

Does Homeownership Improve Personal Wellbeing?¹

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Abstract

Does homeownership help people become better citizens, parents and neighbours? Advocates for promoting homeownership claim: “ownership is consistently linked to improved life outcomes for individuals as well as to more cohesive communities”. This paper uses longitudinal data from nine waves of the nationally representative Household, Income and Labour Dynamics of Australia (HILDA) survey to examine the causal relationship between homeownership and a number of measures of personal wellbeing. As HILDA follows all original sample members regardless of whether they have moved to other residences in Australia and collects detailed information about their current housing circumstances, we are able to estimate fixed effects regression models that allow us to control for unobservable differences in individuals that are related to both homeownership and personal wellbeing. We find that homeownership has a strong causal impact on whether individuals are satisfied with their home and smaller but meaningful effects on whether individuals are satisfied with their inclusion in the local community and with their neighbourhood. While we also find evidence that homeownership leads individuals in couples to have higher overall life satisfaction and satisfaction with their family relationships, but the magnitude of these impacts are less than 1% of mean scores on these domains.

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1. Introduction

Does homeownership help people become better citizens, parents and neighbours? Advocates for promoting homeownership claim: “ownership is consistently linked to improved life outcomes for individuals as well as to more cohesive communities” (Skilling 2004). Benefits may include better health and educational outcomes, greater security and independence, and more political and social participation (New Zealand Government 2006; Skilling 2005; DiPasquale and Glaeser 1999). International studies have found that higher levels of homeownership are associated with a variety of positive outcomes (for example, Rossi and Weber 1996; Rohe and Stegman 1994). However, there is conflicting evidence on whether homeownership has a positive impact on mental and physical health and there is evidence that homeownership can be damaging for groups with declining health and those with an uncertain ability to make mortgage payments (Nettleton and Burrows 1998; 2000).

This paper uses longitudinal data from nine waves of the nationally representative Household, Income and Labour Dynamics of Australia (HILDA) survey to examine the causal relationship between homeownership and a number of measures of personal wellbeing. In particular, we examine the impact of being a homeowner on mental and physical health, overall life satisfaction and satisfaction with a wide range of subdomains. As HILDA follows all original sample members regardless of whether they have moved to other residences in Australia and collects detailed information about their current housing circumstances, we are able to estimate fixed effects regression models that allow us to control for unobservable differences in individuals that are related to both homeownership and personal wellbeing. This modelling approach allows us to potentially identify the causal relationship between homeownership and personal wellbeing.

Our main analysis focuses on longitudinal samples of households that have maintained the same composition ('single' versus 'couple') over multiple waves of HILDA,

while potentially changing homeownership status. This allows us to isolate the impact of homeownership from the impact of changes in relationship status, which often occur at the same time. We first show the extent to which any correlations between homeownership and personal wellbeing are related to the unobserved characteristics of individuals before then providing estimates of any causal relationships. We then extend this analysis along a number of dimensions. First, we examine whether changes in homeownership have differential effects on men versus women and households with and without children. Second, we examine whether the relationship between homeownership and wellbeing varies with housing costs. Third, we examine whether the relationship varies with duration in the particular residence. Lastly, we examine whether impacts differ for individuals who also change couple status at the same time.

2. Data

2.1. The Household, Income and Labour Dynamics in Australia Survey

We examine the impact of homeownership on personal wellbeing using longitudinal data from the nationally representative HILDA survey for the years 2001-2009. This survey began in 2001 and has since been administered annually. It collects information on economic and subjective well-being, labour market dynamics and family dynamics from a sample of more than 7,600 Australian households encompassing almost 20,000 individuals aged 15 and older (see Wooden, et al. 2002). Individuals in sample households are followed over time regardless to whether they remain in the original households. Four survey instruments are included in HILDA: a Household Form and a Household Questionnaire are completed during a personal interview with one adult member of each household; a Person Questionnaire is administered to all adult household members; and a Self-Completion Questionnaire (SCQ) is provided to all respondents to the Person Questionnaire and is collected at a later date or returned by post.

Information on homeownership is collected in the Household Questionnaire. Specifically, the household member being interviewed (who is supposed to be the person who knows the most about household finances) is asked, “Do you (or any other members of this household) own this home, rent it, or do you live here rent free?” with an interviewer note that, “If they do have some equity in the dwelling, then it should be coded as ‘own’.” For the purpose of this paper, all individuals in a particular household are coded as being a ‘homeowner’ if the household is classified as “Own / currently paying off mortgage” based on this question.

We examine the impact of homeownership on twelve measures of personal wellbeing. The Person Questionnaire asks a series of questions on life satisfaction in each wave. First, each respondent is asked “I am going to read out a list of different aspects of life and I want you to pick a number between 0 and 10 that indicates your level of satisfaction with each. The more satisfied you are, the higher the number you should pick. The less satisfied you are, the lower the number.” Eight different aspects are asked about: (1) “The home in which you live”; (2) “Your employment opportunities”; (3) “Your financial situation”; (4) “How safe you feel”; (5) “Feeling part of your local community”; (6) “Your health”; (7) “The neighbourhood in which you live”; and (8) “The amount of free time you have”. We examine the impact on each of these outcomes. Individuals are then asked, “All things considered, how satisfied are you with your life? Again, pick a number between 0 and 10 to indicate how satisfied you are. This is the measure we use of overall life satisfaction.

The SCQ collects detailed information on an array of sensitive questions, such as alcohol use and gender roles in the household. Our three remaining measures of personal wellbeing come from this part of the survey.² It includes the standardised SF-36 questions on

² The SCQ is not filled out by approximately 10% of individuals, hence we examine whether the propensity of responding is related to homeownership to rule out potential selection bias when examining the impact of homeownership on these three outcomes. While we find that homeowners are more likely to respond to the SCQ

the health domains of physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role-emotional and mental health. These questions can be aggregated to form standardized scores for general physical and mental health domains, valued from 0 to 100. We examine the impact of homeownership on each of these. Our final measure is each individual's report satisfaction with their family relationships. In particular, individuals are asked to rank, again on a 0 to 10 scale, how satisfied they are with their relationship with their partner/spouse, children, stepchildren, parents, stepparents, and most recent former spouse/partner, their partner's relationship with their children, and their children's relationship with each other. Because not all of these relationships are applicable for each person, we average over all that apply to each person to create a measure of each individual's average satisfaction with family relationships.

2.2. Analysis Samples

We begin by restricting our sample to prime-age adults aged between 25 and 64 in each round of HILDA. We exclude younger and older individuals because the nature of homeownership is likely to be quite different for them and many will be living in multiple family households. This results in a sample of 77,866 observations from 13,843 individuals. We then use the information provided about relationships within the household to match all individuals who are in a couple (either married or de-facto) in a particular wave. Three analysis samples are then created.

The first, called the 'Stable Single' sample, contains all prime-age individuals who are single for at least 2 consecutive waves at any point in HILDA. For each individual who is included in this sample, only the waves that qualify are included. For example, if an individual is single in waves 2, 3, 4, 6, 8 and 9, then their information from waves 2, 3, 4, 8 and 9 will be included in the 'Stable Single' sample. Overall, 17,603 observations from 3,342

in each wave, once we control for individual fixed effects to get a causal estimate of the relationship, we find that there is none.

individuals are included in this sample. The second, called the ‘Stable Couple’ sample, contains all prime-age individuals who have the same partner (who can be outside the prime-age adult age range) for at least 2 consecutive waves at any point in HILDA.³ Like in the ‘Stable Single’ sample, for each individual who is included in this sample, only the waves that qualify are included. However, now there are typically two records for each member of the couple (except when one does not satisfy the age restriction) in each wave. Overall, 54,569 observation from 8,765 individuals are included in this sample.

Our main analysis focuses on these two samples and thus examines the impact of homeownership on personal wellbeing only for individuals who do not change their couple status over the time period being examined. This is done to isolate the direct impact of homeownership, since changes in couple status frequently lead to changes in homeownership as well. Our third analysis sample is designed to jointly examine changes in homeownership and couple status. Here, the sample is restricted to prime-age adults who changed from single to coupled, or vice versa, or whom changed partners at some point during the sample period. All observations are included for these individuals. Overall, 18,145 observation from 2,696 individuals are included in this sample.

2.3. Descriptive Statistics

Table 1 presents summary statistics for covariates used in our analysis and the twelve measures of personal wellbeing that we examine as outcomes for each of the analysis samples discussed above as well as for the overall HILDA sample. While all the analysis in this paper is stratified by analysis sample, it is good to keep in mind the general differences between the samples when comparing the results for each group.

³ In households where multiple couples are identified, the couple with a member closest to age 35-49 is included in the sample with the remaining couples excluded. The assumption here is that the couple closest to this age range is most likely to be the true homeowners in this type of household. Unlike for singles, we also include couples who are together in sequential waves which are sandwiched around a wave of missing data. In other words, if two individuals are together in wave 3 and 5, but both missing in wave 4, they are considered to be a couple in consecutive waves.

The distribution of most background characteristics (age, gender, qualifications and location) are quite similar across the three samples and compared to the overall prime-age population in HILDA. For example, the mean age is 44 in each sample. Some exceptions are that individuals in the stable single sample are more likely to be women (56% versus 52% in the other analysis samples) and to live in major cities (64% versus 61-62% in the other samples), while individuals in the stable couple sample are more educated than those in the other samples (27% have a bachelors degree or higher versus 23% in the other samples).

Bigger differences are seen for other characteristics. Unsurprisingly, the likelihood of households having children and the average number of children per household are much higher for stable couples than for the other samples, with 59% of stable couples having children versus 26% of stable singles and 40% of the change status sample. As expected, stable couple households also contain more adults than change status households which are larger than stable single households. Individuals in stable couple households are also more likely to be employed (78%) than those in stable single (70%) or change status households (72%). Real total household income per adult is also higher for stable couple households by 16% versus stable singles and 6% versus change status households. However, on a per capita basis, real total household income is quite similar across the three analysis samples.

Turning to our key explanatory variable, whether an individual lives in a house owned by one of its occupants, we find that, while 80% of individuals in the stable couples are homeowners, this is the case for only 50% of individuals in the stable single sample and 63% in the change status sample. Beyond the conceptual reasons for doing so, this large variation in homeownership across groups suggests that different results might be found for singles versus couples. We also examine the relative cost of housing for individuals by dividing either their monthly mortgage payment (for homeowners) or their monthly rent (for renters) by monthly total household income. Individuals who own their home outright or who live for

free (say with their parents) have zero housing costs. We present the median value here instead of the mean, as households with little income (perhaps because of measurement error) can have extremely high ratios. The median housing cost ratio is 0.15 for the stable single sample, 0.13 for the change status sample and 0.10 for the stable couple sample. As is shown in the next table, this reflect the fact that homeowners have lower relative housing costs and stable couples are more likely to be homeowners.

Finally, examining the distribution of our twelve measures of personal wellbeing, we see that individuals in stable couples report higher levels of satisfaction and physical health than individuals in the stable single sample on all but one domain. For example, mean physical health is 1 point higher, mental health 3 points higher, satisfaction with family relationships 1 point higher and overall life satisfaction 0.7 points higher. The only domain where singles are more satisfied than couples is with the amount of free time they have (by 0.2 points). Average satisfaction for individuals in the change status sample is between that reported for stable singles and that reported for stable couples on all measures.

In Table 2, we examine trends in homeownership rates over time and other housing specific variables. These particular variables are not used in our regression analysis, but help provide a complete picture of how homeowners differ from renters in Australia. Homeownership rates in the overall population have declined from around 73% in 2001-2004 to 70% in 2009. There has also been a slight decline in residential mobility over the same time period, with 18-20% of individuals reporting having moved in the last year in the early 2000s versus 17% in 2009 and the mean duration in their current residence increasing from 8.0 to 8.2 years over the sample period. Median housing costs have also increased over time from 10% of household income in 2001 to 12% in 2009. As can be seen in the next two panels in this table, this increase has come entirely from relative larger mortgage burdens for homeowners.

Focusing on homeowners, we find that the mean reported value of homes has increased 61% in real terms between 2001 and 2009 from \$271,000 to \$438,000 (in 2001 dollars). At the same time, the proportion of homeowners who own their home outright declined from 48% in 2001 to 39% in 2009 and the mean real monthly mortgage repayment increased from \$512 to \$830 over the same time period. Taken together, while the median debt to value ratio has remained more or less constant over time at 0.38-0.44, the median mortgage to income ratio for homeowners has increased from 0.04 to 0.09 between 2001 and 2009 and the median debt to income ratio has increased from 1.25 to 1.71. Unsurprisingly, homeowners are less mobile than renters, with mobility declining over time as well.

For renters, mean real monthly rent increased from \$707 to \$900 per month, but real incomes increased at the same rate and the median rent to income ratio remained at 0.17 across the sample period. Along with higher relative costs, renters also live in, on average, smaller dwellings than homeowners (having 2.8 versus 3.5 bedrooms on average). Overall, these results show that while the ongoing costs for homeowners are generally lower than those for renters, the debt burden taken on by homeowners can be quite large relative to current income, which may have an impact on the relationship between homeownership and personal wellbeing. This is something that we examine in our regression models.

3. Regression Results

3.1. Empirical Model

In this section, we examine the relationship between homeownership and personal wellbeing in a regression framework. We do so by estimating the following linear regression model:⁴

$$Y_{it} = \delta * Homeowner_{it} + \beta X_{it} + \alpha_i + e_{it} \quad (1)$$

⁴ While most of our outcomes are ordinal in nature, we estimate linear models to allow for an easier inclusion of individual fixed effects and interpretation of the results. This approach is recommended by Ferrer-i-Carbonell and Frijters (2004) who examine the importance of different methodological choices when estimating what impacts life satisfaction and report, “The empirical findings presented show that it makes virtually no difference whether one assumes ordinality or cardinality of happiness answers, whilst allowing for fixed-effects does change results substantially.”

where Y_{it} is one of the twelve measures of personal wellbeing discussed above for individual i at time t , $Homeowner_{it}$ is whether they live in a home owned by one of the household members, X_{it} are other potential confounding variables, α_i is an individual specific intercept or fixed effect and e_{it} is a mean zero normally distributed error term which is potentially correlated over time for the same individual and across individuals in the same couple, but uncorrelated with the other explanatory variables.⁵

Including individual fixed effects in the regression model is asymptotically equivalent to examining the relationship between changes in homeownership status and changes in personal wellbeing for the same individual over time. Importantly, this controls for any time invariant unobserved characteristics of the individual that are related to both their likelihood of being a homeowner and their reported personal wellbeing. For example, individuals who have a positive outlook about life might be more likely to own a home and to report higher levels of life satisfaction. If this is the case, a cross-sectional OLS regression will find a positive relationship between homeownership and life satisfaction, when, in fact, there may not be a direct relationship.

On the other hand, the fixed effects estimates will be unbiased as long as there are no time-varying unobservables that are correlated with both the propensity to be a homeowner and personal wellbeing. Given that changes in homeownership are generally long lasting, we do not believe that this is likely to be an important concern. However, we examine whether our results are robust to the inclusion of time-varying control variables, such as household composition, employment status and household income, which may be correlated with both homeownership and personal wellbeing. It is worth noting that these variables are also potentially pathways through which homeownership affects personal wellbeing and hence

⁵ The standard errors estimated in all our regression models allow for arbitrary correlation in the error term over time for the same individual and across individuals in the same couple (for the stable couple sample). This is potentially important for correct inference because of the persistent nature of the outcome variables and because the key explanatory variable, homeownership, is measured at the household level.

may not belong as explanatory variables in the regression.. Hence, we first present results both including and excluding these additional covariates.

3.2. Main Results

Our main results are presented in Table 3 for the stable single sample and Table 4 for the stable couple sample. These tables each have the same layout. Each row presents, δ , the estimated coefficient on the homeownership variable in regression model (1) for a particular outcome variable, while each column presents the results from a different specification of the regression model. In other words, each cell in this table presents the results from a separate regression. We begin by discussing the results for singles.

In column (1), we first present results where model (1) is estimated using OLS regression including controls for each individual's gender, age (in a quadratic), education (less than year 12, year 12, post-school vocational or tertiary), and indicator variables for the year of observation. These results show that there is a strong positive correlation between homeownership and personal wellbeing across all domains, except the domain of satisfaction with their amount of free time, which is negatively correlated with homeownership. The strongest relationship is found for satisfaction with one's financial situation, where homeowners are estimated to be 0.88 points more satisfied relative to the overall mean score of 5.5.

As discussed above, the results in this column will be biased if there are unobserved characteristics of individuals that are correlated with both the likelihood of being a homeowner and self-reported wellbeing. Hence, in column (2), we now present results from regression models that also include individual fixed effects to control for time-invariant unobserved characteristics of individuals. Controlling for unobserved heterogeneity reveals that, for the stable single sample, most of the positive relationship between homeownership and personal wellbeing is not causal. In fact, we now find no evidence of a relationship

between homeownership and overall measures of personal wellbeing, such as physical health, mental health, satisfaction with family relationships and overall life satisfaction.

However, we do find that homeownership appears to have a positive causal impact on four domains of life satisfaction, i) satisfaction with one's home, ii) satisfaction with inclusion in one's community, iii) satisfaction with one's financial situation, and iv) satisfaction with one's neighbourhood. Perhaps unsurprisingly, for satisfaction with one's home, the estimated impact is quite large; homeowners are 0.77 points more satisfied with their home relative to an overall mean score of 7.5. Homeownership also has a strongly significant impact on satisfaction with inclusion in one's community, with scores 0.23 points higher relative to a mean score of 6.3. On the other hand, the effect sizes for finances and neighbourhood are quite small (0.13-0.14 points) and are only significant at the 10% level.

Column (3) present results from fixed effects models that also control for what region each individual lives in and the remoteness of their home, column (4) from models that include additional controls for the number of household members in different age groups, as well as the location of the household, and column (5) from models that include two final controls for whether individuals are employed and total household income along with the control variables in column (4). As discussed above, these control variables should be included if they are correlated with both changes in homeownership and changes in personal wellbeing, but do not belong in the model if they are intermediate outcome variables that also may be influences by homeownership.

The results show that adding these other control variables to the regression has no quantitative or qualitative impact on the relationship between homeownership and personal wellbeing. This suggests that these variables are neither important intermediate outcome variables affected by homeownership nor cofounders that are related to both homeownership

and personal wellbeing. Hence, we have some confidence that our main results are measuring the causal impact of homeownership.

Turning to our results for stable couples in Table 4, we again find that there is a strong cross-sectional correlation between homeownership and all measures of personal wellbeing besides satisfaction with the amount of one's free time. Again, controlling for individual fixed effects eliminates most of the positive relationship between homeownership and personal wellbeing. However, we do find that homeownership appears to have a positive causal impact on five domains of life satisfaction (the first four being the same as for stable singles), i) satisfaction with one's home, ii) satisfaction with inclusion in one's community, iii) satisfaction with one's financial situation, iv) satisfaction with one's neighbourhood, and v) satisfaction with one's safety, and on satisfaction with family relationships and overall life satisfaction.

As with stable singles, by far the largest impact of homeownership is on satisfaction with one's home. For stable couples, being a homeowner increases their satisfaction with their home by 1.29 points related to an overall average of 7.9 for this group. The effect sizes for satisfaction with one's community and with one's neighbourhood are larger than for stable singles, with homeownership resulting in 0.32-0.36 high scores on these domains. While statistically significant, effect sizes for the remaining outcomes are all small ranging from 0.06 for satisfaction with family relationships to 0.18 for satisfaction with one's safety. As with the stable single sample, adding further control variables has neither a quantitative nor qualitative impact on the results.

We next again present, in Tables 5 (stable singles) and 6 (stable couples), the results from the final regression specification in Tables 3 and 4. Hence, the coefficients on homeownership are identical here, but now we also show the coefficients for other variables in the regression model. We choose to present a limited set of the most interesting results for

reasons of space, but full regression results are available from the authors by request. The main reason for presenting these results is to enable the reader to judge the magnitude of the impact of homeownership against other variables that have an impact on personal wellbeing.

We start by discussing the four domains for stable singles where homeownership has a positive impact on wellbeing. The domain where homeownership has the largest impact is satisfaction with one's home (0.77 points). Here, homeownership is the predominant driver of satisfaction. The only other variables that have a large impact is whether individuals move from major cities (the default category) to other regions, in which case their satisfaction with their home increases by 0.46-0.47 points. The second largest impact is found for satisfaction with one's inclusion in the local community (0.22 points). Here, a similar size positive impact is also found for being employed and larger impacts are found for moving away from a major city, particularly to an outer regional or remote area.

Smaller impacts were found for financial satisfaction and satisfaction with one's neighbourhood (0.13 points for both). Being employed has a much stronger impact on financial satisfaction than being a homeowner, with the employed having 1.07 points higher satisfaction on this domain. Household income is also positively related to financial satisfaction although the impact of homeownership is bigger than the impact of a 100% increase in household income. On the other hand, there is little relationship between any of the other variables we control for and satisfaction with one's neighbourhood.

We next discuss the seven domains where homeownership leads to greater satisfaction for stable couples. Again, the domain where homeownership has the largest impact is satisfaction with one's home (1.28 points). As with singles, the only other variables that have a large impact is whether individuals move from major cities to other regions, in which case their satisfaction with their home increases by 0.22-0.39 points. The second largest impact is found for satisfaction with one's neighbourhood (0.34 points). Again,

residential location also has a large impact on satisfaction, with moving from major cities to other regions improving satisfaction with one's neighbourhood by 0.43-0.49 points. The third largest impact is found for satisfaction with one's inclusion in the local community (0.31 points). Here, residential location has a much larger impact than homeownership, with a move from a major city to an inner regional area increasing satisfaction by 0.52 points and moving to an outer regional or remote area by 0.88 points. Having more children also increases one's satisfaction with their inclusion in the local community by 0.08-0.17 points per child.

The remaining domains where homeownership has significantly positive impacts are: safety (0.17 point), finances (0.13 points), overall life (0.08 points) and family relationships (0.05 points). For safety, residential location has an equal or larger impact on satisfaction, with a move away from major cities increasing satisfaction by 0.17 points (to inner regional) or 0.38 points (to outer regional or remote). For finances, being employed has a much larger impact on satisfaction (0.47 points) and a 100% increase in household income has a similar size impact as becoming a homeowner, while each child in a household lowers financial satisfaction by about the same as the positive impact of becoming a homeowner.

For overall life satisfaction, age is one of the few other variables having an impact, with a one year increase in age leading to 0.01 points higher satisfaction for 40 year-olds and 0.02 points higher satisfaction for 50 year-olds (and lower satisfaction up to age 34). Household income is also related to life satisfaction but the effect size is very small (a 100% increase in income leads to a 0.02 point increase in satisfaction). For family relationships, being employed has a negative impact larger than the positive impact of being a homeowner, as does each child in any age range besides 0-5, for which each child has larger positive impacts.

3.3. Do Impacts Vary Across Groups?

We next examine whether the impact of homeownership varies for different subgroups. First, we examine whether changes in homeownership have differential effects on men versus women and households with and without children. Table 7 presents the results from estimating model (1), with the full set of control variables (i.e. specification 5 above) stratified by either gender or whether the household has children. We estimate these models by interacting an indicator variable for being female or having children with all explanatory variables (in theory, indicator variables should also be included for being female or having children, but the level effect of being female cannot be measured in a fixed effects model and we already control for the number of children in the household among the main covariates. Main effects are included in the regressions presented in Table 8). However, we present here the total effects for each group (i.e. the main effect for men/those without children and the main plus interaction effect for women/those with children). Again, this is done separately for the stable single and stable couple samples, with results for both presented in this table.

Among the four domains where we found significant impacts for the pooled sample of stable singles, we only find significant gender differences for the impact of homeownership on satisfaction with one's neighbourhood.⁶ The results indicate that there is only a significant impact for single men and that the effect size for them is similar to that for couples. We also find that homeownership leads to greater satisfaction with one's safety for men (again with an effect size similar to that for couples), but not for women, and that it leads to less satisfaction with one's free time for single women while having no impact on this domain for single men. The magnitude of this impact is large; satisfaction with one's free time declines by 0.35 points for single women who become homeowners. There is also weak evidence that any

⁶ The female interaction term for singles is actually negative and significant for five outcomes, satisfaction with one's safety, health, neighbourhood, free time and overall life satisfaction. However, for health and overall life satisfaction, neither the total effect for men nor for women is significant.

impact of homeownership on financial satisfaction only occurs for men (but, the gender difference is not significant). Overall, there is evidence that any positive impacts of homeownership on personal wellbeing are stronger for single men than for single women. For couples, there are no significant gender differences, but again there is weak evidence that any impact of homeownership on financial satisfaction only occurs for men and there is also weak evidence that homeownership has a positive impact on satisfaction with one's free time for men in couples.

Interestingly, the impact of homeownership on personal wellbeing does not differ for households with and without children, with none of the interaction effects significant in either the stable single or stable couple sample. There is weak evidence that, among stable singles, homeownership may have a positive impact on satisfaction with one's safety among individuals in household without children, while among stable couples, homeownership may have a positive impact on satisfaction with one's free time for couples with children. There is also weak evidence that the positive impact on satisfaction with one's family relationships found for stable couples may only occur for couples without children.

Next, we examine whether the relationship between homeownership and personal wellbeing varies with housing costs and duration in the particular residence. Table 8 presents similar results as in Table 7, but we now stratify households into three groups based on each of these variables. Again, we present total effects for each group. For housing costs, the three groups are i) lives for free, i.e. either that have paid off their mortgage or have zero rent, ii) housing costs are less than 25% of income for stable singles or 15% of income for stable couples, and iii) housing costs are greater than these thresholds. For duration in the particular residence, the three groups are i) 0-2 years, ii) 3-9 years, and iii) 10 years or more. In each case, the middle group is roughly 50% of the population with the other two groups are around 25% each.

For individuals with no housing costs, the impact of homeownership on personal wellbeing is significantly smaller than for those with normal housing costs, particularly for stable couples. For example, the impact of homeownership on satisfaction with one's home is 0.57 points smaller for stable singles and 0.44 points smaller for stable couples with zero housing costs (but still significantly positive in both cases). For stable couples with no housing costs, homeownership only significantly impacts this domain, while for those with normal housing costs, it has a significant positive impact on the same seven outcomes as in the pooled sample. On the other hand, there are few differences for individuals with high housing costs versus those with normal housing costs. The only notable difference is that for stable singles with high housing costs, homeownership has a significant negative impact on satisfaction with one's free time.

Overall, the impact of homeownership on personal wellbeing does not appear to strongly depend on how long the individual has been in their home. There is some suggestive evidence that homeownership has larger positive impact on individuals that are also fairly new to their home, especially for stable couples, and conversely that any positive impacts of homeownership are smaller for individuals that have been occupying the same home for a long duration, again especially for stable couples. However, few of the interaction terms are statistically significant.⁷

3.4. Examining Joint Changes in Couples Status and Homeownership

Lastly, we examine whether the impact of homeownership on personal wellbeing differs for individuals who also change couple status at the same time versus those who remain in the same status. This regression is estimated on the change status sample, i.e. the data for individuals who either change from single to couple or vice-versa (or change partner) during

⁷ Going forward, we will examine an alternative specification which uses to the SCQ question on whether a household has moved in the last 12 months to stratify the sample into people who moved to change homeownership status versus those who remained in the same residence and changed homeownership status .

the sample period. Using this sample, we estimate equation (1) stratified by couple status. The results are presented in Table 9. As in Table 7 and 8, we present the total effects for singles and couples. We also present the estimated impact of changing from single to couple, without changing homeownership status.

Interestingly, we find fairly similar impacts of homeownership on personal wellbeing for singles and couples in the change status sample. The only significant differences are for overall life satisfaction and financial satisfaction, and in both cases the interaction term is not large in magnitude. Overall, we find positive impacts of homeownership on the same domains as found for individuals in stable couple sample, with somewhat smaller effect sizes that are between those found for stable couples and those found for stable singles. Perhaps surprisingly, changing couple status only significantly impacts satisfaction with one's finances (becoming a couple has a negative impact) and satisfaction with one's local inclusion (becoming a couple has a positive impact). However, the effects sizes for these and other domains are quite large, so it appears questionable to how much power our model has for estimating the impact of partnering on life satisfaction. This is likely because a simple before and after comparison is not the correct way to examine a dynamic change like this.

4. Conclusions

Advocates for promoting homeownership have argued that ownership is consistently linked to improved life outcomes for individuals as well as to more cohesive communities. In this paper, we use nine waves of longitudinal data from the nationally representative Household, Income and Labour Dynamics of Australia (HILDA) survey to examine the causal relationship between homeownership and a number of measures of personal wellbeing. As HILDA follows all original sample members regardless of whether they have moved to other residences in Australia and collects detailed information about their current housing circumstances, we are able to estimate fixed effects regression models that allow us to control

for unobservable differences in individuals that are related to both homeownership and personal wellbeing. This modelling approach allows us to potentially identify the causal relationship between homeownership and personal wellbeing.

We find that homeownership has a strong causal impact on whether individuals are satisfied with their home and smaller but meaningful effects on whether individuals are satisfied with their inclusion in the local community and with their neighbourhood. While we also find evidence that homeownership leads individuals in couples to have higher overall life satisfaction and satisfaction with their family relationships, the magnitude of these impacts are less than 1% of mean scores on these domains. Further stratifying our models reveals that for singles, any positive impacts of homeownership on personal wellbeing are stronger for men than for women, and we even find evidence that homeownership leads single women to be less satisfied with their free time. Positive impacts of homeownership are also smaller for individual with no housing costs, such as those living at home with their parents.

In summary, our results suggest that homeownership has at most small positive impact on overall measures of life satisfaction, but does lead to better feeling of inclusion and satisfaction with one's neighbourhood, particularly for single men and couples. Couples generally have much higher homeownership rates than singles, which suggests that peer effects might be important for evaluating one's place in the local community. One important follow-up question is whether homeowners are also more likely to participate in neighbourhood activities, as opposed to just being more satisfied with their neighbourhood.

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Table 1: Main Summary Statistics for Different Household Types

	Overall	Stable Single	Stable Couple	Change Status
Age	43.5	43.9	44.0	44.0
Female	52.5%	55.7%	52.0%	51.5%
Education - < Year 12	28.6%	30.3%	27.9%	29.2%
Education - Year 12	12.6%	13.0%	12.2%	12.2%
Education - Certificate	33.4%	33.8%	33.4%	35.3%
Education - Bachelor or higher	25.4%	22.9%	26.5%	23.2%
Major City	62.0%	64.4%	60.8%	61.6%
Inner Regional	24.2%	22.6%	25.1%	23.8%
Outer Regional and Remote	13.8%	13.1%	14.0%	14.7%
Any Child in the Household	49.9%	26.3%	58.8%	40.1%
Total Number of Children	1.02	0.47	1.23	0.79
Total Number of Adults	1.90	1.26	2.07	1.73
Employed	75.7%	70.4%	77.8%	71.7%
Real Total Household Income Per Adult	41,479	37,129	42,932	40,581
Real Total Household Income Per Capita	26,988	26,973	26,970	27,858
Homeowner	71.8%	50.3%	80.2%	62.8%
Median Housing Cost Income Ratio	0.11	0.15	0.10	0.13
SF-36 Physical Health	50.4	49.5	50.6	50.2
SF-36 Mental Health	48.6	46.4	49.5	47.5
Satisfaction with Family Relationships	7.8	7.1	8.1	7.5
Overall Life Satisfaction	7.8	7.3	8.0	7.6
Satisfaction with One's Home	6.3	7.5	7.9	7.6
Satisfaction with Employment Opportunities	8.0	6.6	7.2	6.9
Satisfaction with Financial Situation	6.7	5.5	6.5	6.0
Satisfaction with Safety	7.3	7.7	8.1	7.9
Satisfaction with Inclusion in Community	7.9	6.3	6.9	6.5
Satisfaction with Health	6.2	6.9	7.4	7.2
Satisfaction with Neighbourhood	7.8	7.6	8.0	7.7
Satisfaction with Amount of Free Time	7.0	6.4	6.2	6.3
Year 2001	12.5%	10.3%	11.4%	12.4%
Year 2002	11.5%	11.7%	11.8%	12.3%
Year 2003	11.1%	11.5%	11.4%	12.0%
Year 2004	10.7%	11.3%	10.9%	11.5%
Year 2005	10.9%	11.4%	11.0%	11.6%
Year 2006	10.9%	11.5%	11.1%	10.9%
Year 2007	10.7%	11.3%	11.0%	10.4%
Year 2008	10.7%	11.2%	10.9%	9.8%
Year 2009	11.1%	9.7%	10.4%	9.3%
Number of Individuals	13,843	3,342	8,765	2,696
Number of Observations	77,866	17,603	54,569	18,145

Note: All values are in 2001 dollars. Values are means or percentages unless otherwise indicated. Stable singles are adults aged between 25 and 64 who remain single for at least 2 consecutive waves. Stable couples are adults who have remained partnered to each other for at least 2 consecutive years, where at least one side of the couple is aged between 25 and 64. Change status are adults who are aged between 25 and 64 whose couple status changed at least once during the period, either between single and coupled, or by changing partners.

Table 2: Additional Characteristics of Homeowners and Renters

Year of Observation	2001	2002	2003	2004	2005	2006	2007	2008	2009
All Households									
Homeowner	72.9%	73.2%	73.0%	72.5%	71.6%	70.9%	70.7%	71.2%	69.6%
Moved Since Last Wave		18.1%	19.8%	17.9%	17.9%	17.4%	18.0%	16.8%	17.2%
Years in Current Dwelling	7.99	8.10	8.05	8.14	8.17	8.18	8.10	8.23	8.23
Number of Bedrooms	3.24	3.24	3.24	3.28	3.27	3.27	3.29	3.28	3.30
Median Housing Cost Income Ratio	0.10	0.09	0.10	0.11	0.11	0.12	0.12	0.13	0.12
Overall Sample Size	9,718	8,967	8,673	8,344	8,466	8,467	8,324	8,293	8,614
Homeowners									
Moved Since Last Wave		11.1%	12.1%	10.1%	10.5%	10.2%	10.2%	9.3%	9.0%
Years in Current Dwelling	9.90	9.81	9.74	9.84	9.94	9.92	9.82	9.89	10.01
Number of Bedrooms	3.44	3.41	3.43	3.45	3.47	3.47	3.49	3.49	3.50
Real Value of Home	270,675	302,183	348,064	382,457	392,265	415,971	435,123	429,518	438,199
Owns Home Outright	48.0%	49.0%	46.7%	45.8%	44.7%	42.0%	41.4%	40.3%	38.7%
Had/Has Mortgage	80.8%	80.5%	81.3%	82.2%	83.0%	83.4%	84.0%	84.6%	85.4%
Mortgage is Fully Paid Off	34.5%	34.2%	31.0%	30.7%	29.3%	27.2%	27.6%	27.7%	26.8%
Real Outstanding Mortgage Value	98,163	105,233	115,686	127,134	134,647	145,677	151,338	157,913	168,568
Real Monthly Mortgage Repayments	512	499	546	595	655	745	796	892	832
Median Housing Cost Income Ratio	0.04	0.02	0.05	0.05	0.06	0.08	0.08	0.10	0.09
Median Debt to Value Ratio	0.44	0.41	0.37	0.36	0.38	0.38	0.38	0.40	0.43
Median Debt to Income Ratio	1.25	1.30	1.37	1.48	1.56	1.59	1.59	1.71	1.71
Number of Homeowners	7,082	6,562	6,329	6,049	6,060	6,006	5,883	5,908	5,999
Renters									
Moved Since Last Wave		37.2%	40.4%	38.6%	36.3%	34.9%	36.7%	35.4%	36.0%
Years in Current Dwelling	2.86	3.41	3.47	3.65	3.71	3.92	3.93	4.11	4.14
Number of Bedrooms	2.73	2.76	2.75	2.81	2.77	2.79	2.81	2.78	2.85
Real Monthly Rent	707	708	726	750	764	782	821	850	900
Median Housing Cost Income Ratio	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17
Total Renters	2,636	2,405	2,344	2,295	2,406	2,461	2,441	2,385	2,615

Note: All values are in 2001 dollars. Values are means or percentages unless otherwise indicated.

Table 3: Relationship Between Homeownership and Wellbeing for the Stable Single Sample

	(1) OLS - Baseline Controls	(2) FE - Baseline Controls	(3) FE - (2) Plus Controls for Location	(4) FE - (3) Plus Controls for Demogs	(5) FE - (4) Plus Controls for Emp/Inc	Mean of Outcome	Number of Individuals	Number of Observations
SF-36 Physical Health	2.04*** (0.344)	-0.370 (0.279)	-0.338 (0.278)	-0.284 (0.281)	-0.304 (0.281)	49.5	3,205	14,955
SF-36 Mental Health	1.60*** (0.362)	0.054 (0.381)	0.099 (0.381)	0.025 (0.385)	-0.004 (0.384)	46.4	3,205	14,955
Satisfaction with Family Relationships	0.282*** (0.067)	0.053 (0.068)	0.053 (0.068)	0.047 (0.070)	0.045 (0.070)	7.09	3,151	14,649
Overall Life Satisfaction	0.209*** (0.050)	0.013 (0.055)	0.012 (0.055)	0.004 (0.055)	0.003 (0.055)	7.30	3,342	17,588
Satisfaction with One's Home	0.687*** (0.056)	0.765*** (0.084)	0.759*** (0.084)	0.772*** (0.085)	0.771*** (0.085)	7.47	3,342	17,580
Satisfaction with Employment Opportunities	0.414*** (0.072)	-0.067 (0.079)	-0.055 (0.078)	-0.018 (0.079)	-0.019 (0.076)	6.60	3,231	15,528
Satisfaction with Financial Situation	0.884*** (0.070)	0.142* (0.077)	0.144* (0.077)	0.129* (0.077)	0.126* (0.074)	5.55	3,342	17,586
Satisfaction with Safety	0.115** (0.053)	0.094 (0.061)	0.091 (0.061)	0.095 (0.061)	0.095 (0.061)	7.68	3,342	17,588
Satisfaction with Inclusion in Community	0.305*** (0.065)	0.230*** (0.074)	0.223*** (0.073)	0.218*** (0.073)	0.219*** (0.073)	6.33	3,342	17,574
Satisfaction with Health	0.376*** (0.069)	0.011 (0.056)	0.014 (0.055)	0.018 (0.055)	0.019 (0.055)	6.91	3,342	17,589
Satisfaction with Neighbourhood	0.200*** (0.054)	0.128* (0.072)	0.119* (0.072)	0.127* (0.074)	0.126* (0.074)	7.60	3,342	17,583
Satisfaction with Amount of Free Time	-0.146** (0.067)	-0.092 (0.082)	-0.100 (0.082)	-0.121 (0.081)	-0.125 (0.081)	6.42	3,342	17,579

Note: Standard errors robust to correlation over time in outcomes for individuals in parentheses. Each cell in the table is a coefficient from a different regression equation with the listed variable as the outcome. Column (1) presents the results from OLS regressions which control for gender, age, age-squared, indicators for whether an individual's highest education is finished year 12, post-school vocational or tertiary, and indicator variables for the year of observation. Column (2) presents the results from regression models that also include individual fixed effects along with the baseline control variables. Column (3) presents the results from fixed effects regressions that also control for each household's location, column (4) from fixed effects regressions that also control for the number of individuals in the household in different age groups, and column (5) from fixed effects regressions that also control for whether an individual is employed and total household income.*** p<0.01, ** p<0.05, * p<0.1

Table 4: Relationship Between Homeownership and Wellbeing for the Stable Couple Sample

	(1) OLS - Baseline Controls	(2) FE - Baseline Controls	(3) FE - (2) Plus Controls for Location	(4) FE - (3) Plus Controls for Demogs	(5) FE - (4) Plus Controls for Emp/Inc	Mean of Outcome	Number of Individuals	Number of Observations
SF-36 Physical Health	1.84*** (0.209)	-0.079 (0.153)	-0.045 (0.153)	-0.057 (0.153)	-0.071 (0.153)	50.6	8,200	48,485
SF-36 Mental Health	2.01*** (0.223)	-0.011 (0.171)	-0.025 (0.171)	-0.022 (0.171)	-0.041 (0.171)	49.5	8,200	48,485
Satisfaction with Family Relationships	0.197*** (0.036)	0.057** (0.028)	0.056** (0.028)	0.047* (0.028)	0.047* (0.028)	8.09	8,306	49,971
Overall Life Satisfaction	0.262*** (0.031)	0.082*** (0.025)	0.081*** (0.025)	0.079*** (0.025)	0.078*** (0.025)	7.96	8,762	54,536
Satisfaction with One's Home	0.938*** (0.041)	1.29*** (0.059)	1.27*** (0.059)	1.28*** (0.059)	1.28*** (0.059)	7.88	8,760	54,542
Satisfaction with Employment Opportunities	0.461*** (0.049)	0.017 (0.040)	0.032 (0.040)	0.037 (0.040)	0.019 (0.040)	7.17	8,108	47,730
Satisfaction with Financial Situation	0.898*** (0.047)	0.126*** (0.043)	0.133*** (0.043)	0.141*** (0.043)	0.132*** (0.043)	6.54	8,764	54,553
Satisfaction with Safety	0.220*** (0.035)	0.183*** (0.032)	0.172*** (0.032)	0.174*** (0.032)	0.173*** (0.032)	8.11	8,763	54,541
Satisfaction with Inclusion in Community	0.494*** (0.046)	0.323*** (0.047)	0.312*** (0.046)	0.306*** (0.046)	0.305*** (0.046)	6.87	8,760	54,529
Satisfaction with Health	0.427*** (0.045)	0.035 (0.031)	0.033 (0.031)	0.034 (0.031)	0.031 (0.031)	7.38	8,764	54,556
Satisfaction with Neighbourhood	0.407*** (0.038)	0.357*** (0.046)	0.339*** (0.046)	0.337*** (0.046)	0.336*** (0.046)	7.97	8,763	54,540
Satisfaction with Amount of Free Time	-0.016 (0.048)	0.043 (0.052)	0.035 (0.052)	0.053 (0.051)	0.066 (0.050)	6.16	8,763	54,540

Note: Standard errors robust to correlation over time in outcomes for individuals and across individuals in the same couple in parentheses. Each cell in the table is a coefficient from a different regression equation with the listed variable as the outcome. See the footnote to Table 3 for further information. *** p<0.01, ** p<0.05, * p<0.1

Table 5: Fixed Effect Regression of the Relationship between Homeownership and Wellbeing for the Stable Single Sample

	SF-36	SF-36	Satisfaction with										Amount of Free Time
	Physical Health	Mental Health	Family Relations	Overall Life	One's Home	Employ Opps	Financial Situation	Safety	Local Inclusion	Health	Neighbour hood	Amount of Free Time	
Own Home	-0.304 (0.281)	-0.004 (0.384)	0.045 (0.070)	0.003 (0.055)	0.771*** (0.085)	-0.019 (0.076)	0.126* (0.074)	0.095 (0.061)	0.219*** (0.073)	0.019 (0.055)	0.126* (0.074)	-0.125 (0.081)	
Age	0.283 (0.341)	-0.276 (0.453)	-0.112 (0.087)	-0.066 (0.062)	-0.154* (0.080)	0.193** (0.088)	-0.062 (0.080)	-0.084 (0.068)	0.034 (0.086)	-0.009 (0.065)	0.028 (0.068)	-0.152 (0.092)	
Age Square (/100)	-0.392** (0.187)	0.081 (0.221)	0.021 (0.044)	0.064** (0.032)	0.083** (0.041)	-0.054 (0.052)	0.047 (0.048)	0.029 (0.036)	-0.052 (0.043)	0.054 (0.036)	-0.003 (0.039)	0.030 (0.052)	
Employed	1.26*** (0.303)	1.72*** (0.350)	0.046 (0.067)	0.369*** (0.054)	0.004 (0.064)	1.53*** (0.085)	1.07*** (0.073)	0.077 (0.058)	0.185*** (0.064)	0.441*** (0.063)	0.094 (0.060)	-0.827*** (0.085)	
Real Log Hhold Income	0.050 (0.060)	0.088 (0.072)	0.015 (0.016)	0.016 (0.011)	0.008 (0.013)	0.052** (0.020)	0.076*** (0.017)	0.002 (0.013)	0.005 (0.016)	0.003 (0.013)	0.010 (0.014)	0.007 (0.018)	
Inner Regional	0.042 (0.565)	-0.459 (0.849)	-0.062 (0.128)	0.179 (0.110)	0.473*** (0.166)	0.039 (0.153)	0.318** (0.150)	0.091 (0.130)	0.295* (0.172)	0.030 (0.117)	0.254 (0.170)	0.414** (0.192)	
Outer Regional	-0.677 (0.670)	-1.12 (1.098)	-0.065 (0.162)	-0.060 (0.146)	0.464** (0.215)	-0.383* (0.230)	0.237 (0.196)	0.296 (0.183)	0.780*** (0.223)	-0.189 (0.138)	0.266 (0.196)	0.318 (0.243)	
# Children Aged 0-5	-0.027 (0.348)	-0.165 (0.447)	-0.045 (0.073)	0.0004 (0.068)	-0.145 (0.097)	0.004 (0.101)	-0.007 (0.089)	-0.187** (0.095)	-0.155* (0.093)	-0.012 (0.076)	-0.201** (0.082)	-0.575*** (0.111)	
# Children Aged 6-12	0.417 (0.290)	-0.017 (0.347)	-0.034 (0.065)	0.031 (0.051)	-0.011 (0.068)	-0.093 (0.076)	0.075 (0.068)	-0.078 (0.058)	-0.002 (0.074)	0.030 (0.051)	-0.059 (0.061)	-0.289*** (0.087)	
# Children Aged 13-15	-0.042 (0.291)	0.175 (0.378)	-0.147** (0.067)	0.019 (0.059)	-0.029 (0.077)	0.010 (0.091)	0.206*** (0.074)	-0.045 (0.059)	-0.054 (0.072)	0.041 (0.054)	-0.052 (0.065)	-0.296*** (0.093)	
# Children Aged 16-17	-0.425 (0.326)	-0.214 (0.459)	-0.085 (0.069)	-0.103 (0.066)	-0.090 (0.082)	-0.162* (0.098)	-0.100 (0.087)	-0.072 (0.071)	-0.108 (0.083)	-0.062 (0.069)	-0.049 (0.073)	-0.245** (0.114)	
# Children Aged 18-20	-0.384 (0.327)	0.082 (0.417)	-0.092 (0.078)	-0.049 (0.058)	-0.080 (0.073)	-0.190** (0.090)	-0.022 (0.081)	-0.041 (0.066)	-0.009 (0.074)	-0.061 (0.065)	-0.049 (0.071)	-0.176* (0.097)	
Mean of outcome	49.5	46.4	7.09	7.30	7.47	6.60	5.55	7.68	6.33	6.91	7.60	6.42	
R-squared	0.020	0.010	0.006	0.013	0.017	0.063	0.058	0.009	0.010	0.012	0.004	0.022	
Individuals	3,205	3,205	3,151	3,342	3,342	3,231	3,342	3,342	3,342	3,342	3,342	3,342	
Observations	14,955	14,955	14,649	17,588	17,580	15,528	17,586	17,588	17,574	17,589	17,583	17,579	

Note: Standard errors robust to correlation over time in outcomes for individuals in parentheses. Each column presents the results from a different regression. Controls variables are also included for the number of adults in different age groups, the location of each household and the year of observation. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Fixed Effect Regression of the Relationship between Homeownership and Wellbeing for the Stable Couple Sample

	SF-36 Physical Health	SF-36 Mental Health	Family Relations	Overall Life	One's Home	Employ Opps	Financial Situation	Safety	Local Inclusion	Health	Neighbour hood	Amount of Free Time
Own Home	-0.071 (0.153)	-0.041 (0.171)	0.047* (0.028)	0.078*** (0.025)	1.28*** (0.059)	0.019 (0.040)	0.132*** (0.043)	0.173*** (0.032)	0.305*** (0.046)	0.031 (0.031)	0.336*** (0.046)	0.066 (0.050)
Age	0.490*** (0.181)	-0.327 (0.209)	-0.086*** (0.031)	-0.049* (0.028)	0.004 (0.045)	0.020 (0.050)	0.054 (0.042)	-0.046 (0.035)	0.017 (0.043)	-0.048 (0.034)	0.024 (0.036)	-0.072 (0.055)
Age Square (/100)	-0.380*** (0.104)	0.286** (0.113)	0.085*** (0.018)	0.0718*** (0.017)	0.027 (0.025)	0.037 (0.031)	-0.001 (0.026)	0.046** (0.021)	0.006 (0.026)	0.094*** (0.021)	0.001 (0.023)	0.066** (0.032)
Employed	1.03*** (0.153)	1.00*** (0.163)	-0.072*** (0.021)	0.015 (0.022)	0.0026 (0.031)	1.24*** (0.052)	0.467*** (0.035)	0.037 (0.027)	0.070** (0.033)	0.192*** (0.029)	0.055** (0.028)	-0.807*** (0.047)
Real Log Hhold Income	-0.032 (0.044)	0.116** (0.052)	0.009 (0.008)	0.017** (0.007)	0.019 (0.012)	0.0361*** (0.014)	0.122*** (0.013)	0.019* (0.010)	-0.009 (0.009)	0.006 (0.009)	0.008 (0.008)	0.004 (0.012)
Inner Regional	-1.04*** (0.296)	0.56 (0.370)	-0.003 (0.055)	0.036 (0.054)	0.391*** (0.104)	-0.257*** (0.089)	-0.123 (0.084)	0.173** (0.069)	0.524*** (0.107)	0.060 (0.068)	0.490*** (0.101)	0.149 (0.108)
Outer Regional	-1.02*** (0.375)	0.418 (0.457)	-0.108 (0.075)	0.030 (0.069)	0.216 (0.138)	-0.365*** (0.118)	0.168 (0.122)	0.377*** (0.087)	0.883*** (0.134)	0.026 (0.088)	0.430*** (0.127)	0.231 (0.148)
# Children Aged 0-5	0.223** (0.095)	-0.419*** (0.106)	0.077*** (0.018)	-0.023 (0.016)	-0.135*** (0.028)	-0.045* (0.026)	-0.146*** (0.025)	-0.058*** (0.019)	0.082*** (0.027)	-0.012 (0.019)	0.028 (0.024)	-0.632*** (0.034)
# Children Aged 6-12	0.451*** (0.100)	-0.352*** (0.115)	-0.058*** (0.018)	-0.015 (0.017)	-0.059** (0.029)	-0.049* (0.028)	-0.107*** (0.027)	-0.028 (0.021)	0.170*** (0.027)	0.054*** (0.021)	0.045* (0.025)	-0.298*** (0.034)
# Children Aged 13-15	0.276** (0.117)	-0.405*** (0.133)	-0.128*** (0.021)	-0.012 (0.020)	0.006 (0.031)	0.015 (0.031)	-0.089*** (0.030)	0.015 (0.023)	0.134*** (0.028)	0.052** (0.024)	0.038 (0.026)	-0.252*** (0.036)
# Children Aged 16-17	0.212* (0.128)	-0.478*** (0.145)	-0.107*** (0.021)	-0.031 (0.020)	-0.009 (0.031)	-0.001 (0.035)	-0.070** (0.032)	0.019 (0.025)	0.089*** (0.031)	0.040 (0.025)	0.031 (0.027)	-0.194*** (0.039)
# Children Aged 18-20	0.175 (0.129)	-0.218 (0.142)	-0.136*** (0.021)	-0.016 (0.019)	0.002 (0.031)	0.012 (0.035)	-0.083*** (0.032)	0.015 (0.024)	0.053* (0.030)	0.009 (0.025)	0.001 (0.025)	-0.160*** (0.037)
Mean of outcome	50.6	49.5	8.09	7.96	7.88	7.17	6.54	8.11	6.87	7.38	7.97	6.16
R-squared	0.013	0.005	0.022	0.007	0.045	0.043	0.032	0.009	0.013	0.013	0.011	0.032
Individuals	8,200	8,200	8,306	8,762	8,760	8,108	8,764	8,763	8,760	8,764	8,763	8,763
Observations	48,485	48,485	49,971	54,536	54,542	47,730	54,553	54,541	54,529	54,556	54,540	54,540

Note: Standard errors robust to correlation over time in outcomes for individuals and across individuals in the same couple in parentheses. Each column presents the results from a different regression. See the footnote to Table 5 for further information. *** p<0.01, ** p<0.05, * p<0.1

Table 7: FE Regression of the Relationship between Homeownership and Wellbeing for Different Demographic Groups

	SF-36	SF-36	Satisfaction with									
	Physical Health	Mental Health	Family Relations	Overall Life	One's Home	Employ Opps	Financial Situation	Safety	Local Inclusion	Health	Neighbour hood	Amount of Free Time
(A) Stable Single Sample												
Men	-0.401 (0.421)	0.359 (0.583)	0.064 (0.104)	0.122 (0.080)	0.874*** (0.121)	0.044 (0.104)	0.192* (0.103)	0.219** (0.086)	0.226** (0.098)	0.125 (0.077)	0.324*** (0.094)	0.110 (0.112)
Women	-0.257 (0.381)	-0.302 (0.503)	0.028 (0.095)	-0.095 (0.074)	0.675*** (0.118)	-0.073 (0.107)	0.084 (0.106)	-0.007 (0.085)	0.205* (0.106)	-0.072 (0.077)	-0.060 (0.110)	-0.352*** (0.114)
No Children	-0.395 (0.315)	0.146 (0.426)	0.066 (0.080)	0.040 (0.061)	0.737*** (0.092)	0.014 (0.079)	0.119 (0.077)	0.117* (0.065)	0.166** (0.078)	0.050 (0.061)	0.114 (0.081)	-0.117 (0.088)
Have Children	-0.222 (0.474)	-0.449 (0.607)	-0.024 (0.106)	-0.103 (0.095)	0.845*** (0.145)	-0.076 (0.144)	0.151 (0.144)	0.063 (0.111)	0.354*** (0.126)	-0.086 (0.093)	0.138 (0.119)	-0.184 (0.137)
(B) Stable Couple Sample												
Men	-0.195 (0.187)	0.018 (0.221)	0.026 (0.036)	0.097*** (0.032)	1.22*** (0.071)	0.053 (0.049)	0.178*** (0.053)	0.154*** (0.042)	0.298*** (0.061)	0.039 (0.040)	0.394*** (0.058)	0.111* (0.063)
Women	0.046 (0.235)	-0.101 (0.238)	0.068* (0.039)	0.058* (0.034)	1.34*** (0.077)	-0.024 (0.060)	0.080 (0.058)	0.194*** (0.043)	0.315*** (0.059)	0.022 (0.044)	0.278*** (0.061)	0.014 (0.072)
No Children	-0.418* (0.227)	-0.034 (0.241)	0.079* (0.041)	0.075** (0.034)	1.25*** (0.068)	0.016 (0.055)	0.190*** (0.055)	0.213*** (0.044)	0.322*** (0.061)	-0.007 (0.044)	0.360*** (0.058)	0.011 (0.068)
Have Children	0.204 (0.180)	-0.089 (0.213)	0.002 (0.033)	0.076** (0.031)	1.31*** (0.077)	0.011 (0.049)	0.100* (0.054)	0.149*** (0.039)	0.298*** (0.057)	0.051 (0.038)	0.322*** (0.059)	0.106* (0.062)

Note: Standard errors robust to correlation over time in outcomes for individuals and across individuals within couples in parentheses. Controls variables are also included each individual's age, age squared, employment status, and household income, for the number of children and adults in different age groups, the location and remoteness of each household and the year of observation separately for each subgroup in the regression along with indicator variables for the subgroup of the observation. *** p<0.01, ** p<0.05, * p<0.1

Table 8: FE Regression of the Relationship between Homeownership and Wellbeing for Subsamples of the Stable Couple Sample

	SF-36	SF-36	Satisfaction with									
	Physical Health	Mental Health	Family Relations	Overall Life	One's Home	Employ Opps	Financial Situation	Safety	Local Inclusion	Health	Neighbour hood	Amount of Free Time
(A) Stable Single Sample												
Normal Housing Costs	-0.29 (0.341)	-0.359 (0.436)	0.033 (0.085)	-0.020 (0.064)	0.908*** (0.100)	-0.011 (0.092)	0.077 (0.091)	0.052 (0.074)	0.272*** (0.091)	0.029 (0.066)	0.088 (0.089)	-0.053 (0.099)
No Housing Costs	-0.715 (0.529)	1.23* (0.722)	-0.040 (0.149)	0.034 (0.104)	0.343** (0.147)	-0.115 (0.136)	0.091 (0.138)	0.016 (0.123)	0.201 (0.130)	0.058 (0.096)	0.211* (0.113)	-0.035 (0.143)
High Housing Costs	0.228 (0.390)	-0.417 (0.538)	0.152 (0.099)	0.003 (0.082)	0.841*** (0.116)	-0.010 (0.109)	0.154 (0.106)	0.142 (0.089)	0.128 (0.104)	-0.041 (0.086)	0.074 (0.109)	-0.267** (0.114)
Med Duration in Home	0.106 (0.387)	0.504 (0.495)	-0.035 (0.090)	-0.045 (0.072)	0.871*** (0.102)	0.006 (0.100)	0.078 (0.097)	0.135* (0.082)	0.266*** (0.096)	0.111 (0.072)	0.204** (0.087)	0.015 (0.103)
Short Duration in Home	-0.532* (0.306)	-0.210 (0.420)	0.053 (0.078)	0.059 (0.061)	0.818*** (0.090)	-0.027 (0.083)	0.203** (0.080)	0.090 (0.064)	0.173** (0.079)	-0.013 (0.062)	0.110 (0.083)	-0.125 (0.090)
Long Duration in Home	-0.745 (0.654)	0.164 (0.798)	0.066 (0.174)	-0.189* (0.108)	0.753*** (0.170)	-0.041 (0.198)	0.079 (0.164)	0.089 (0.140)	0.161 (0.155)	-0.036 (0.133)	0.048 (0.131)	-0.300* (0.179)
(B) Stable Couple Sample												
Normal Housing Costs	-0.049 (0.166)	0.074 (0.186)	0.070** (0.030)	0.084*** (0.027)	1.33*** (0.065)	0.031 (0.043)	0.142*** (0.047)	0.191*** (0.035)	0.355*** (0.050)	0.050 (0.034)	0.353*** (0.051)	0.077 (0.055)
No Housing Costs	-0.113 (0.346)	-0.074 (0.343)	-0.015 (0.061)	0.070 (0.059)	0.893*** (0.126)	-0.129 (0.102)	-0.045 (0.098)	0.075 (0.068)	0.034 (0.098)	-0.048 (0.069)	0.136 (0.087)	0.045 (0.119)
High Housing Costs	0.137 (0.321)	-0.070 (0.351)	-0.022 (0.055)	0.090* (0.053)	1.20*** (0.093)	0.162** (0.082)	0.262*** (0.085)	0.153** (0.064)	0.281*** (0.083)	0.040 (0.061)	0.295*** (0.077)	-0.031 (0.096)
Med Duration in Home	-0.224 (0.219)	0.011 (0.251)	0.076* (0.040)	0.045 (0.036)	1.28*** (0.076)	-0.012 (0.058)	0.024 (0.060)	0.138*** (0.045)	0.247*** (0.060)	0.014 (0.045)	0.250*** (0.057)	0.134* (0.071)
Short Duration in Home	-0.053 (0.165)	-0.015 (0.190)	0.045 (0.030)	0.102*** (0.027)	1.36*** (0.062)	0.038 (0.043)	0.192*** (0.047)	0.203*** (0.035)	0.312*** (0.050)	0.039 (0.034)	0.399*** (0.050)	0.034 (0.054)
Long Duration in Home	0.676 (0.510)	0.054 (0.466)	-0.004 (0.082)	-0.009 (0.083)	0.910*** (0.139)	0.018 (0.138)	-0.067 (0.125)	0.131 (0.095)	0.165 (0.108)	0.122 (0.098)	0.093 (0.101)	0.170 (0.151)

Note: Standard errors robust to correlation over time in outcomes for individuals and across individuals within couples in parentheses. Controls variables are also included each individual's age, age squared, employment status, and household income, for the number of children and adults in different age groups, the location and remoteness of each household and the year of observation separately for each subgroup in the regression along with indicator variables for the subgroup of the observation. *** p<0.01, ** p<0.05, * p<0.1

Table 9: FE Regression of the Relationship between Homeownership and Wellbeing for Individuals Who Change Couple Status

	SF-36	SF-36	Satisfaction with									Amount of Free Time
	Physical Health	Mental Health	Family Relations	Overall Life	One's Home	Employ Opps	Financial Situation	Safety	Local Inclusion	Health	Neighbour hood	
Homeown - Single	0.401 (0.283)	-0.343 (0.392)	0.101 (0.067)	0.050 (0.057)	0.886*** (0.086)	0.089 (0.074)	0.233*** (0.078)	0.107* (0.059)	0.320*** (0.074)	0.085 (0.056)	0.164** (0.069)	-0.066 (0.086)
Homeown - Couple	-0.085 (0.268)	0.276 (0.320)	0.151*** (0.057)	0.144*** (0.045)	1.01*** (0.079)	0.099 (0.070)	0.413*** (0.071)	0.127** (0.056)	0.373*** (0.072)	0.098* (0.053)	0.261*** (0.068)	0.062 (0.078)
Couple vs Single	-3.49 (3.803)	1.14 (4.746)	-0.487 (0.929)	-0.018 (0.731)	-0.596 (0.988)	-0.565 (1.054)	-2.30** (1.006)	0.563 (0.780)	1.71* (1.018)	-0.292 (0.733)	-0.066 (0.871)	-1.77 (1.124)
Mean outcome	50.2	47.5	7.48	7.63	7.62	6.91	5.97	7.90	6.49	7.17	7.75	6.30
R-squared	0.018	0.022	0.074	0.048	0.043	0.074	0.074	0.032	0.021	0.016	0.016	0.038
Individuals	2,548	2,548	2,582	2,696	2,696	2,358	2,696	2,696	2,695	2,696	2,696	2,696
Observations	15,647	15,647	16,134	18,133	18,128	15,351	18,137	18,134	18,124	18,138	18,130	18,133

Note: Standard errors robust to correlation over time in outcomes for individuals in parentheses. Controls variables are also included each individual's age, age squared, employment status, and household income, for the number of children and adults in different age groups, the location and remoteness of each household and the year of observation. These are interacted with whether an individual is single or in a couple in any given year. *** p<0.01, ** p<0.05, * p<0.1