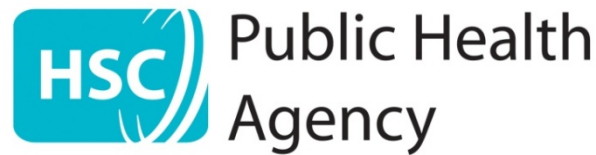


Multiple address changes in Northern Ireland (NI): Who moves most often?



Improving Your Health and Wellbeing



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Background & Rationale

- Analysis of internal migration based on the Northern Ireland Longitudinal Study 2001-2007
 - A c28% sample of the NI population (based on 104/365 birthdates)
 - data on individuals and households collected by the 2001 Census;
 - information on post-census moves from health card registrations (2001-2007);
 - information on residents of 890 SOAs in NI – built from OAs – c1,800-2,500 residents;
 - in total, c500,000 NILS members
 - 76,741 people (with 2001 NI Census record) who moved between 890 SOAs, within NI, between 2001 & 2007

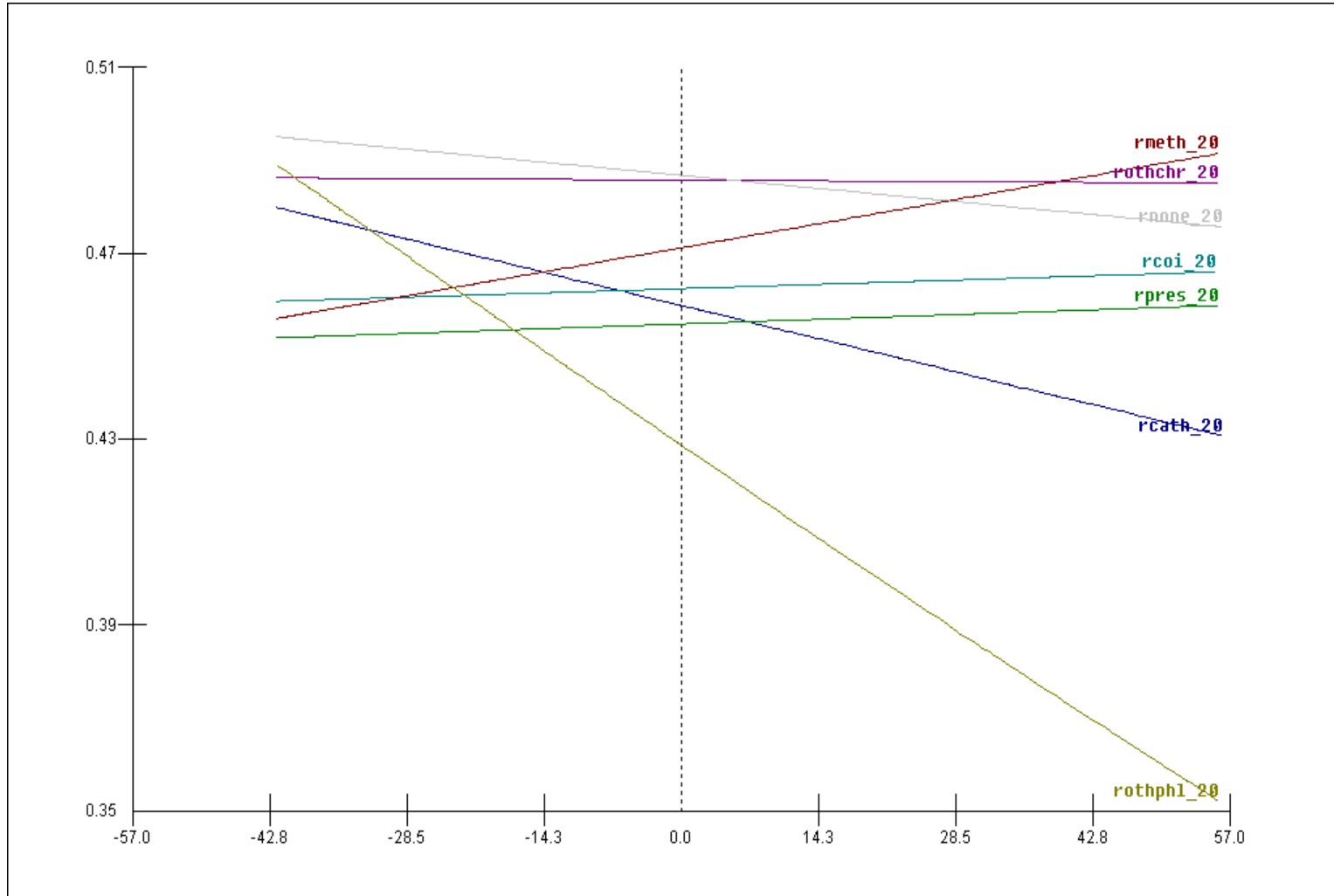
Background & Rationale

- The project
 - Residential segregation
 - moving apart or moving together?
 - understanding migration patterns – which areas are gaining and losing population through migration after the 2001 Census?
 - All part of wider project
 - who moves, how far, from/to where, and what influences moves
 - exploring how far internal migration in NI sifts the population with regard to residential segregation (community background & socio-economic deprivation)
- Analysis based so far only on ‘first moves’ – origins/destinations

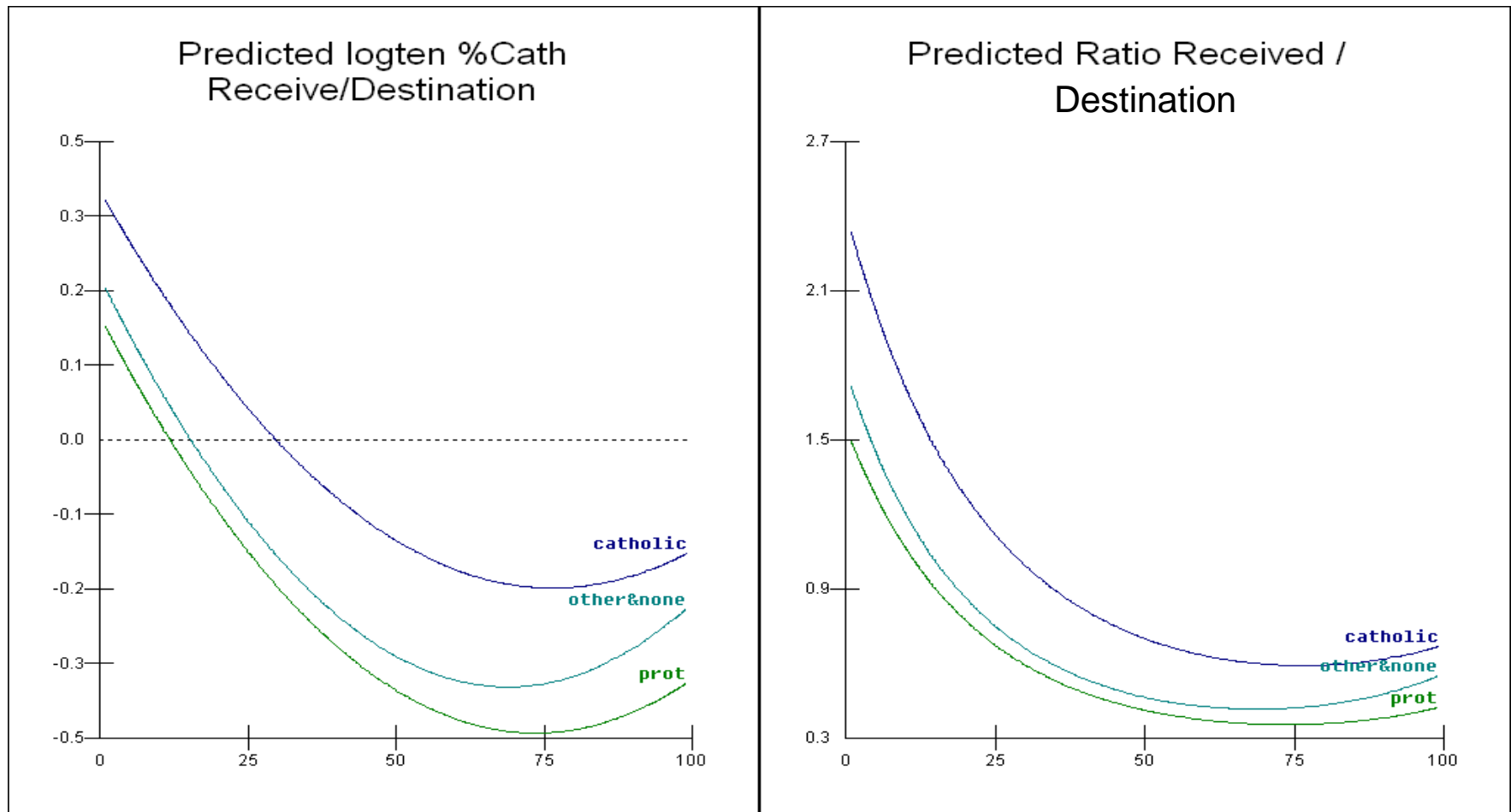
The story so far...

- Main findings
 - Most people do not move
 - Most people do not move far
 - Moves neither increase nor decrease residential and other social segregation
 - Significantly longer moves and more moves are needed to resort the population
- 1970s and 1980s saw large changes in the geography of population in NI
- Early 2000s – and from 1991? – more stable
- Two different population states?

Direction of moves by individual and SOA religion



Direction of moves by individual and SOA religion



	Mean	Median	Number
Gender			
Male	9.9	3.6	46115
Female	10.1	3.5	46002
Community background			
Catholic	9.4	3.4	31088
Protestant & other Christian	9.9	3.8	43909
None	11.9	3.8	345
Other	10.7	3.9	1399
Age category			
25 to <35	11.3	4.0	37746
35 to <45	8.9	3.4	24934
45 to <55	9.1	3.4	13891
55 <65	9.7	3.2	9194
65 <75	8.7	2.9	6352
Limiting long-term illness			
Yes	8.4	2.9	16579
No	10.1	3.8	60162
Socio-economic status			
Professional	12.6	4.6	22874
Intermediate	10.3	3.9	9433
Self-employed	9.2	4.3	7019
Lower supervisor	8.7	3.3	7222
Routine	7.5	2.8	24506
Not working	7.5	2.5	5033
Students	16.5	4.4	449
Education			
No education	7.6	2.9	30112
Educated	11.0	4.1	46424
Tenure			
Owner occupier	10.2	4.1	55983
Social rented	6.2	1.7	12634
Private rented	11.8	3.9	7556

Distances moved (km) by individual category

Developing the story/analysis (Modelling multiple moves)

- But the analysis so far ignores multi-movers – these might be the ones who may actually reshape the population in the longer term – a positive?
- Mobility may be positive – mixing the population
- But excess mobility may also have negatives – anomie, communal disruption, rootlessness

Developing the story/analysis (Modelling multiple moves)

- This leads to the following questions.....
 - Who moves most frequently?
 - How often do migrants change address?
 - With which areas are the most frequent movers associated?
 - What are the likely future levels of movement in NI given estimates/speculation about social trends?

Developing the story/analysis (Modelling multiple moves)

- Approach
 - Descriptive analysis
 - MLM
- Relatively simple hierarchical data structure
 - individuals (level-1) nested within 890 SOAs (level-2)
- Properly handle spatial clustered data
- Get purchase on within-area and between-area variability
- Precision weighted estimation
- Individual variables: sex, religion, marital status, SES, age, limiting long-term illness, housing tenure
 - can include as overall main effects (as here)
 - allow different, differentials between SOAs - complex between-area random variation (*done but not presented here today*)
- Ecological level-2 variables: %Catholic, deprivation score

Descriptive analysis: individual characteristics

		No moves	One move	Two moves	Three and more moves
Limiting long-term illness	No	73.49	19.78	4.80	1.93
	Yes	69.66	22.80	5.70	1.84
Education level	No	74.66	19.48	4.30	1.56
	Yes	69.65	22.81	5.70	1.84
Community background	Catholic	69.84	22.76	5.63	1.77
	Protestant	69.73	22.74	5.66	1.88
	Other/none	63.84	25.60	8.23	2.33
Age category	25-34	44.55	37.70	12.89	4.86
	35-44	63.67	27.39	6.65	2.29
	45-54	74.59	20.12	4.02	1.27
	55-64	79.02	17.34	2.91	0.73
	65-74	80.77	16.17	2.50	0.55
Tenure	Owner occupier	71.81	21.99	4.94	1.26
	Social rent	67.39	23.31	6.45	2.85
	Private rent	46.68	32.17	14.03	7.11
Marital status	Married	73.84	20.69	4.30	1.17
	Single	60.15	27.88	8.90	3.08
	Remarried	66.72	24.39	6.83	2.06
	Separated	57.19	28.95	9.45	4.42
	Divorced	60.84	27.30	8.22	3.64
	Widowed	77.87	17.58	3.57	0.97

Descriptive analysis: area characteristics

	No moves		One move		Two moves		Three moves or more	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Density	19.70	9.88	22.72	14.61	24.42	16.59	25.46	18.60
% Catholic	42.29	35.36	42.99	36.20	42.37	35.14	42.01	35.36
MDM	20.99	17.29	22.92	18.64	23.57	19.24	24.93	20.71
% LLTI	20.27	19.66	20.80	20.19	20.96	20.39	21.39	20.88
Mean dist			9.25	3.48	11.65	4.00	13.13	4.12



Multi-level model results

- Several outcome variables
 - 1 versus 2+ moves
 - 1,2 versus 3+ moves
- Specified as series of binary outcomes because of complexity of multinomial models
- Can give a picture of the factors that shape high mobility (multiple moves)

Random Intercepts ML Models: Comparing individual characteristics

	Prob. 1 Vs. 2+ moves	Prob. 1&2 Vs. 3+ moves
Base: 25-34, Catholic, Female, not educated, owner occ, routine, married	0.27	0.07
+ 35-44	0.19	0.04
+45-54	0.15	0.03
+ 55-64	0.12	0.02
+ 65-74	0.11	0.02
+ Protestant	0.29	0.08
+ None and Other Com. Background	0.30	0.06 NS
+ Male	0.25	0.06
+ Educated	0.26	0.06
+ Long-term Illness	0.31	0.09
+ Rented	0.32	0.10
+ Private rented	0.43	0.16
+ Professional	0.27 NS	0.06
+ Intermediate	0.28 NS	0.07 NS
+ Self employed	0.25	0.06
+ Lower	0.26 NS	0.07 NS
+ Not working	0.29	0.08
+ Student	0.28 NS	0.08 NS
+ Single	0.30	0.08
+ Remarried	0.36	0.10
+ Separated	0.35	0.11
+ Divorced	0.36	0.10
+ Widowed	0.33	0.09
Between Level-2 SOA Variation	0.025	0.094

Model Results

- Effects for age are large
- Marital status has large effects
- Tenure makes a big difference too
- There remains variation between SOAs once taking account of individual characteristics but this is small when looking at 1,2 versus 3+ moves
- SES, community background, education, and limiting long-term illness have small effects

Discussion/Conclusion

- The NI geography of the distribution of the NI population did not change much between 2001 and 2007
- The inclusion of movers who move more than once will probably not substantially alter the conclusions of earlier analysis over this time period (because moves >1 are a small minority); the NI population seems fairly stable

Discussion/Conclusion

- The population has not become more segregated or desegregated 2001-2007
- It is probable, on one hand, that migration will remain low for the foreseeable future as the population is
 - Ageing
 - Has increasing levels of owner occupation
- However, some aspects of the composition of the population suggest greater mobility in the future

Discussion/Conclusion

- However, some aspects of the composition of the population suggest greater mobility in the future
 - Partnership breakup
 - Growing non-traditional communities (eg growth of others/nones – often non-NI immigrants)
- Unless there is disruption, it is probable that the rigidities of NI society will not lead to significantly greater/less residential segregation

Discussion/Conclusion

- This can fit with the historical idea of the 'segregation ratchet' with large increases followed by stability or slight declines
- The NI population might exist in two states
 - Dynamic as in the 1970s/1980s – violence, deindustrialisation, counterurbanisation, new public housing = more segregation
 - Static as in 1991-2007 – 'normal processes', normal migration

Discussion/Conclusion

- It takes a lot to increase segregation
- And also takes a lot to decrease segregation
- At the minute, the population is not being redistributed enough and over long enough distances to lead to de-segregation
- Future mobility trends are in the balance, but social patterns may act to dampen mobility

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