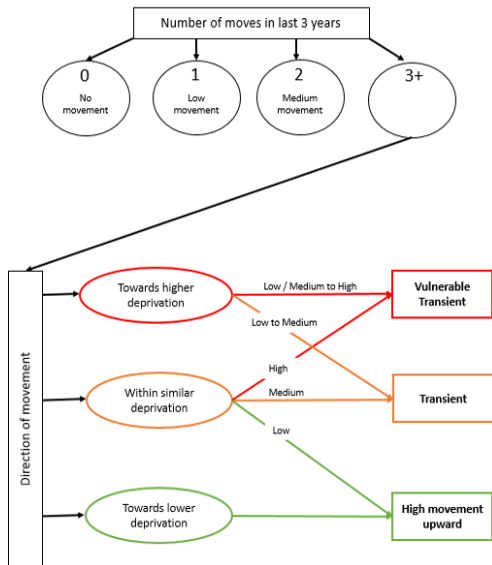
Size of key population groups

Population subgroups		Proportion of population sample
Nm	Non-movers	70.2%
Lm	Low movement	16.9%
Mm	Medium movement	7.3%
HmU	High movement (upward)	0.3%
T	Transient	1.3%
VT	Vulnerable transient	4.0%
Population sample size		3,857,433

Duration of stay- Transients and vulnerable transients

Number of times lived at an address ≤ 180 days	T. Transient	VT. Vulnerable transient
None	22.0%	15.0%
1	43.9%	34.6%
2	24.1%	25.2%
3	6.7%	11.8%
4 to 6	3.1%	10.9%
7 or more	0.2%	2.5%

Drivers of transience and vulnerable transience

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- The datasets used to construct binary indicators as well as intensity of independent variables are:
  - **Personal details data** (demographic information);
  - **DIA** life events (marriage and divorce);
  - **MSD**- WFF, Benefit dynamics, CYF, YST;
  - **Housing NZ**- Social housing receipt;
  - **MOJ**- Court charges and convictions;
  - **MOH**- PRIMHD, NNPAC, NMDS.

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- **Justice**: Binary indicator for court charges and Number of convictions.
- **Health**:
  - Binary indicator of mental health referrals and Number of events.
  - Binary indicator of emergency department (ED) admission and Number of days with ED visits.
  - Binary indicator of acute admissions and Number of admissions.

Logistic regressions

- Model 1: Adults (aged 20 and over as of August 1, 2008)

$$\log\left(\frac{P(VT)}{1-P(VT)}\right) =$$

$$\alpha_a \; + \; X\beta_a + \delta_{1a}.Benefit + \; \theta_{1a}.(Benefit \times number\ weeks)$$
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$$+ \; \delta_{3a}.CourtCharges \; + \; \theta_{3a}.(CourtCharges \times number\ convictions)$$
$$+ \; \delta_{4a}.WFF \; + \; \theta_{4a}.(WFF \times number\ months)$$
$$+ \; \delta_{5a}.Marriage \; + \; \delta_{6a}.Divorce$$
$$+ \; \delta_{7a}.MentalHealth \; + \; \theta_{5a}.(MentalHealth \times number\ events)$$
$$+ \; \delta_{8a}.EDvisit \; + \; \theta_{6a}.(EDvisit \times number\ days)$$
$$+ \; \delta_{9a}.AcuteAdmission \; + \; \theta_{7a}.(AcuteAdmission \times number\ admissions)$$

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- Model 3: Child regression (aged under 15) is similar to youth regression, but excludes YST and court charges.

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- Note focus on both indicator and intensity variables.

Regression analysis: Results for belonging in the VT group

Characteristics	Odds ratios (Robust standard errors)		
	Adults	Youth	Child
Demographic			
Female	1.246*** (0.011)	1.857*** (0.029)	1.693*** (0.028)
Age	0.970*** (0.000)	0.412*** (0.078)	0.695*** (0.008)
Age²	1.000*** (0.000)	1.017*** (0.004)	1.022*** (0.000)
Māori	2.209*** (0.025)	1.674*** (0.032)	1.965*** (0.042)
Pasifika	1.893*** (0.029)	1.247*** (0.031)	1.332*** (0.038)
Asian	0.988 (0.026)	0.706*** (0.030)	0.568*** (0.027)
MELAA	1.526*** (0.024)	1.250*** (0.031)	1.406*** (0.040)
Other ethnicity	1.631*** (0.022)	1.368*** (0.036)	1.452*** (0.052)
Benefits and social services			
Benefit	2.671*** (0.038)	2.658*** (0.053)	2.906*** (0.073)
Benefit * number of weeks	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)
CYF	-	1.395*** (0.137)	2.387*** (0.125)
CYF * number of events	-	0.983*** (0.022)	1.032*** (0.006)
YST	-	1.186*** (0.041)	-
YST * number of weeks	-	1.000*** (0.000)	-
Housing			
Social housing (SH)	2.221*** (0.052)	1.818*** (0.066)	2.448*** (0.096)
SH * number of months	0.968*** (0.001)	0.979*** (0.001)	0.976*** (0.001)
Justice			
Court charges	1.700*** (0.023)	1.560*** (0.030)	
Court Charges * number of convictions	1.030*** (0.002)	1.032*** (0.032)	-
Family			
WFF	2.049*** (0.053)	-	-
WFF * number of months	0.999*** (0.000)	-	-
Marriage / civil union	1.004 (0.020)	-	-
Divorce	1.226*** (0.033)	-	-
Health			
Mental Health	1.700*** (0.023)	1.431*** (0.034)	1.923*** (0.060)
Mental Health * number of events	1.027*** (0.002)	1.029*** (0.004)	1.066*** (0.010)
ED visit	1.669*** (0.021)	1.618*** (0.032)	1.486*** (0.033)
ED visit * number of days	1.046*** (0.003)	1.075*** (0.005)	1.102*** (0.006)
Acute admission	1.174*** (0.015)	1.111*** (0.025)	1.136*** (0.031)
Acute admission * number of admissions	0.970*** (0.004)	0.938*** (0.008)	0.941*** (0.011)
Number of observations	2,472,243	264,003	405,663
Pseudo R²	0.241	0.207	0.230

Key findings I

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☞ The more court charges incurred in the pre-reference period, the greater the likelihood of being VT in the reference period.
  - The likelihood increases further with each additional charge that results in a conviction.

☞ Having a divorce is associated with a 22.6% increase in likelihood of being VT.

Key findings II

☞ Having a divorce is associated with a 22.6% increase in likelihood of being VT.

☞ Having a health event in the pre-reference period is associated with a large increase in likelihood of being VT in the reference period.

- For children, having a mental health event is associated with a 92.3% increased likelihood of being VT.
- Similar patterns for emergency visits and acute admissions.

Conclusion

Scope for future research

Future research could delve into a number of avenues, including:

- Understanding the welfare impacts for individuals and their families after a period of being (vulnerable) transience, with a special focus on children and youth.
- Evaluate public policies that are targetted at the transient population.

Thank you very much for your time.

Full report is available at ▸ Superu's website .

May also e-mail gail.pacheco@aut.ac.nz