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Personality Traits, Risk Aversion and Endowment Effects on Residential Mobility Outcomes

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Abstract: The psychology literature offers substantial evidence suggesting that personality traits are associated with different residential mobility patterns. Our study extends this previous work by examining whether the effects of personality traits on mobility are attenuated by risk aversion and endowment effects. We also investigate whether personality traits exert an indirect influence on mobility through risk aversion and endowment effects. We draw on data from the Household, Income and Labour Dynamics in Australia Survey over the period 2014-2018. We find that openness and extraversion have positive associations with residential mobility, but risk aversion and endowment effects reduce the likelihood of moving. Moreover, risk aversion and endowment effects act as mediators through which openness and extraversion exert an indirect influence on residential mobility. These mediators account for 35% and 30% of the total effect on mobility exerted by openness and extraversion respectively. The types of individual differences that matter for residential mobility also vary by sex and age, reflecting the influence of life course contexts on residential mobility outcomes.

Key words: personality traits, risk preferences, risk aversion, endowment, residential mobility, migration, longitudinal data

1. Introduction

There is an extensive literature in economics and demography which explain migration in terms of the returns expected from moving compared to staying (Kan, 1999; Khwaja, 2002). Sjaastad (1962) is a classic study where individuals perform what is, in effect, a cost-benefit calculation in relation to their human capital in different locations so that moves are the process whereby the market tends to equilibrium as people locate to places where they can be most productively utilized.

However, we know that migration is more complicated than a decision only about its economic returns. For instance, social and family considerations play a significant role in the decision of where to move (Korpi and Clark, 2015; Clark, 2017). Furthermore, traditional models typically do not account for the fact that individuals in similar economic circumstances may make vastly different decisions on migration. Campbell (2019) notes that residential moves present uncertainty, which is a subjective cost that is evaluated differently due to the influence of individual differences such as personality traits.

The international psychology literature has presented substantial evidence suggesting that personality traits are associated with the propensity to move. Mobility has been found to be positively associated with openness (Jokela, 2009; Ciani and Capiluppi, 2011; Jokela, 2014; Campbell, 2019), extraversion (Silventoinen et al., 2007; Ciani and Capiluppi, 2011; Campbell, 2019) and neuroticism (Silventoinen et al., 2007; Jokela, 2014). On the other hand, it is negatively linked to agreeableness (Jokela, 2009; Jokela, 2014). Jokela (2021), using pooled longitudinal data from the United Kingdom, Germany and Australia, showed that different personality traits were linked to different types of residential moves. For instance, openness was strongly associated with moves for employment and education, but lower emotional stability was linked to moves for neighbourhood, housing and family reasons.

In this study, we extend previous work on the role of personality traits in influencing mobility decisions by examining whether the influence of personality traits on mobility is attenuated by risk aversion and endowment effects. We also investigate whether personality traits exert an indirect effect on migration through risk aversion and endowment effects.

Our study makes some important contributions to the psychology literature. First, although the psychology literature is replete with studies on the measurement of risk preferences (Hertwig et al., 2019), correlates of financial risk tolerance (Fisher and Yao, 2017), and risky behaviours (Weber et al., 2002), there has been much less attention on the links between risk preferences and residential mobility, a gap that our study seeks to fill. The relationship between personality traits and risk preferences is also unclear. Some studies show that a preference for risk is linked to personality traits (Lauriola and Levin, 2001; Jagelka, 2020; Rustichini et al., 2012). Yet another group of studies find no associations between personality traits and risk preferences (Dohmen et al., 2010; Piovesan and Willadsen, 2021). Using cross-sectional data, Jaeger et al. (2010) and Clark and Lisowski (2017) generated empirical estimates that showed negative links between risk aversion and labour market migration, but neither study included personality traits. We extend earlier work by implementing panel data models to shed light on the extent to which personality traits are still linked to the propensity to move after isolating the potentially confounding effects of risk preferences (and endowment effects).

Second, by testing for the links between endowment effects and the mobility decision, we make another contribution by shifting away from a traditional economic approach towards an economic psychology framework for understanding migration processes.applying We consider what happens when individuals get accustomed to their locations, thus developing an endowment effect which means that they will want a compensation to change locations, to compensate for the perceived loss (Kahnemann, 1992; 2011). As Kahneman notes, such

endowment effects are especially likely in goods that are not regularly traded – like houses. Thus, we posit that the owned home serves a reference point and because of loss aversion, the pain of giving up one's home is likely greater than the pleasure of securing an equally good home in a new location. We also propose that the longer one lives at a residential location, the greater the place attachment and hence the greater pain of giving up one's current place to move to a new destination (Morrison and Clark, 2016; Yan and Bao, 2018).

2. Data and Methods

The data we use come from the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Watson and Wooden, 2020). It is a yearly longitudinal survey begun in 2001 with about 7,600 households and 19,900 adults and children. The survey has detailed data on socio-demographic, economic and mobility characteristics, and a wide range of attitudinal questions including attitudes towards personality traits and risk preferences.

We apply the Big-Five personality traits model, the most common approach for defining personality traits to date, which classify individual differences in personality into five broad domains: extraversion, agreeableness, conscientiousness, emotional stability (or its inverse, neuroticism) and openness to experience (Saucier, 1994; Losoncz, 2009). The HILDA Survey respondents are questioned regarding their personality traits using a 36-item instrument, which is then used to derive personality scales for each trait. Each scale ranges between 1 and 7, with 1 indicating that a trait does not describe the respondent at all and 7 indicating that the trait describes the respondent very well. These variables are available in the 2005, 2009, 2013 and 2017 waves of the HILDA Survey.

Respondents are asked to rate their willingness to take risks on a scale of 0 to 10, with 10 representing greatest willingness to take risks. This is a widely used stated risk preference measure shown in psychological research to have significant predictive validity for economic

outcomes (Mata et al., 2018). As in Clark and Lisowski (2017), we reversed the responses to create a 0–10 index of risk aversion, with 0 indicating minimal risk aversion and 10 indicating maximal risk aversion. The risk variable is available in waves 14 and 18 of the Survey.

Endowment is proxied by a housing tenure variable as well as length of time at one's address. We hypothesise that endowment effects are greater for owners than renters and these effects grow stronger the longer one stays at one address (Clark & Lisowski, 2017).

While proxies for endowment effects can be sourced from every wave of the survey, information on personality traits is only available every four years from 2005 onwards i.e. 2005, 2009, 2013 and 2017. The risk preference variable is also less frequent, being available in 2014 and 2018 only. The availability of personality traits and risk preference information become the binding constraints on our sample timeframe. Thus, we use data on mobility decision in every wave between 2014 and 2018. Endowment effects are drawn from each wave within 2014 and 2018, and thus treated as time-varying variables. We draw in personality traits from 2013 and risk preferences from 2014, and therefore treat these as time-invariant characteristics. The results of our forthcoming models remain stable when switching personality to 2017 and risk aversion to 2018 values, indicating that treating these variables as time-invariant is an acceptable compromise, given data limitations.

We define migrators as those who have changed labour markets across a distance of at least 5km between waves t and t+1 during the analysis timeframe 2014-2018. By restricting our focus to moves to labour market, i.e moves of a substantial distance, we focus on those who leave their local community or neighbourhood and break local connections. Stayers remain in the same locality, either in the same dwelling or within the same labour market, which maintains local connections and support systems. We observe labour markets from Statistical Areas Level 4 (SA4) in the HILDA survey. SA4 regions have been specifically designed by

the Australian Bureau of Statistics (2016) for their national Labour Force Survey data. The design of SA4s consider the locations of both labour supply (where people live) and labour demand (where people work). The additional 5km distance restriction serves to meaningfully exclude those who cross SA4 boundaries without leaving their local neighbourhoods. 93.8% of SA4 moves in our sample were above 5km.

We limit our universe to individuals in a position to make decisions about residential mobility: that is independent adults aged 18 to 65 excluding full-time students. Overall, there will be a maximum of four mobility decisions captured for each individual for the years 2014-15, 2015-16, 2016-17 and 2017-18. If the individual was only interviewed in three pairs of adjacent years, then only three mobility decisions will be captured. All available mobility decisions (whether to move or to stay) are pooled across all respondents over the period 2014-2018. There are 10,248 individuals who provided the necessary responses, resulting in a modelling sample of 35,341 repeated person-observations for analysis.

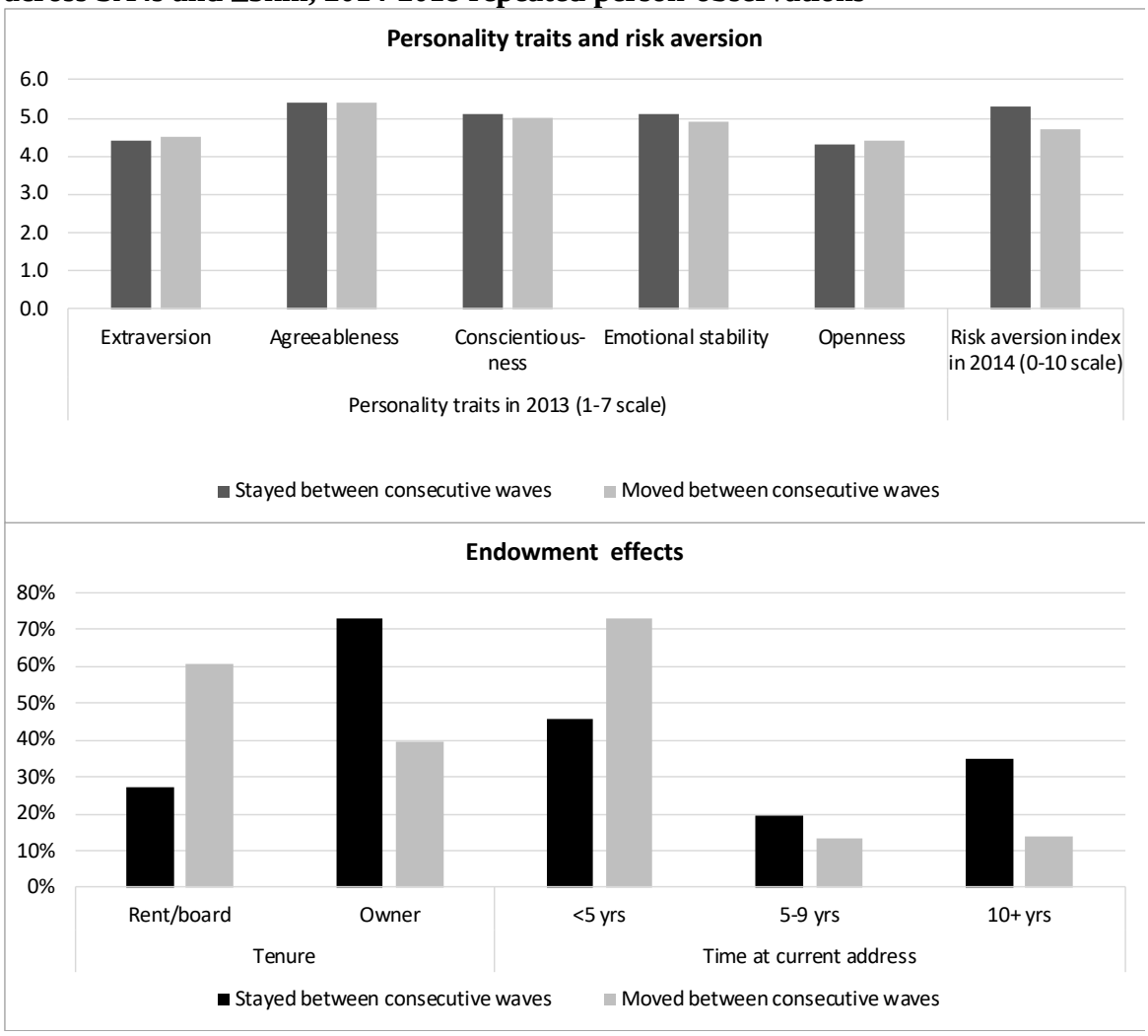
We construct two modelling exercises. We first model the relationship between personality traits and the likelihood of moving, then add measures of risk and endowment using a random effects logit model specification. This exercise allows us to examine the additive role of risk preferences and endowment effects on the mobility decision. Because it is possible that risk and endowment are not independent of personality traits and are in fact mediators in the relationship between personality traits and residential mobility, in a second exercise we investigate whether this possibility through mediation analysis. In both exercises, we include covariates for sociodemographic characteristics measures that are likely to influence residential mobility, as well as state and time fixed-effects.

3. Results

Table 1 presents some key descriptive statistics. The mean personality trait scores do not vary

much by mobility decision. However, the mean risk aversion index is lower for movers than stayers . Endowment effects are also weaker for those who move, with the share of homeownership and lengthy durations at the current residence much lower among movers than stayers. Supplementary Table S1 (available online) reports the mean values of the covariates by decision to stay versus move.

Table 1. Average measures of individual differences, by decisions to stay versus move across SA4s and ≥5km, 2014-2018 repeated person-observations



Source: Authors' calculations using waves 14-18 of HILDA.

Table 2 reports the odds ratios from the random effects logit models for the full sample (columns 1-2), as well as for subsamples broken down by sex (columns 3-4) and age (columns 5-7) .

Turning first to the full sample, the results suggest that openness to experience and extraversion are strongly associated with higher residential mobility agreeableness, conscientiousness, and emotional stability have not effect on mobility. Adjusting for risk aversion, endowment and covariates does not substantially change the association between the traits of openness and extraversion and mobility. However, the size of the openness and extraversion effects do fall slightly when risk and endowment are accounted for.

Risk aversion is highly significant across all models. The odds ratios attached to the risk aversion index are around 0.9, indicating that for each unit increase in the risk aversion index in 2014, the odds of moving falls by ten percentage points and vice versa. While not reported here, we experimented with replacing the risk aversion index with threshold measure, which indicates whether a respondent has an index value of 6 or greater. We find that the main associations between risk aversion and the mobility decision remain largely unchanged regardless of whether the index or threshold is applied.

Homeownership is linked to reduced odds of moving. Duration effects play an important role too, with the odds of a move declining as the time spent at one's current address lengthens. The negative links that risk aversion and endowment effects have with the likelihood of migration reduce slightly in magnitude when covariates are added. Nonetheless, both types of individual differences continue to exert a significant negative link with mobility in the full model.

We also estimate the models with covariates for subsamples broken down by sex and age respectively. We observe men's mobility decisions are more sensitive to personality traits and endowment effects than women's. For both men and women, risk aversion is linked to lower mobility, though the risk aversion variable has a higher statistical significance for women. There are further interesting observations by age groups, which can be categorised into 'mature-age' (50-65 years), 'middle-age' (36-49 years) and 'young' (18-35 years). Owner-

occupation is an important negative influence on residential mobility for all age groups. However, the range of individual differences affecting mobility widens as age increases. For the young, owner-occupation stands out as being a particularly important driver of mobility decisions. For middle-age groups, owner-occupation remains important, but so is risk aversion. Mature-age groups are influenced by the widest range of individual differences encompassing owner-occupation, personality traits, risk aversion and a lengthy residence at one's residence.

Table 2. Odds ratios of moving across SA4s and ≥5km between consecutive waves, 2014-2018 random effects logit

	All		Males	Females	Aged 18-35	Aged 36-49	Aged 50-65
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Extraversion	1.113***	1.063**	1.138***	1.010	1.084**	0.968	1.173***
	(0.030)	(0.029)	(0.049)	(0.036)	(0.043)	(0.049)	(0.068)
Agreeableness	0.974	0.988	0.980	1.000	0.996	1.078	0.865**
	(0.035)	(0.035)	(0.051)	(0.049)	(0.048)	(0.080)	(0.062)
Conscientiousness	0.997	1.012	1.014	1.013	0.959	1.028	1.068
	(0.031)	(0.031)	(0.045)	(0.042)	(0.041)	(0.060)	(0.071)
Emotional stability	0.970	0.968	0.924*	1.003	0.962	0.928	0.992
	(0.028)	(0.028)	(0.039)	(0.039)	(0.039)	(0.054)	(0.057)
Openness to experience	1.094***	1.063**	1.064	1.060	1.043	1.041	1.098
	(0.033)	(0.032)	(0.048)	(0.041)	(0.046)	(0.057)	(0.067)
Risk aversion index		0.964***	0.967*	0.961**	0.967*	0.940**	0.961*
		(0.013)	(0.018)	(0.018)	(0.019)	(0.024)	(0.023)
Tenure (ref. rent/board)							
Owner		0.357***	0.347***	0.367***	0.345***	0.315***	0.381***
		(0.023)	(0.033)	(0.032)	(0.032)	(0.040)	(0.052)
Time at current address (ref. <5 yrs)							
5-9 yrs		0.808***	0.807*	0.810*	0.886	0.757**	0.704**
		(0.066)	(0.097)	(0.091)	(0.117)	(0.104)	(0.111)
10+ yrs		0.610***	0.596***	0.623***	0.815	0.538***	0.486***
		(0.053)	(0.077)	(0.073)	(0.120)	(0.088)	(0.069)
Other covariates included	✓	✓	✓	✓	✓	✓	✓
N observations	38,749	35,341	16,424	18,917	11,035	10,847	13,371
N clusters	11,163	10,248	4,753	5,495	3,776	3,491	4,084
McFadden Pseudo-R^2	.061	0.089	.098	.084	.057	.071	.069

Source: Authors' calculations using waves 14-18 of HILDA.

Notes: * $p < .1$, ** $p < .05$, *** $p < .01$. Standard errors in parentheses and robust to individual clusters. The odds ratios for the covariates are reported in full within Table S2 in the online supplementary material.

Because the effect of personality traits is weakened slightly with the inclusion of risk aversion and endowment effects, we implement mediation analysis to test whether this is because the relationship between personality traits and residential mobility are mediated by risk and endowment. In other words, are the effects of personality traits channelled through a direct effect on mobility as well as indirect effects through risk and endowment?

Failure to account for this indirect effect implies two issues with our presented conclusions. First, though we found agreeableness, conscientiousness, and emotional stability to have no direct effect on mobility, they may exert an indirect influence on mobility through risk and endowment. Second, we may be underestimating the true total effect of extraversion and openness on mobility, if there is an indirect effect through risk and endowment, in addition to the established direct effect.

The KHB-method developed by Breen et al. (2013) is particularly suitable for our study because it decomposes the total effect of a variable into direct and indirect effects regardless of the number of mediating variables, supports both discrete and continuous variables, and works in the context of non-linear models, including random effects logit.[1]

Table 3 presents the decomposition results. The direct effects of each personality variable are the same as in Table 2 column 2, highlighting that the KHB-method allows us to fully replicate our desired modelling specification. Extraversion and openness have significant total, direct and indirect effects on residential mobility, as mediated by risk and endowment. However, the other personality traits are insignificant in their totality, directly and indirectly.

Importantly, the results suggest that the positive effect of extraversion and openness on residential mobility have been underestimated; in addition to their direct effect, there is a

[1] Further details on the method are presented in the online supplementary material.

statistically significant indirect effect mediated through risk and endowment. The mediators combined account for 35% and 30% of the total effect of extraversion and openness respectively on mobility.

Focusing on the components of the indirect effects, we find that risk aversion is the most important contributor, accounting for 44% and 55% of the indirect effect of extraversion and openness respectively. This is followed by owner-occupation, which accounts for around one-third of the indirect effect through the two personality traits affect mobility.

Table 3. Decomposition of the total, direct and indirect effects of personality traits on residential mobility using the KHB method, 2014-2018

	Extraversion	Agreeableness	Conscientiousness	Emotional stability	Openness
Odds ratio					
Total effect	1.098***	0.986	1.002	0.953*	1.091***
Direct effect	1.063**	0.988	1.012	0.968	1.063**
Indirect effect	1.033**	0.998	0.990	0.984	1.026**
Indirect effect as a percentage of total effect	34.5%				29.5%
Contribution of each mediator to the indirect effect					
Risk aversion index	44.0%				55.2%
Owner	32.9%				35.9%
Time at current address 5-9 yrs	2.4%				2.4%
Time at current address 10+ yrs	20.8%				6.5%

Source: Authors' calculations using waves 14-18 of HILDA.

Notes: * $p < .1$, ** $p < .05$, *** $p < .01$. The percentage contribution estimates are not reported for agreeableness, conscientiousness, and emotional stability as the odds ratios for the indirect effects of these personality traits are statistically insignificant.

4. Discussion

Our study offers findings that contribute new evidence to the existing literature linking personality traits to residential mobility decisions. First, we find that openness and extraversion have positive associations with residential mobility. The results provide support for previous studies' findings that openness and extraversion are key personality traits associated with residential mobility (Jokela, 2009, 2021; Campbell, 2019). High openness to experience may reflect greater curiosity and willingness to explore new locations (Silvia and Christensen, 2020), and extroverted individuals may have increased probabilities of planning to move due to their high energy and assertiveness (Jokela, 2021).

Second, we find that key themes from the field of economic psychology are highly relevant to mobility decisions. Specifically, high risk aversion and endowment effects reduce the likelihood of moving. Thus, two individuals with the same economic circumstances can be differentially risk-averse and therefore have different propensities to migrate. Also, owner-occupation generates endowment, as does longer durations of residence at one's current address. As posited in economic psychology, this encourages individuals to favour the status quo, which equates to a lower likelihood of moving out of one's home or local area.

These findings present important implications for models that attempt to explain migration. We show that migration cannot be explained simply in terms of the expected returns from moving compared to staying as assumed in traditional economic models. Indeed, individual differences and circumstances that manifest through differences in personality traits, appetites for risk and endowment effects are important drivers of residential mobility that are not often considered in traditional migration models.

Another key finding is that the relationship between personality traits and residential mobility is complicated by risk aversion and endowment effects. Our analysis shows that risk aversion

and endowment effects act as mediators. Together, they account for 35% and 30% of the total effect on mobility exerted by openness and extraversion respectively. These findings imply that models that do not account for the mediating roles of risk aversion and endowment effects will under-estimate the effects of personality traits on the decision to move because indirect effects have not been accounted for.

The types of individual differences that matter for residential mobility decisions vary by sex and age, potentially reflecting the influence of life course contexts on residential mobility as illustrated in studies such as Clark (2017). Importantly, the range of individual differences affecting mobility widens as age increases. Within our sample, mature-age groups are influenced by the widest range of individual differences encompassing owner-occupation, personality traits, risk aversion and a lengthy duration at one's residence. This may indicate that an older person bears the accumulated impacts of exposure to life experiences that a younger person has not yet been exposed to. It implies that residential mobility models for the aged need to address more varied individual differences accumulated over the life course than models for the young.

From a policy perspective, because residential mobility decisions are often tied to reasons related to employment and housing (Jokela, 2021), our findings give rise to at least three implications for policies and programs that extend to labour and housing decisions.

First, policies and programs that encourage geographic labour mobility to promote efficient functioning of labour markets are likely to be less effective among population groups whose mobility decision are strongly influenced by risk aversion. For instance, policies that seek to increase female labour force participation through encouraging mobility will have to address the sensitivity that women's mobility manifests in response to risk aversion.

Second, housing policies that seek to improve mobility outcomes will have to address the strong influence of endowment effects through the owner-occupied home for all age groups. Existing Australian policies that impose high transaction costs on moves, such as conveyance tax on property transfers, may be partially responsible for the strong endowment effects so there is scope for policies to be reformed to weaken these effects that act as barriers to moves.

Third, our findings lend strong support to the notion that older people prefer to age in place due to the strong negative link between duration at one's residence and the decision to move. Thus, policies that promote downsizing by older people will need to be matched by supply-side responses that facilitate downsizing into appropriate and affordable housing within an older person's local community. The findings also suggest that there is scope for exploring the role of *in situ* housing equity withdrawal to support financial wellbeing without requiring the older person to sell up and move.

Our study has some limitations that could be addressed in future analyses. There is significant scope to extend our analysis to moves for different reasons, across different distances and selectivity to particular locations. The institutional context that individuals reside in may amplify or mitigate against individual differences in personality traits, risk preferences and endowment effects. This can be investigated through a cross-country analysis of populations with different social, economic, and cultural settings, which give rise to different mobility trends.

Overall, our study contributes to a growing body of work on the links between personality traits, other individual differences and residential mobility. The predicted relationships between extraversion and migration, and openness and migration, are consistent with existing evidence. Our study fills an important gap in the literature by uncovering the effects of risk aversion and endowment effects, including their roles as mediators through which extraversion

and openness influence mobility indirectly. The mediation analysis is a promising means to illustrating the complex processes that that underpin any mobility decision because it shows that the relationship between personality traits and residential mobility is attenuated by multiple mediators.

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Personality Traits, Risk Aversion and Endowment Effects on Residential Mobility Outcomes: Online supplementary material

Table S1. Average measures of covariates, by decisions to stay versus move across SA4s and ≥5km between consecutive waves, 2014-2018 repeated person-observations

	All person-year observations	Stayed between consecutive waves	Moved between consecutive waves
Age	43.6	44.0	36.2
Sex			
Male	46.5%	46.3%	48.7%
Female	53.5%	53.7%	51.3%
Family status			
Couple w/o children	28.2%	28.2%	28.4%
Couple w/ children	43.6%	44.5%	28.3%
Single parent	5.9%	5.9%	5.7%
Lone person	13.1%	12.5%	24.3%
Other	9.0%	8.8%	13.4%
Marital status			
Other	27.6%	26.8%	41.8%
Cohabiting	16.6%	16.5%	19.7%
Legally married	55.8%	56.7%	38.6%
Country of birth			
Australia	79.7%	79.6%	81.4%
Main English speaking	8.8%	8.9%	7.1%
Other	11.4%	11.4%	11.5%
Educational attainment			
Less than high school completion	18.3%	18.5%	14.2%
Completed high school	13.9%	13.7%	17.3%
Other post-school qualification	36.1%	36.3%	32.2%
Bachelor's degree or higher	31.7%	31.5%	36.3%
Household equivalised income			
Lowest quintile	12.7%	12.6%	15.6%
Second quintile	16.6%	16.7%	16.4%
Middle quintile	20.6%	20.6%	19.2%
Fourth quintile	24.5%	24.5%	23.2%
Highest quintile	25.6%	25.6%	25.7%
Labour force status			
Employed	77.3%	77.5%	74.7%
Unemployed	3.3%	3.1%	6.3%
Not in the labour force	19.4%	19.4%	19.0%
Person-year observations	35,341	33,448	1,893

Source: Authors' calculations using waves 14-18 of HILDA.
Notes: 'Main English Speaking' countries are the UK, New Zealand, Canada, USA, Ireland, and South Africa.

Table S2. Odds ratios of moving across SA4s and ≥5km between consecutive waves, 2014-2018 random effects logit

	All (excl. risk and endowment)	All (incl. risk and endowment)	Males	Females	Aged 18-34	Aged 35-49	Aged 50-65
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Extraversion	1.113***	1.063**	1.138***	1.010	1.084**	0.968	1.173***
	(0.030)	(0.029)	(0.049)	(0.036)	(0.043)	(0.049)	(0.068)
Agreeableness	0.974	0.988	0.980	1.000	0.996	1.078	0.865**
	(0.035)	(0.035)	(0.051)	(0.049)	(0.048)	(0.080)	(0.062)
Conscientiousness	0.997	1.012	1.014	1.013	0.959	1.028	1.068
	(0.031)	(0.031)	(0.045)	(0.042)	(0.041)	(0.060)	(0.071)
Emotional stability	0.970	0.968	0.924*	1.003	0.962	0.928	0.992
	(0.028)	(0.028)	(0.039)	(0.039)	(0.039)	(0.054)	(0.057)
Openness	1.094***	1.063**	1.064	1.060	1.043	1.041	1.098
	(0.033)	(0.032)	(0.048)	(0.041)	(0.046)	(0.057)	(0.067)
Risk aversion index		0.964***	0.967*	0.961**	0.967*	0.940**	0.961*
		(0.013)	(0.018)	(0.018)	(0.019)	(0.024)	(0.023)
Tenure (ref. rent or pay board)							
Owner		0.357***	0.347***	0.367***	0.345***	0.315***	0.381***
		(0.023)	(0.033)	(0.032)	(0.032)	(0.040)	(0.052)
Time at current address (ref. <5 y)							
5–9 y		0.808***	0.807*	0.810*	0.886	0.757**	0.704**
		(0.066)	(0.097)	(0.091)	(0.117)	(0.104)	(0.111)
10+ y		0.610***	0.596***	0.623***	0.815	0.538***	0.486***
		(0.053)	(0.077)	(0.073)	(0.120)	(0.088)	(0.069)
Age	0.946***	0.934***	0.935***	0.933***			
	(0.017)	(0.016)	(0.024)	(0.023)			
Age squared	1.000	1.000**	1.000	1.000			
	(0.000)	(0.000)	(0.000)	(0.000)			
Sex (ref. male)							
Female	0.855**	0.892*			0.931	0.759**	1.020
	(0.053)	(0.055)			(0.080)	(0.098)	(0.131)
Family status (ref. couple without children)							
Couple with children	0.545***	0.633***	0.641***	0.626***	0.794*	0.651***	0.463***
	(0.042)	(0.049)	(0.074)	(0.067)	(0.097)	(0.102)	(0.075)
Single parent	1.304	1.280	1.197	1.525	1.464	1.286	1.206
	(0.326)	(0.342)	(0.607)	(0.490)	(0.515)	(0.846)	(0.775)
Lone person	2.763***	2.256***	1.558	2.821***	3.044***	2.080	1.641
	(0.647)	(0.561)	(0.642)	(0.887)	(0.948)	(1.286)	(1.046)

	All (excl. risk and endowment)	All (incl. risk and endowment)	Males	Females	Aged 18-34	Aged 35-49	Aged 50-65
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Other	1.142	1.680**	0.948	2.552***	2.279***	1.091	1.208
	(0.278)	(0.428)	(0.403)	(0.810)	(0.726)	(0.761)	(0.769)
Marital status (ref. other)							
Cohabiting	1.488*	1.354	0.930	1.683*	1.351	1.584	1.873
	(0.341)	(0.329)	(0.381)	(0.503)	(0.405)	(0.981)	(1.182)
Legally married	1.564*	1.790***	1.205	2.268***	1.505	1.981	1.956
	(0.370)	(0.448)	(0.503)	(0.710)	(0.477)	(1.231)	(1.237)
Country of birth (ref. Australia)							
Main English Speaking	1.066	0.980	0.963	0.989	1.028	0.738	1.063
	(0.115)	(0.104)	(0.143)	(0.149)	(0.203)	(0.149)	(0.173)
Other	1.246**	1.016	1.008	1.025	0.976	1.271	0.728*
	(0.110)	(0.090)	(0.133)	(0.123)	(0.133)	(0.196)	(0.137)
Educational attainment (ref. < high school completion)							
Completed high school	1.069	1.202*	1.231	1.167	1.302*	1.244	1.431
	(0.107)	(0.125)	(0.190)	(0.164)	(0.196)	(0.270)	(0.319)
Other post-school qualification	1.070	1.185*	1.274*	1.109	1.260	1.094	1.077
	(0.094)	(0.109)	(0.171)	(0.140)	(0.183)	(0.200)	(0.166)
Bachelor's degree or higher	1.399***	1.569***	1.828***	1.386**	1.887***	1.240	1.327
	(0.131)	(0.153)	(0.267)	(0.182)	(0.290)	(0.241)	(0.231)
Equivalised household income (ref. lowest quintile)							
Second quintile	0.990	1.028	1.031	1.032	1.044	0.875	0.999
	(0.093)	(0.104)	(0.166)	(0.135)	(0.148)	(0.176)	(0.211)
Middle quintile	0.965	1.108	1.077	1.152	1.191	0.758	1.175
	(0.092)	(0.112)	(0.170)	(0.152)	(0.167)	(0.157)	(0.237)
Fourth quintile	0.926	1.251**	1.316*	1.211	1.271	1.096	1.213
	(0.090)	(0.130)	(0.211)	(0.166)	(0.188)	(0.225)	(0.246)
Highest quintile	0.967	1.436***	1.454**	1.445**	1.598***	1.007	1.443*
	(0.099)	(0.156)	(0.241)	(0.212)	(0.247)	(0.215)	(0.308)
Labour force status (ref. employed)							
Unemployed	1.696***	1.565***	1.664***	1.488**	1.410**	1.757**	1.924**
	(0.202)	(0.195)	(0.293)	(0.272)	(0.228)	(0.454)	(0.550)
Not in the labour force	1.554***	1.527***	1.590***	1.507***	1.453***	1.354*	1.500***
	(0.120)	(0.123)	(0.231)	(0.150)	(0.177)	(0.233)	(0.214)
State (ref. New South Wales)							
Victoria	0.947	1.001	1.080	0.941	0.998	1.018	0.947

	All (excl. risk and endowment)	All (incl. risk and endowment)	Males	Females	Aged 18-34	Aged 35-49	Aged 50-65
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(0.069)	(0.073)	(0.117)	(0.094)	(0.102)	(0.146)	(0.158)
Queensland	1.180**	1.116	1.181	1.058	1.117	0.855	1.437**
	(0.089)	(0.084)	(0.129)	(0.110)	(0.120)	(0.132)	(0.212)
South Australia	0.743***	0.810*	0.858	0.776	0.643***	1.098	0.984
	(0.083)	(0.091)	(0.141)	(0.121)	(0.103)	(0.240)	(0.218)
Western Australia	0.971	0.992	1.023	0.955	1.001	1.121	0.861
	(0.102)	(0.105)	(0.156)	(0.141)	(0.150)	(0.228)	(0.188)
Tasmania	0.431***	0.526***	0.608	0.471***	0.387***	0.686	0.800
	(0.090)	(0.110)	(0.185)	(0.135)	(0.123)	(0.272)	(0.278)
Northern Territory	1.617**	0.943	0.997	0.885	1.043	1.289	
	(0.359)	(0.232)	(0.352)	(0.312)	(0.324)	(0.721)	
Australian Capital Territory	0.837	0.775	0.951	0.603*	0.708	0.727	1.124
	(0.156)	(0.142)	(0.234)	(0.169)	(0.168)	(0.325)	(0.450)
Year (ref. 2014)							
2015	1.037	1.063	1.134	1.004	0.954	1.273*	1.132
	(0.067)	(0.074)	(0.112)	(0.098)	(0.089)	(0.184)	(0.178)
2016	0.922	0.916	0.896	0.934	0.745***	1.060	1.210
	(0.062)	(0.066)	(0.092)	(0.093)	(0.073)	(0.161)	(0.186)
2017	0.975	1.018	1.036	1.005	0.868	1.296*	1.052
	(0.066)	(0.073)	(0.108)	(0.100)	(0.085)	(0.191)	(0.169)
Intercept	0.119***	0.237***	0.289*	0.191**	0.051***	0.055***	0.017***
	(0.056)	(0.113)	(0.215)	(0.124)	(0.025)	(0.049)	(0.015)
N observations	38,749	35,341	16,424	18,917	11,035	10,847	13,371
N clusters	11,163	10,248	4,753	5,495	3,776	3,491	4,084
McFadden pseudo-R2	.061	0.089	.098	.084	.057	.071	.069

Source: Authors' calculations using waves 14-18 of HILDA.

Notes: * $p < .1$, ** $p < .05$, *** $p < .01$. Standard errors in parentheses. Errors are robust to individual clusters. All predictors are entered as binary indicators, with the exception of personality traits, age and its higher order term. 'Main English Speaking' countries are the UK, New Zealand, Canada, USA, Ireland, and South Africa.

Mediation analysis

There are several challenges in implementing mediation analysis in the context of our study. First, the method must allow for multiple mediating variables - risk aversion, tenure, and time at current address. Second, the latter two mediating variables, as well as our dependent residential mobility variable, are discrete variables, and so the method must allow for non-continuous variables. Third, the method must allow us to our random effects logit model of residential mobility, including all control variables, and standard errors robust to individual clusters.

The KHB-method developed by Breen et al. (2013), meets all our criteria; it decomposes the total effect of a variable into direct and indirect effects regardless of the number of mediating variables, supports both discrete and continuous variables, and works in the context of non-linear models, including random effects logit. The application of their method in statistical software package Stata is outlined in Kohler et al. (2011).

Their method extends prior methods of mediation analysis through decomposition that are limited to linear models (Sobel, 1987). In the linear case, decomposing the total effect into direct and indirect effects is relatively straightforward. The decomposition compares the coefficient of a variable of interest between a *reduced model* without the hypothesized mediator variable/s and a *full model* which include the mediator/s. The difference in the estimated coefficient between the two models is the indirect effect. However, in the context of a non-linear model the estimated coefficients are not comparable, due to the scale identification issue described in Karlson, Holm, and Breen (2011). The KHB-method ensures the coefficients of nested nonlinear models are measured on the same scale, allowing for a fair comparison of coefficients, while also providing appropriate standard errors. Thus, using the KHB-method,

the odds ratios are decomposed into their total effect (from the reduced model), direct effect (from the full model), and indirect effect (the difference between the reduced and full model).

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