

Social and Economic Impacts of Housing Tenure



A Report for the New Zealand Housing Foundation

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Literature review preface

This literature review, carried out by the Family Centre Social Policy Research Unit, was commissioned by the New Zealand Housing Foundation. It describes the social and economic associations of various forms of housing tenure, mainly homeownership and renting. We analysed over a hundred and twenty international studies, focusing on the effects of housing tenure on health, employment, crime, welfare, wealth and education.

The objective of the review was to explore the research evidence through the literature and describe the findings. The research question was: What does the research evidence demonstrate about the health, employment, crime, welfare, wealth and educational impacts of housing tenure differences? The purpose was to provide research evidence for applied policy development. It does not attempt to add to the literature beyond the research question or rigorously critique it as a pure academic research article might. Because of its applied purpose, the review was limited to those domains that directly reflect fiscal costs, rather than studies that demonstrate other social benefits like social capital, social cohesion, neighbouring and social stability, for example.

Most studies compare the different social and economic outcomes of renting and homeownership, probably because they are the most common tenure forms and present a clear comparison for research purposes. The review shows there is substantial evidence, that homeownership has important positive effects on these outcomes when compared with private renting. There are however, a number of studies that show no significant positive or negative associations, but apart from a minority of studies on employment impacts, no studies were found that demonstrated negative effects of homeownership. We have not included studies that focussed specifically on mortgage or rent stress. Unaffordable debt for renters or owners will almost certainly lead to negative health and social outcomes. The purpose of the literature was to note the social, health and economic impacts of tenure options. The literature for this review was restricted to the previous 25 years.

The text of this report draws on the literature review tables we prepared which outline, in note form, each study under the following headings: author; country; citation; theme/type; objective/research questions; conclusions; sample size, factors controlled for; and magnitude of effect. In a narrative summary, such as this, detailed information on each study would be very lengthy and confusing. If the reader wishes to pursue more detail of particular studies than set out in this report, we recommend the 'Social and Economic Impacts of Housing Tenure Literature Review Table' prepared with this report by the authors. The references in this report and citations in the literature review table will enable the reader to search for each individual study if they choose to.

This report reviews the literature under the following headings: Health; Employment; Crime; Welfare; Wealth; Education; Discussion and References.

Health

The links between housing and health have been studied extensively. Apart from the influence of physical housing conditions like dampness or overcrowding, many, though not all, studies found an independent direct relationship between housing tenure and health. The effect of homeownership compared with renting was the main focus of interest in most of the studies.

Homeownership and physical health

Numerous studies have demonstrated associations between housing tenure and physical health outcomes. Homeownership has been found to be significantly associated with a lower rate of coronary heart disease (Woodward et al 1992), a lower rate of long-standing illness (Gould and Jones 1996), better self-reported health (Rossi and Weber 1996), lower consultation rates in general practice (Carr-Hill et al 1996), a lower rate of teeth loss (Slade et al 1996), lower mortality (Sundquist and Johansson 1997) and better self-assessed health, fewer symptoms, a lower rate of limiting long standing illness (Macintyre et al 2003, similarly Hiscock et al 2003). Of these studies, Gould and Jones 1996, Rossi and Weber 1996, Hiscock et al 2003 controlled for income and/or socio-economic status.

Macintyre et. al. (1998) demonstrated a number of health promoting effects of homeownership. Homeowners had better general health, respiratory capacity, waist/hip ratio, lower rates of long standing illness and fewer symptoms after controlling for income. Another longitudinal Scottish study found that being in rental accommodation and without car access was associated with 35–45% higher mortality rate than those in owner occupied homes with a car available, controlling for occupation (Breeze et al 1999). An Australian study similarly found that housing tenure was independently associated with self-assessed health status, numbers of serious health conditions reported, health service use and smoking, even after adjusting for income (Waters 2001). Schluter et. al. (1997) in a New Zealand study showed that the relative risk of sudden infant death (SIDS) usually occurred in houses rented from the government (state houses). The rate was more than 2½ times that of infants with parents owning their house after adjusting for social, economic and environmental confounding factors.

An association between homeownership and better health outcomes was found also in several literature reviews (Mullins et al 2001, Dietz and Haurin 2003, Bridge et al 2003, Phibbs and Thompson 2011, Rohe and Lindblad 2013).

Some of the evidence, however, is mixed. A study comparing health outcomes of tenure in Britain and Finland, found that housing tenure is strongly associated with health in Britain but not in Finland (Rahkonen et al 1995). The difference might be caused by different social policy regimes in these two countries.

Other studies found no independent effect of homeownership on health. Robert and House (1996) after controlling for education, income and liquid assets found no significant associations with health. Similarly, in another American study, homeownership was not associated with children's health

outcomes after controlling for the length of tenure (Galster et al 2007). Ellaway and Macintyre (1998) found that tenure was no longer significantly associated with any of the health measures once housing stressors and type and neighbourhood conditions were considered simultaneously.

No studies were found that showed significant negative relationships between homeownership and physical health.

Homeownership and mental health

Several studies found positive effects of homeownership on mental health. Rossi and Weber (1996) showed homeowners had lower rates of depression, were more satisfied with life and had higher self-esteem. These effects were not large, but significant, even after controlling for socio-economic status. Two British studies found that housing tenure was independently associated with the prevalence of common mental disorders after adjusting for social class and material standard of living (Weich and Lewis 1998, Lewis et al. 1998). Other studies found that homeowners were less depressed and less anxious (Macintyre et al 2003, Hiscock et al 2003).

A Canadian study explored the relationship between tenure and distress and showed that individuals in rental situations reported the highest level of distress, while homeowners without mortgages reported the lowest levels. Homeowners with mortgages were in between (Cairney and Boyle 2004). In a study of perceptions of disorder, homeowners were less likely to perceive disorder in their neighbourhoods (Sampson and Raudenbush 2004). The authors noted that perceptions of racial and socio-economic disorder within neighbourhoods were linked to higher rates of physical decline, depression, psychological distress, and perceived powerlessness. Howden-Chapman et. al. (2011) found a difference in mental health outcomes by tenure, but the effect diminished in older age, as other factors became more important in explaining older people's health. Manturuk (2012) concluded, that homeowners were 66.3 percent as likely as renters to have experienced a mental health problem and that this effect was entirely moderated by a sense of control derived from homeownership. A recent Australian study also found that people in rental dwellings had poorer mental health outcomes than homeowners (Dal Grande et al 2015).

Friedrichs and Blasius (2009), on the other hand, found no significant associations between mental health and tenure in a study of perception of disorder, including links with depression, psychological distress, and perceived powerlessness, after controlling for income and length of residence. An Australian study also found no relationship between tenure and mental health, once accounting for income, education and occupation (Baker et al 2013).

We found no studies that showed significant negative relationships between homeownership and mental health.

Homeownership, health and vulnerable groups

Some studies focused on the health outcomes of tenure amongst vulnerable groups. A number of them have explored the **health effects of tenure on children** and found that homeownership had

positive associations. Dockery et al (2010) indicated in their literature review that children of homeowners have better health outcomes than children of renters. In a later study of their own, they found children of renters had significantly lower health and wellbeing scores (Dockery et al 2013). Haurin et al. (2002) noted that children of homeowners in their study, had fewer behavioural problems than children of renters, after controlling for income and wealth. Similar results were found by Boyle (2002), where homeownership was associated with lower ratings of emotional-behavioural problems of children and youth, even after controlling for income and SES. A Canadian study showed children of renters have higher levels of depression than children of owners (Cairney 2005). Children of homeowners have also been found to have a lower rate of teen unwed births (Harkness and Newman 2002, Green et al 2012),

On the other hand, Holupka and Newman (2012) found no independent effect of homeownership on the health of children from low-income minority families, after controlling for a wide range of individual, family and neighbourhood characteristics including income and residential stability.

Homeownership has also been positively associated with the **health outcomes of older citizens**. A Welsh study of older people reported that homeowners had better health outcomes than renters (Windle et al 2006). A large Swedish study, that followed nearly 450,000 older people, concluded that homeowners were less likely than renters to retire early for health reasons, stating that homeownership appears to involve health resources independent of basic socio-physical factors (Hartig and Fransson 2006). Similarly, a Spanish study found better health outcomes for older people with greater housing equity (Costa-Font 2008). A recent Australian qualitative study explored the relationship between tenure and health and concluded that for most older private renters, the financial pressures and minimal security of occupancy had potentially serious health implications. Alongside the induced anxiety, the high cost of their accommodation made it difficult for them to look after themselves adequately (Morris 2016, July).

Herbert and Belsky (2008) reviewed literature on the **benefits of homeownership for low-income families**. They found modest evidence, that low-income homeowners experienced improved psychological and physical health. Mallach (2011) reached a similar conclusion, noting that low-income families benefit from homeownership, but with the benefits often less and the costs often greater than those for more affluent households. Manturuk et al (2012) explored perceived financial stress and actual financial hardship in low-income families during the economic crisis. Their results suggested that although both renters and owners were experiencing similar levels of financial stress, the owners were less stressed overall and reported significantly higher financial satisfaction. Lindblad et al (2013) also found a significant, yet indirect effect of homeownership reducing perceived disorder in neighbourhoods and the linkage to negative mental health outcomes among lower income families. Similarly, Manturuk (2013) in a later paper, found homeowners from low-income families had better health outcomes than renters, but when financial hardship was taken into account the significance of the effect diminished.

An American study concluded, that homeownership was associated with better health outcomes in the non-Latino white population, but that relationship was not significant for **racial/ethnic minorities** (Ortiz and Zimmerman 2013). Finnigan (2014) reached similar results where white homeowners emerge as exceptionally healthy compared to white renters and all minority groups. However, a New

Zealand study that investigated housing tenure and the relationship between tenure and health among mothers of a birth cohort of Pacific children concluded that better mental health was observed for homeowners compared to renters (Carter et al 2005).

A study, that investigated the impact of unregulated single room occupancy (SRO) hotels on the **health status of illicit drug users** in Vancouver found that living in SRO hotels was associated with more intensive illicit drug use, and poor health status, including HIV infection (Shannon et al 2006). Another qualitative study with drug users helped to shed light on the mechanisms connecting less secure housing and a greater risk of HIV. Drug users who lived in unsubsidized housing with higher rent tended to engage in heavier drug use than those who lived in subsidized housing with lower rents. Some of the drug users with higher rents were not so motivated to control their drug abuse, since they felt they couldn't continue to pay rent and believed they will be evicted anyway. (Dickson-Gomez et al 2009).

Other forms of secure tenure

A number of studies have explored other forms of secure tenure. An Australian study reviewed the literature concerning housing **assistance** impacts on a range of what have become known as non-shelter outcomes. People reported an improvement in their health as a result of the change of housing (Phibbs and Young 2005).

Another Australian review investigated the effect of **security of tenure** on various outcomes among public housing tenants and concluded, that security of tenure gave people a sense of autonomy, identity and control over their living environment resulting in increased residential stability and reduced stress (Lewis 2006). Cutts et al (2011) in a US quantitative study focused on the connection between housing insecurity and the health of children younger than 3 years from low-income families, and discovered that housing insecurity was associated with poor health, lower weight, and developmental risk among young children.

Housing affordability for low-income families was a key concept explored at the Australian National Research Venture (Yates et al 2007). The final report, which provided an overview of major findings that had emerged out of the venture, indicated, that in 2002-03, a total of 860,000 lower-income households in Australia were in housing stress and at risk of housing affordability problems. Many moderate-income households – over 150,000 – were also considered to be at risk. The authors noted, “housing affordability problems arise when households are forced into decisions that adversely affect them and that they would not make had they not been in housing stress. Examples are various forms of deprivation, such as going without meals” (Yates et al 2007, p. 5). The report stated that such circumstances can lead to health problems in these families (Yates et al 2007). Pollack et al (2010) in a quantitative study, focussed on the health effects of housing affordability in the US. They concluded, that the financial strain of unaffordable housing was associated with trade-offs that may harm health, such as hypertension, arthritis or poor self-rated health. They also found that renting rather than owning a home heightened the negative association between unaffordable housing and self-rated health. Similar results were found by Mason et al (2013), when renters reported poorer mental health when housing was unaffordable. Tenure was found to be an important mediator in disability acquisition in another Australian study (Kavanagh et al 2016). Deterioration in mental health

following disability acquisition was modified by prior housing circumstance with the largest negative associations found for those in unaffordable housing. A New York study found unaffordable housing to be associated with worse self-reported health conditions and a higher likelihood of postponing medical services for financial reasons (Mentzel and Schwartz 2016).

Summary

The majority of studies, noted in this section, found health promoting effects, both physical and mental, resulting from homeownership. A number of studies also demonstrated beneficial outcomes for vulnerable groups including children, elderly people, low-income families, some cultural groups and drug users. There are some exceptions that show mixed results or no independent effect of homeownership on health. Studies concerning racial and ethnic minorities for example show differing results, which may reflect a broader social context and inequalities which these groups experience, and the different results in some country comparative studies may reflect social policy differences. Some of the studies control for factors which might be interconnected with homeownership such as, residential stability. Nevertheless, other studies show no statistically significant effects of homeownership at all, but these are a minority of studies and none demonstrate negative effects from homeownership. As noted at the beginning of this section, studies solely concerned with mortgage or rent stress were not included.

One of the overriding research concerns about the effect of tenure is that studies may be simply demonstrating the socio-economic or income status of the families observed, and that their better health outcomes are a result of easier lives, the ability to access better healthcare and the information and capacity to live healthier lifestyles. Such concerns were raised by Holupka and Newman (2012) after their study found no direct relationship between tenure and health outcomes after controlling for family income. Similar results were found by Robert and House (1996), Friedrichs and Blasius (2009) and Baker et al 2013. Apart from these studies however, there was consistent evidence about the health benefits of homeownership either after controlling for socio-economic status in general (Gould and Jones 1996, Rossi and Weber 1996, Schluter et. al. 1997, Weich and Lewis 1998, Lewis et al 1998, Hiscock et al 2003, Ortiz and Zimmerman 2013, Dockery et al 2013), or after controlling specifically for income (Macintyre et al 1998, Waters 2001, Haurin et al 2002, Harness and Newman 2002, Boyle 2002, Cairney and Boyle 2004, Cairney 2005, Carter et al 2005, Hartig and Fransson 2006, Costa-Font 2008, Pollack et al 2010, Green et al 2012, Manturuk et al 2012, Mason et al 2013, Finnigan 2014 and Kavanagh et al 2016).

Employment

This section of the review investigates the relationship between homeownership and labour market outcomes. In 1996, a paper was published by Andrew Oswald, a professor of economics and behavioural science at the University of Warwick in the UK, suggesting that homeownership harms labour market performance. The paper generated considerable international debate in subsequent years. Some, but overall little, support has been found for Oswald's thesis. It has however provided a marker for researchers addressing the relationship between homeownership and labour market

outcomes. It is fair to say the precision of labour market performance measures have improved and econometric techniques on individual data have become more sophisticated since Oswald's 1996 paper.

Homeownership and unemployment

In the 1990s Oswald (1996, 1997, 1999) observed rising homeownership rates in western countries as well as rising unemployment rates, and suggested that there might be a relationship between those two phenomena. He put forward the thesis, that homeowners were less mobile than renters because of higher transaction costs and therefore they were not able to move for a suitable job: a necessary condition for an efficient labour market. He analysed the macroeconomic data of OECD countries from 1960 to 1990 and concluded that a 10% rise in homeownership would cause an increase of unemployment of 2 percent.

This conclusion initiated a robust debate and research effort. Pehkonen (1999) and Partridge and Rickman (1997) came to a similar conclusion applying Finnish and US data respectively, and considered that a 10 percent rise in homeownership was linked to a 1% rise in the unemployment rate in both studies. In France, Brunet and Leseur (2003) also found homeownership to increase unemployment duration, while Cochrane and Poot (2006) produced similar results in New Zealand. However, they concluded, that the analysis ignored the spatial nature of the data. Blanchflower and Oswald (2013) again, in a more recent study found that homeownership was associated with higher unemployment across U.S. states. This study however was unable to assess the exogenous changes in the structure of the housing market and control for unobserved characteristics.

Other macroeconomic studies did not support Oswald's hypothesis. Nickell et al (2005) found no significant effect of homeownership on the unemployment rate in OECD countries over the 1961 to 1995 period, after accounting for the lagged unemployment rate, labour demand, money supply shocks and the real interest rate in their regression analysis. Gregg et al (2004) found similar results after including regional characteristics. Green and Hendershott (2001) found no relationship for young and old households, but observed very small effects of homeownership on unemployment for those between 35 and 64. The effects though, were often not significant if restricted to household heads. Flatau et al (2002b) in an Australian study, found no significant effects of homeownership after adding more explanatory variables. They showed different results for differing groups of homeowners, such as those with a mortgage or outright owners, and public or private renters.

Garcia and Hernandez (2004) found an opposite effect (to Oswald's thesis) for Spanish data, demonstrating a 10% rise of homeownership was followed by 2.2% decrease in unemployment rate. They also found that Spanish provinces with unemployment rates that were 10 percentage points higher, have homeownership rates that are approximately 1.7 percentage points lower than other provinces. Coulson and Fisher (2009) included the percentages of migrants in the state, and race and education characteristics in their model. They concluded that in the US, individual homeownership decreases the probability of unemployment by about 3.6 percentage points. In an earlier study they (Coulson and Fisher 2002) found that homeowners were less likely to be unemployed, have higher wages and that when unemployed they had a shorter duration compared to renters.

Goss and Phillips (1997) found that homeownership reduced the unemployment duration by 11.6 to 17.8 weeks. Arulampalan et. al. (2000) observed that homeownership decreased the probability of being unemployed for male British population in their study. They also noted, that homeowners have long term financial constraints, which they considered help motivate them to avoid unemployment.

Flatau et al (2002a) in a separate paper from the one noted above in the same year, found that homeowners exit unemployment 84% faster than renters. The study carefully controlled for income and socio-demographic information. The following year, their (Flatau et al 2003) data showed that a 1% increase in homeownership was associated with 0.24% decrease of probability of being unemployed for men and 0.19% for women. They also concluded that homeowners with a mortgage had the lowest probability of being unemployed, followed by outright owners, who were followed by other tenure types. In a further study, Flatau (2004) confirmed that homeowners were less likely to be unemployed and have quicker exits from unemployment.

Van Luevensteijn and Koning (2000, 2004) found homeowners were less vulnerable to unemployment, had fewer job to job transitions and were less likely to become non-participants in the labour market or on a welfare benefit. Munch et al (2008) found homeowners were 29% less likely to become unemployed and had higher wages. However, they also had a 14% lower transition rate into a new job outside the local labour market and 5% lower transition rate into a new job inside the local labour market. Rouwendal and Nijkamp (2010) found homeowners exited unemployment faster when their housing expenses were higher than those of tenants, after controlling for income. Kantor et al (2015) found that the exit rate from unemployment for owners was 11 to 20% higher when compared with renters, after controlling for income and financial assets.

The following few studies distinguish between exit from unemployment to local or non-local labour markets, to test Oswald's thesis from a different angle. Munch et al (2006) found that homeownership hampered the propensity to move out of unemployment to non-local jobs, but accelerated finding a job in local labour markets. The latter effect was however stronger, so homeowners overall had a higher transition rate out of unemployment than renters. As noted above in a later study (2008), Munch et. al. found a lower transition rate into new jobs for both non-local and to a lesser extent local labour markets for owners, while also finding they were less likely to be unemployed. Interestingly, these findings contradicted Oswald's hypothesis concerning homeownership being associated with higher unemployment, while at the same time found support for his key mechanism, namely that homeownership restricts labour market mobility. Van Vuuren (2007, 2009) found similar results for the Netherlands, using much the same methodology, whereas Battu et al (2008) found no significant differences between homeowners and renters in Britain. Barceló (2006) found homeowners to be less likely to find a job on non-local labour market, but on the local labour market there were no differences between owners and renters.

Other studies

Outside the Oswald's hypothesis discussion, are other studies that have addressed the relationship between homeownership and labour market outcomes. Boehm and Schlottmann (1999) found children of homeowners to have better employment outcomes, but the effect was indirect, and

moderated by increased educational attainment. The study controlled for several characteristics including parental income and education. Harkness and Newman (2002) found homeowners to have higher wages, after controlling for a number of socio-economic, neighbourhood and individual characteristics. They also found children of homeowners to have higher earnings (Harkness and Newman 2003). Galster et al (2007) however, found no effect of parental homeownership on their children's wages as young adults, after controlling for the length of tenure. Svarer et al (2005) focusing on the effect of rent control in Denmark after accounting for wealth, education and labour market characteristics, concluded, that the probability of finding a local job increases with rent controls, whereas the probability of finding a job outside the local labour market decreases.

Australians participating in a qualitative study exploring homeownership and labour outcomes stated that their stable public housing address would help the process of applying for a job (Epic 2000). Respondents in another Australian qualitative study exploring the effect of housing assistance gave mixed messages about their experiences in the labour market. "In some cases households used the extra disposable income generated by savings on rent to reduce their employment. On the other side of the ledger, the increase in self-esteem reported by some respondents meant they wanted to work on their career" (Phibbs and Young 2005, p. 72).

A number of literature reviews have explored the effect of homeownership on employment. Mullins et al (2001) concluded that the relationship between housing and crime, education, health, social exclusion and poverty is clear, but more caution is required when describing the relationship with the labour market. Dietz and Haurin (2003) also noted that homeownership has important effects on household behaviours and outcomes, but impacts on the labour market are not firmly established. Havet and Penot (2010) in their review found little support for Oswald's hypothesis. Herbert and Belsky (2008) found modest evidence for beneficial effects of homeownership for the employment in low-income and minority households.

Summary

Oswald's hypothesis that that homeownership harms labour market performance, has provided a rallying point for numerous studies that examine housing tenure and employment. Some support has been found for his conclusions, but overall studies have tended to demonstrate, either no effects of homeownership on labour market performance, or positive effects, which are the opposite of his hypothesis. The studies showing the positive effects of homeownership are considerable and several them also indicated that homeowners moved out of unemployment more rapidly than renters and their children had better employment outcomes. Studies that contrasted unemployment exit spatially, either to local or non-local labour markets, suggested homeowners do better locally and less well in non-local markets. The literature reviews offered little support for the harmful effects of homeownership on employment outcomes and tended to urge caution on interpreting the relationship between housing tenure and the labour market because the impacts are not yet fully established. Nevertheless, most of the recent studies demonstrated better employment outcomes for homeowners.

Of the studies that found support for Oswald's thesis, Partridge and Rickman (1997) controlled for state and regional characteristics, demographic characteristics and received welfare. Pehkonen

(1999) controlled for age and education of the workers and long-term unemployment rate. Brunet and Leseur (2003) controlled for demographic characteristics, qualification of the worker, reasons of entry into unemployment, job search intensity, unemployment benefits and local labour market specificities. Cochrane and Poot (2006) controlled for proportion of single person households, age, culture and type of occupation. Blanchflower and Oswald (2013) controlled for union density in the state, personal characteristics of the workers, state and year effects and the rate of joblessness. Barceló (2006) controlled for institutional differences, strictness of employment protection legislation, household head's previous job, received benefits, personal characteristics including education, gender, age, information about partner and children; having outstanding mortgage and social housing.

Of those that found no significant effects Nickell et al (2005) controlled for the lagged unemployment rate, labour demand, money supply shocks and the real interest rate. Gregg et al (2004) controlled for housing tenure type, labour force status, demographic characteristics, region, and wave. Green and Hendershott (2001) controlled for age and headship rate. Flatau et al (2002b) controlled for demographics, different tenure types and locality. Battu et al (2008) controlled for unobserved heterogeneity and tenure endogeneity. Galster et al (2007) controlled for length of tenure, education and employment of parents.

Of those who found homeownership was significantly associated with a decrease in unemployment, Garcia and Hernandez (2004) controlled for income and proportion of younger population. Coulson and Fisher (2009) controlled for immigration, demographics, type of job and population. Coulson and Fisher (2002) controlled for demographics, profession type and location. Goss and Phillips (1997) controlled for demographics, education, personal characteristics, wages, family structural and financial characteristics, unemployment compensation rate, local area labour market conditions, duration of homeownership and skills. Arulampalan et. al. (2000) controlled for demographic and family variables, education, job search intensity, job offer arrival, job retention rates, labour market tightness variable, unobserved heterogeneity, pre-sample information and characteristic of the job. Flatau et al (2002a, 2003, and Flatau 2004) controlled for housing data, socio-demographic information and detailed income data. Van Luevensteijn and Koning (2000, 2004) controlled for demographic characteristics, education, family characteristics and income. Munch et al (2008) controlled for demographic and family characteristics, education, income, job experience, duration of the job, characteristics of locality and home owner status of the individual's parents. Rouwendal and Nijkamp (2010) controlled for housing costs, income, household and local characteristics. Kantor et al (2015) controlled for demographic and family characteristics, mortgage, household income and financial assets. Munch et al (2006) controlled for demographic, household and family characteristics, education, employment insurance and replacement rate. Van Vuuren (2007, 2009) controlled for demographic and family characteristics, type of job, education, unobserved and regional characteristics and unemployment benefits. Boehm and Schlottmann (1999) controlled for demographic and family characteristics including parental income and education, family mobility and neighbourhood characteristics. Harkness and Newman (2002, 2003) controlled for a number of socio-economic, neighbourhood and individual characteristics. Svarer et al (2005) controlled for education and wealth among other characteristics.

It is interesting to note that practically all these latter studies that demonstrated lower unemployment rates being associated with homeownership, controlled in various ways for socio-economic status and/or income. Whereas the studies that found no significant relationships or higher unemployment rates seldom controlled for these variables.

Crime

Homeownership and crime

The links between housing tenure and crime have been investigated in a number of studies from various perspectives. The most straightforward have explored the relationship between neighbourhood ownership and crime rates. Glaeser and Sacerdote (1999) found that crime rates were lower in neighbourhoods with higher homeownership rates. Haurin (2002), in a literature review study also found that crime rates were lower in neighbourhoods with higher homeownership. Livingston et al (2014) found a small effect of homeownership on crime reduction after controlling for residential structural variables.

Alba et al (1994) explored the relationships between neighbourhood ownership rates, crime and racial/ethnic minorities in the U.S. They found homeownership predicted lower crime levels of an individual's community of residence, but did little to explain group differences in exposure to crime. They also noted racial/ethnic differences in average exposure to property and violent crime. Homeownership was an individual level independent variable in this analysis.

There were a small number of studies that focused on residents' individual perception of disorder in the neighbourhood. Sampson and Raudenbush (2004) referred to earlier literature and noted that minor forms of public disorder can lead to serious crime and a downward spiral of urban decay (Kelling and Coles 1996). "The presumed reason is that visual cues such as graffiti, public intoxication, garbage, and abandoned cars are thought to attract criminal offenders, who assume from these cues that residents are indifferent to what goes on in the neighbourhood." (Sampson and Raudenbush 2004, p. 319). Using individual data, they showed that homeowners were less likely to perceive disorder in their neighbourhood. Friedrichs and Blasius (2009) did not confirm these results for Germany, as they found that tenure status had no effect on perceived disorder after controlling for income and length of residence. A study from Rotterdam however, found homeowners feel safer, after controlling for income and length of residency. (Brounen et al 2012). Lindblad et al (2013) found that homeownership exerts a robust, yet indirect effect in reducing perceived neighbourhood crime and disorder via 'collective efficacy', by which they mean the ability of members of communities to control the behaviour of their members.

Wikström (1991) however, concluded a unique study with over 50 000 Swedish youth, investigating the effect of tenure in childhood on offending in later childhood and adolescence. Housing tenure was not found to be predictor of juvenile crime, after controlling for social class.

Public housing and crime

Matka (1997) found an association between public housing and higher crime rates in Sydney metropolitan area and concluded, that up to 69 percent of the variation in crime rates could be accounted for by social factors alone. Once these were controlled for, the effect of housing tenure was rather small, accounting for 3% of the variation. However, another study from Sydney found no independent effect of tenure. They considered that the public housing allocation process was largely, if not entirely, responsible for the association between public housing and crime (Weatherburn et al 1999). Mullins et al (2001) in their review reached similar conclusions, that public housing areas tend to have a higher incidence of crime and a disproportionate concentration of those with criminal records, which they considered to be the result of the allocation processes. Samuels et al (2004) also found higher crime rates in public housing areas in Australia.

A qualitative Australian study however, explored the benefits of housing assistance. People reported they felt safer and more secure in their public housing dwellings because they had better security of their dwelling (Phibbs and Young 2005). They reported being able to install security features not allowed by some private landlords they considered they were living in a safer neighbourhoods.

Summary

The studies exploring the relationship between homeownership and crime, though not as many as other areas of enquiry, mostly found ownership to be associated with lower crime. The major exception was Wikström's (1991) early study in which no significant association was detected. Homeownership was also associated with perceptions of order in neighbourhoods in all but one study of those that assessed it. These led to greater feelings of safety, and in one study collective community control of behaviour in their neighbourhoods.

The associations between public housing and crime in Australian studies was most commonly seen as a result of the allocation process rather than the choice of tenure.

From the studies mentioned above, Wikström (1991), Weatherburn (1999) controlled for social class and Matka (1997), Friedrichs and Blasius (2009), Livingstone (2014) and Brounen (2012) controlled for income.

No studies were found where homeownership was associated with higher crime rates.

Welfare

We discovered few studies exploring the effect of homeownership on welfare payments. Harkness and Newman (2002) found that homeownership is beneficial for children of homeowners and concluded that they have a lower probability of receiving welfare benefits, after controlling for neighbourhood effects, family characteristics and income. Their following study (Harkness and Newman 2003) focused on differentiating between children from low-income families from high-

income families. They concluded that this effect held only for the low-income group, as it ceased to be significant for the high-income families. Herbert and Belsky (2008) confirmed these results in their review.

Wealth

Homeownership has been studied in relation to wealth building for lower income households by a small number of researchers. Bridge et al (2003) in a review noted that lower socio-economic households gain less through ownership than middle and higher socio-economic households. They concluded that “homeownership increases wealth but that wealth accumulation benefits do not accrue evenly to homeowners in all income brackets” (p.ix). Mallach (2011) reached a similar conclusion that low-income homeowners benefit from accumulated wealth to a lesser extent than higher income homeowners.

A useful approach to studying the effects of homeownership on wealth is to observe shared equity schemes. They are generally considered to be a safer option for lower-income homebuyers, as they help prevent mortgage stress and foreclosure risk. Temkin et al (2013) evaluated seven shared equity programmes in the U.S. and concluded that “homebuyers earned returns that were competitive with what they would have received if they had invested in stocks or bonds, many families who sold their homes were able to use their sales’ proceeds to purchase market-rate homes” (p. 553). Jacobus (2007) and Jacobus and Davis (2010) reached a similar conclusion that shared equity programmes can attract a rate of return quite similar to that of traditional homeownership. They noted the programmes were superior to most other investment opportunities that lower income households could be expected to realistically access.

Herbert et al (2013) were interested whether homeownership was still an effective way of building wealth for low income and minority families considering the recent changes in the market. After controlling for income, they concluded that “homeownership continues to represent an important opportunity for individuals and families of limited means to accumulate wealth. Those who buy homes but do not sustain this ownership do not experience any gains in wealth, but are generally left no worse off in wealth terms than they were prior to buying a home.” (Herbert et al.2013, p. 2). Yates (2009) also noted the tax advantages in Australia per household per year for owner occupiers were around eight times more than for renters. If an owner occupier was also an investor in housing, then the margin per household per year was around twelve times that of renters.

Education

Does parental homeownership effect the educational achievements of children? There are quite a number of studies that have demonstrated a positive effect of homeownership on educational attainment. Green and White (1997) found children of homeowners stay at school longer than the children of renters. After controlling for income and length of tenure, the effect of homeownership was between 3-27%. Boehm and Schlottmann (1999), after controlling for parental income,

education, family mobility and neighbourhood characteristics, found children of homeowners to be significantly more likely to achieve a higher level of education. Aaronson (2000) controlled for income and mobility and found children of home owners were more likely to graduate from High School. Haurin et al (2002) concluded that children of homeowners have a 9% higher mathematical outcome, a 7% higher reading score and a 1-3% lower behavioural problem rate, after also controlling for income and wealth, parental and child's characteristics. Mallach (2011) confirmed the positive effects of homeownership on children's education in his review. Green et al. (2012) revisited their original research with improved methods and they concluded that "children of homeowners have better outcomes than children of renters whether their parents make a large or small initial investment in their home, as long as they make a minimal down payment when they buy their homes. Children with parents who made no down payment have similar outcomes to children of renters" (Green et al 2012, p. 8). Chen (2013) also found a positive effect of homeownership after controlling for income.

Harkness and Newman (2002) were interested in the effect of homeownership on children in poor and distressed neighbourhoods. They concluded, that after controlling for income and many individual and neighbourhood characteristics, homeownership was beneficial in any neighbourhood, as children stayed at school longer and had a higher probability of high school graduation and postsecondary education. In a further publication the following year, they (Harkness and Newman 2003) focused on children from low-income families and compared them with children from high-income families. They found significant positive effects for the low-income group including a greater likelihood of secondary school graduation and post-secondary education., Bramley et al. (2007) found similarly that homeownership has an additional positive effect on school attainment, after controlling for poverty and social variables.

Zhan and Sherraden (2003) explored the role of homeownership in single mother's households. After controlling for income, family structure and mothers' and children's characteristics, they found maternal homeownership was positively associated with children's educational achievement and that this relationship was partially mediated through expectations.

Not all studies however, found positive effects. Conley (2001) did not find an independent effect of homeownership, after controlling for income, education of parents, household crowding and housing quality. Galster et al. (2007) found no effect of homeownership after controlling for the length of tenure, and nor did Barker and Miller (2009) after controlling for residential mobility, wealth, dwelling type and vehicle ownership. Holupka and Newman (2012) also found no independent effects of homeownership after controlling for residential stability and income. Mohanty and Raut (2009) found only an indirect effect of homeownership on children's education through creating a better home environment.

Summary

The positive effects of parental homeownership on children's educational attainment have been demonstrated in the literature through a range of different measures and studies. However, not all studies replicate the same positive effects, with a smaller number showing no significant differences. Where significant effects occurred, they related to school graduation, post-secondary education, specific subject areas, length of time at school and fewer behavioural problems. The positive effects

of homeownership were also demonstrated for children of single mothers and children in poor and distressed neighbourhoods. The variables the studies controlled for are noted in the text above.

No studies were found that demonstrated negative effects of homeownership on the educational attainment of children.

Discussion and conclusion

This literature review has drawn together in excess of a hundred and twenty studies that explored the associations between housing tenure and social, economic and health outcomes. Most studies focus on the comparison of outcomes for homeowners and renters, even though there are other forms of tenure and security. This is probably because owners and renters form the bulk of occupants when compared with other forms of tenure, and they provide two clearly differentiated easy to access categories for research purposes.

By far the majority of studies under each of the six categories: health; employment; crime; welfare; wealth; and education; demonstrate the positive effects of homeownership. Health promoting benefits were found for both physical and mental health with objectively assessed health conditions and self-assessed health status. Although the results for positive employment outcomes were less consistent, the majority of studies showed ownership to be beneficial, not only for protecting against unemployment, but also for faster exits out of unemployment when it occurs. There were fewer studies relating to crime, welfare and wealth, but the majority showed homeownership to be significantly associated with lower crime rates, less welfare dependency and offered a greater chance for low income families to create asset wealth, albeit at a lower rate than higher income groups. The children of homeowners also showed significantly higher educational attainment levels than those of renters in the majority of the educational studies.

As in most social science research though, such results are not replicated in every study. A minority of physical and mental health studies found no significant effects in health outcomes because of differences in housing tenure. Two studies found no significant differences for crime rates and a small number of studies found children's educational attainment to be unaffected by housing tenure choice. However, the labour market studies demonstrated the most varied results. A minority of studies found no significant association between housing tenure and employment, and a further minority found ownership was detrimental to employment which was presumed to be because owners were less mobile than renters.

As a result of all these studies, the relationship between housing tenure and a number of independent variables like health, crime and education are becoming more accepted as the majority of them continue to replicate positive significant associations with ownership. Labour market outcomes are less clear though, and more caution is required when describing the relationship between tenure and employment because the studies are less consistent. Nevertheless, it is fair to note most studies continue to show lower unemployment among owners.

Interestingly, no studies demonstrated significantly negative health, crime, welfare or educational outcomes associated with homeownership. The very few studies that supported Oswald's hypothesis on the negative impacts of ownership on employment have not been consistently replicated. In fact,

the opposite has been the case, where either no employment effects were found, or as the majority of studies have shown, ownership was positively associated with employment.

As noted earlier in this review, one of the overriding research concerns about the effect of tenure is that studies may be simply demonstrating the socio-economic or income status of the families observed, and that their better social and economic outcomes are simply a result of easier lives, the ability to access better resources and the information and capacity to live independent lifestyles. Such concerns were raised by several researchers and so this review has identified where studies have and have not controlled for variables such as socio-economic status and income.

As most researchers are aware of the dilemma of causality, they usually, though not always, controlled for a range of variables including socio-economic status and income. The associations between housing tenure and social, economic and health outcomes noted above, in most cases, resulted from studies that controlled for these variables. It was particularly interesting to note however, that the studies which demonstrated lower unemployment rates being associated with homeownership, controlled in various ways for socio-economic status and/or income, whereas the studies that found no significant relationships or higher unemployment rates seldom controlled for these variables.

As noted at the beginning of this report, the review did not include studies that focussed specifically on mortgage or rent stress. It is acknowledged that unaffordable housing of whatever tenure type will almost certainly lead to negative health and social outcomes. The purpose of the literature review was to note the social, health and economic impacts of tenure options. So, the results do not suggest that homeownership is advantageous in any context, and certainly not if it is unaffordable. It does suggest though, that social housing policies which enable low income families affordable mortgage arrangements can be expected to provide greater long term positive outcomes that are less likely to be found in rental tenure.

On balance, the research suggests housing tenure is a significant factor for positive social and economic outcomes. Homeownership is often significantly associated with positive health, crime, and educational outcomes in studies, usually after controlling for a range of variables including socio-economic status and income. A small number of other studies further suggest it is beneficial for wealth creation and not receiving a welfare benefit. The labour market results for decreased unemployment are not as strong, but point in a similar direction.

Limitations of the study

As noted at the beginning of this review, the purpose of this study was to provide research evidence for applied policy development. It does not attempt to add to the literature beyond the research question: *What does the research evidence demonstrate about the health, employment, crime, welfare, wealth and educational impacts of housing tenure differences?* Nor does it rigorously critique the literature as a pure academic research article might. Because of its applied purpose, the review was limited to those domains that directly reflect fiscal costs, rather than studies that demonstrate other social benefits like social capital, social cohesion, neighbouring and social stability, for example. Research on these other domains shows the impacts of tenure not covered in this review.

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