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Do Homeowners Have More Social Capital? A Quantitative Approach

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Abstract: *Behind the support for homeownership in many countries, there is widespread belief that homeownership creates better citizens. Recognising that homeownership is a more time-intensive form of tenancy than renting, but also that the valuation of some forms of social capital is complementary to the residential property value, we hypothesise that ownership will reduce engagement in some forms of social interactions and increase it in others. Using a survey data set of Danish households we test this hypothesis. The results indicate that homeowners tend to be selective in their investments in social capital.*

Keywords: Home ownership; social capital; Allocation of time theory;

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Introduction

Some governments (including those of the US, Australia, Austria, the UK, Finland, etc.) have deliberately favoured homeownership by, among other things, offering cash grants to first-time buyers or providing incentives to convert rental stock to ownership housing. Behind the support of homeownership is an empirically founded belief that homeownership may have various positive externalities (Rohe et al. 2001; Dietz & Haurin, 2003). The objective of this paper is to provide new empirical evidence on the relationship between housing ownership and individual social capital, as we try to answer the question: Do differences in housing tenure status imply a significantly different involvement in social activities? Our analysis adds to existing empirical evidence by emphasising that the relationship between homeownership and social capital is not unilaterally positive or negative.

The concept of social capital

There are many dimensions of social capital, and definitions usually vary across the social sciences depending on the study at hand. Sometimes it is unclear whether social capital is defined in terms of its effects or in terms of its characteristics (Durlauf, 1999; Westland, 2006). But generally, social capital can be defined as a set of actual or potential resources that come from attachment to a lasting network that consists of more or less institutionalised relations with reciprocal acquaintance, recognition, and mutual trust between individuals and groups (Bourdieu, 1986; Coleman, 1988; Portes, 1998; Schneider, 2004). Our view in this paper is that social capital is a public good based on reciprocity and credibility that benefits all group members through direct interaction. It can be utilised by individuals in giving and attaining knowledge or help.

Analytical framework

From an economic point of view, social interactions can be considered to be forms of individual investments that build up a person's social capital. However, not all authors find meaningful the idea that social interaction can be saved in order to acquire social capital that can be beneficial in the future (Westland, 2006). Our approach builds on Becker's (1965) theory of the allocation of time, which sees households both as producers and as consumers. In Becker's (1965) model, households get utility from the consumption of commodities they self-produce by combining inputs from market goods with inputs from their own non-working time:

$$Z_i = f_i(x_i, T_i) \quad (1)$$

where the Z_i is so-called output commodity, x_i is a vector of market goods, T_i is the amount of time and f_i is the production function that combines x_i and T_i to produce the Z_i commodities. The households then try to maximise the conventional utility function by choosing the best combination of these commodities. Since social interaction yields a direct utility to the individual, because he enjoys it or networking for future gain (Saffer 2008), and since interactions are 'produced' with time and market goods (e.g. by family visits, meetings with friends, and activities in politics and sports clubs) and require the input of market goods such as food, membership fees, sports equipment, transportation costs, etc., they can be regarded as Z_i commodities. Social interaction is typically a time-intensive commodity, because engaging with other people usually requires much time and less intense use of market goods compared to the production of other commodities.

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Given that social interaction enters the utility function directly, and the optimisation of utility is subject to a resource constraint with time, prices, and income (wage), a general demand function for *social interaction* is:

$$Z_i = Z(\pi_i, \pi_j, S, Taste) \quad (2)$$

where π_i represents the sum of prices of the market goods and the price of time spent per unit of Z_i, π_j is the composite price of the composite other commodity Z_j, and S is the full income, which is a composite of the money income earned and the forgone income because not all time is devoted to work. *Taste* captures idiosyncratic unobserved preferences – for example, the individual consumer's preference for time, and the consumer's valuation of different forms of social interaction.

The basic prediction is that a decrease in the price of social interaction, that is of good Z_i, will increase the demand for it. Remembering that the price of social capital is a composite of prices for goods and time, one could argue that the price of social interaction is a positive function of the price of the relevant market's goods and the opportunity cost of time and a negative function of the marginal productivity of time. Since social interaction is a time-intensive commodity, it follows that social capital is more sensitive to changes in the opportunity cost of time. For example, the wage rate captures the opportunity cost of time, and a higher wage is therefore expected to reduce the number of social interactions because it induces substitution towards more goods-intensive commodities.

The same line of reasoning can be applied to homeownership versus renting. Having a home yields direct utility to households, and the housing services provided by a home are produced with time and market goods by households. Homeowners are responsible for the maintenance of their own home, while a tenant can call his landlord. Subtracting time for maintenance from the non-working time of households suggests that time left for social interaction is scarcer for homeowners, thus making the opportunity cost of time higher for owners than for households living in rental dwellings. A simple prediction from this is that changing from renting to owning will induce less engagement in time-intensive social interactions. The opportunity cost of time is not the only factor that affects households' choice of which type of social relation to 'produce'. Some social interaction can be regarded as complementary to homeownership, because it is positively related to the property value of the home. Involvement in associations that exert influence on the level of public service in the neighbourhood, like clean green areas, no polluting activities, etc., will have positive spillover effects on the value of homes, and this gives homeowners the additional value of the involvement. Even though time is more costly to owners, this may lead to homeowners being more engaged in local politics than tenants.

Overall, we expect homeowners to be less engaged in time-consuming informal social activities that do not relate to the asset value of their home – for example, being together with family/friends or voluntary work not related to residential property value.

Based on the above considerations, we estimate the regression model as:

$$Soc\_cap_i = \alpha + \beta Owner_i + \theta CoopOwner_i + \gamma \mathbf{X}_i + \varepsilon_i \quad (3)$$

Soc_cap_i is a measure for social capital (that is the commodity Z_i) , the dummy $Owner_i$ takes the value one if the respondent is a homeowner and zero otherwise, and $\mathbf{X}_i$ contains the control

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variables. We also include a separate dummy for co-op ownership. We do not observe the composite prices for the Z_i goods, but the level of these goods can act as a proxy for prices (Saffer 2008). The hypothesis to be tested is that once the other socio-demographic factors are controlled for, the coefficient for homeownership will remain significant, but the sign of β will depend on the type of social capital.

Data

The data are from the Danish Living Conditions Survey conducted in 2000 by the Danish National Centre for Social Research and the Department of Sociology at the University of Copenhagen. A total of 7,602 people were randomly extracted from the Danish population to participate in the survey, and the response rate was 66%. To proxy the amount of social capital, we use the answers to several questions concerning different forms of social capital, for which we construct twenty-two different measures.

The measures are binary indicators of whether respondents report to have close personal friends, have friends among co-workers and among neighbours, and borrow things from neighbours, etc. Some of the proxies are used to cover more attitudinal aspects, such as voting in elections and contact with the media. Table 1 presents our social capital measures.

Table 1. Social capital indicators[a]

Relations with family, friends and neighbours	
Close personal friends	Do you have friends with whom you can talk about your personal problems?
Co-worker as friend	Do you have friends among current or former co-workers?
Neighbour as friend	Do you have friends among current or former neighbours?
Borrow from neighbours	If you need something for housekeeping, e.g. a tool, can you borrow it from neighbouring families?
Being with relatives	Do you visit family members that you do not live with at least once a month?
Time spent interacting	
Going to meetings	How often do you go to meetings in your spare time?
Volunteerism	Do you volunteer in unpaid work?
Memberships in various organisations and associations	
Member of a political party	Are you a member of a political party?
Member of a charity organisation	Are you a member of ant organisations that conduct volunteer social work, e.g. Red Cross, etc.?
Member of a sports club	Are you a member of a sports club
Member of a youth organisation?	Are you a member of a political or religious youth organisation?
Member of a cultural association	Are you a member of a cultural association, e.g. art, music, or singing society?
Member of a pensioners' association	Are you a member of a pensioners' club or association?
Member of a human rights organisation	Are you a member of a human rights organisation or an organisation that promotes international solidarity?

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Member of an environmental organisation	Are you a member of an environmental organisation, e.g. Greenpeace, etc.?
Public positions	
Member of a municipal council	Are you a member of a municipal council?
Member of a school board	Are you a member of school board?
Member of a church council	Are you a member of a parish's parochial council?
Member of a day-care centre board	Are you a member of your child's day-care centre board?
Member of a senior citizens/disability committee	Are you a member of a municipal senior citizens/disability committee?
Supporting politics	Have you supported a political cause with money?
Participate in public hearings	Have you participated in any public hearings, protest meetings, rallies?
Demonstration	Have you participated in any demonstrations
Political meetings outside the party	Have you participated in any political meetings other than party meetings?
Contact with politicians	Have you contacted politicians, officials or other associations to further a cause?
Contact with the media	Have you contacted the media or submitted an article or a letter to the editor of a newspaper or a magazine?
Voted in the last parliamentary election	Did you vote in the last election for parliament?
Voted in the last municipal election	Did you vote in the last election for the city council?

Note: a) All measures are coded as Yes=1, No=0.

We employ two strategies to estimate model (2). One is to construct an index for social capital, another one is to make a series regression using each indicator as a dependent variable. The construction of the index is based on an item-rest correlation and Cronbach's alpha. Removing irrelevant indicators left us with the following 11 indicators that could be used to construct an index:

- Going to meetings in free time
- Doing charity work in free time
- Membership in a political party
- Membership in a youth organisation
- Membership in a cultural association
- Supporting politics
- Participation in public hearings
- Demonstrations
- Political non-party meetings
- Contact with politicians
- Contact with the media

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We use these variables to make a simple index as a sum score. An alternative way to operationalise social capital would be to focus on local involvement. The problem with our measures of social activities is that it is not possible to clearly distinguish between activities occurring locally or not. Relationships with neighbours are local, and voting in municipal elections could be considered a way of influencing the local community. But such measures as volunteering work, joining sports, participating in hearings, etc., could take place elsewhere. Therefore, we construct an alternative index based on the variables *neighbour as a friend*, *borrowing from a neighbour*, *member of a school board*, *member of a day-care centre board* and *voting in municipal elections*. We call the former index the *overall social capital index*, and the latter index the *local social capital index*.

Estimation results

We estimate a linear probability model using the method of Ordinary Least Squares (OLS)[1] and present the results in Table 3. The diagnostics of the preliminary regressions revealed problems with the linearity in parameter assumptions, which was solved by logarithmically transforming both the overall and the local social capital indexes.[2]

Table 3. Estimates of the relation between ownership and social capital, OLS

	Overall social cap. index		Local social cap. index	
Variable name	**Coefficient**	**Std. error**	**Coefficient**	**Std. error**
Owner	0.001	0.029	0.050***	0.017
Co-op ownership	0.046	0.042	0.105***	0.025
Cohabitation	-0.045*	0.024	0.016	0.015
Number of children	0.045***	0.011	0.048***	0.006
Male	0.020	0.019	-0.032***	0.0107
Non-ethnic Danish	-0.092	0.067	-0.079	0.049
Age	0.021***	0.004	0.014***	0.002
Age squared	-0.0002***	0.0004	-0.0001***	0.0002
1 income quartile (reference)	-	-	-	-
2 income quartile	0.027	0.031	0.005	0.020
3 income quartile	0.034	0.035	0.014	0.021
4 income quartile	0.166***	0.036	0.024	0.022
Savings	0.096***	0.020	0.032***	0.012
Education	0.153***	0.022	0.075***	0.014
Wage earner (reference)	-	-	-	-
Self-employed	0.0094**	0.038	-0.005	0.019
Unemployed	0.004	0.043	-0.045	0.028
Retired	-0.002	0.038	0.029	0.020
Undergoing education	0.329***	0.048	0.084***	0.032
Tenure length	-0.004*	0.002	0.003***	0.001

[1] Poisson and negative binomial regressions were also applied, but did not in any significant way affect the sign or the size of the coefficients. Only the results from the OLS are presented.
[2] We got rid of the zeros by adding one to the index.

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	Overall social cap. index		Local social cap. index	
Variable name	**Coefficient**	**Std. error**	**Coefficient**	**Std. error**
Tenure length squared	0.00002	0.00004	-0.0001**	0.00002
Single-family house (reference)	-	-	-	-
Farmhouse	0.047	0.034	0.020	0.019
Semi-detached house	-0.022	0.031	-0.009	0.016
Multi-family housing	-0.011	0.033	-0.053***	0.020
City municipalities (reference group)	-	-	-	-
Suburb municipalities	-0.013	0.028	-0.035**	0.016
Rural municipalities	0.012	0.024	-0.005	0.013
Peripheral municipalities	-0.008	0.029	0.010	0.017
Constant	-0.168*	0.097	0.488***	0.064
N	4571		4341	
R^2	0.06		0.11	
F-statistic	13.16***		17.81***	

Note: Robust standard errors are in parentheses. Significance at the 1% level: ***; significance at the 5% level: **; significance at the 10% level: *.

The variable of main interest is homeownership, which turns out to be statistically insignificant in the case of the overall social capital index with the coefficient being almost zero.

When we turn to the local social capital index, which consists of a different set of indicators, the relationship between ownership and social capital is significantly positive. This result underlines the idea that owners invest more in social capital that is complementary to the value of their estate and less in other kinds of social capital.

Casewise estimations

In order to assess if the different social capital indicators pull in different directions in the case of homeownership, we estimated a model for each indicator separately by applying logistic regressions. Only the coefficients of homeownership are shown in Table 4 and only when homeownership or cooperative ownership is statically significant. In case of homeownership, odds ratios higher than one indicate that being a homeowner increases the odds of observing a positive social capital indicator outcome.

Table 4. Casewise estimates of the relation between ownership and social capital, logistic regressions

Dependent variables	Coefficient of homeownership
Close personal friends	1.122
	(0.170)
Co-worker as a friend	1.126
	(0.116)

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Dependent variables	Coefficient of homeownership
Neighbour as a friend	1.106
	(0.119)
Borrow from a neighbour	1.361***
	(0.138)
Going to meetings	1.029
	(0.111)
Member of a charity organisation	0.738**
	(0.111)
Member of a sports club	1.453***
	(0.160)
Member of a school board	2.510**
	(0.950)
Member of a senior citizens/disability committee	0.275**
	(0.183)
Political non-party meetings	0.619*
	(0.171)
Voted in last parliamentary election	1.281
	(0.259)
Voted in last municipal election	1.736***
	(0.264)

Note: There are no observations of co-op owners in those positions. Robust standard errors are in parentheses. Significance at the 1% level: ***; significance at the 5% level: **; significance at the 10% level: *.

There are only seven significant coefficients for ordinary homeownership. In accordance with the theoretical reasoning above, homeowners do this because they gain more than tenants from the creation of a harmonious neighbourhood that results in a positive reputation of the area and can be capitalised in the price of the home. A strong relationship is found between homeownership and being *a member of a school board*, where the probability of membership is much higher compared to renting. Furthermore, homeowners are more likely to vote in municipal elections.

In the case of membership of a municipal senior citizens/disability committee, the estimate of ownership shows that homeowners have much lower odds of being members. Given that homeowners are also less likely to be members of charity organisations, it is clear that engagement in some social capital-related activities is a selective thing.

Many indicators indicating political engagement turned out to be insignificant, which undermines the widely held belief that homeowners are more politically active. The lack of difference in political activity between owners and tenants may be the result of a long Danish tradition for widespread participation in the political process.

Even when we control for many relevant characteristics in the multivariate setting, some relevant but unobservable characteristics might still be omitted. These could be differences in social inclination, or differences with respect to time preference. Thus, there is a potential bias arising from correlation between unobserved individual characteristics that encourage homeownership and

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those that lead to the provision of social capital. Some studies tried to control for the selection bias with quasi-experimental studies [analyses] using random assignment or by applying the IV (instrumental variable) method. Instruments used in IV regressions earlier include relative homeownership costs and locational and income-related homeownership rates (DiPasquale and Glaeser, 1998; Manturuk et. al., 2010; Hilber 2010).[3] We also tried using the homeownership rate within income quartiles at the municipality level as an instrument. In the case of the overall social capital index the ownership coefficient compared to OLS drops to -0.654 and becomes significant at 10% level, while the coefficient for the local social capital index drops to -0.233 and becomes insignificant[4]. Thus the OLS regressions in Table 3 may overestimate the effect of homeownership on social capital.

Conclusion

We conclude that homeownership is positively associated with a number of measures of social capital, mainly those that measure local involvement. But the results also suggest that homeowners are less likely to engage in social activities not directly related to the local community. We believe this can be explained by differences in time intensity between tenure types in combination with complementary between neighbour-related social capital and property values. Furthermore, it does not seem that owners devote more time to the political process than tenants. All in all, our findings can be embedded in Becker's theory, and indicate that societies with centralised welfare provision and deep-rooted traditions of democracy may not gain much by supporting policies promoting homeownership, especially if the purpose is to promote civic engagement and improve the functioning of political institutions.

[3] In addition to this, the study by Roskruge et al. (2012) seems to be the first to use propensity score matching as an alternative strategy to uncover causal relations between homeownership and social capital.
[4] Full IV regression results as well as descriptive statistics are available on request.

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