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Does Social Capital Affect Residents' Propensity to Move from Restructured Neighbourhoods?

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Abstract: *Many Dutch post-war neighbourhoods are subject to intensive urban restructuring. Demolition and new housing construction combined with social and economic programmes should improve the housing stock, liveability and social capital. Currently, it is unknown whether social capital contributes to residential stability and reduces residents' propensity to move. In this paper, social capital levels of stayers, movers and newcomers are studied in two recently restructured neighbourhoods in Rotterdam, The Netherlands. Using survey data, social capital is operationalised as benefits of everyday cursory interactions, trust, shared norms and collective action. Logistic regression analysis shows that age, length of residency, employment, income, dwelling satisfaction, dwelling type and perceived neighbourhood quality significantly predict residents' propensity to move. Newcomers are more inclined to move again than stayers and other movers. Social capital is of less importance than suggested by previous research; housing features, satisfaction and neighbourhood perception affect residents' propensity to move much stronger. The paper concludes with policy implications and suggestions for future research.*

KEY WORDS: social capital, propensity to move, urban restructuring, residential mobility, social housing, The Netherlands.

1. Introduction

Throughout Europe, urban regeneration policies are adopted in disadvantaged residential neighbourhoods. International comparisons indicate diverging policy strategies and contents, but also similarities in different countries. One of these is the growing importance of the concept of social capital in the discourse of urban regeneration. Many policymakers claim that urban regeneration should not only improve the physical quality of neighbourhoods, but also the social well-being of their residents (Flint & Kearns, 2006; Lelieveldt, 2004; Middleton *et al.*, 2005). Interestingly, policymakers consider social capital both in terms of a problem and a solution. “Social capital is seen as the foundation on which social stability and a community’s ability to help itself are built; and its absence is thought to be a key factor in neighbourhood decline” (Middleton *et al.*, 2005, p.1711). A second similarity between regeneration policies in European countries is a continuing dominance of physical measures. Despite substantial social and economic programmes, urban regeneration efforts primarily target the housing stock of problematic neighbourhoods. Demolition and upgrading of social rented housing and new construction of owner-occupied housing are common interventions. These policies not only aim to improve the housing stock and housing career opportunities but also create socially mixed populations (Kearns, 2004; Kleinmans, 2004).

Urban restructuring measures cause a considerable temporary turnover of residents, because significant mobility out of, within and into the restructuring area is inevitable. Afterwards, the question rises how stable the post-intervention neighbourhood are. Especially, which residents are planning to move out (again)? And to what extent does social capital affect their propensity to move? Does it function as a kind of ‘glue’ that binds residents to their current neighbourhood? In sum, this paper aims to contribute to a better understanding of social capital and intended residential mobility in recently restructured neighbourhoods.

Following Morris *cum suis* (1976), the term ‘propensity to move’ refers to people’s desires, plans, inclinations or expectations about future mobility (Van Ham & Feijten, 2008). Earlier research has shown that social ties between residents are important for residential satisfaction and the propensity to move (Amerigo & Aragonés, 1997; Dawkins, 2006; Parkes *et al.*, 2002; Putnam, 2000; Skifter Andersen, 2008). Nevertheless, we still lack a proper grasp on how neighbourhood, and especially social factors, affect residential mobility (Clark *et al.*, 2006, p. 324; Van Ham & Feijten, 2008). This holds true especially for neighbourhoods that have undergone significant changes in housing stock and population.

Social capital generally refers to resources accessible through social contacts, social networks, reciprocity, norms and trust (Bourdieu, 1986; Coleman, 1988; Field, 2003; Halpern, 2005; Putnam; 2000). In a neighbourhood context, social capital concerns the benefits of cursory social interactions, trust, shared norms about treating each other and behaviour in space, trust, and of residents acting collectively for a shared purpose. As Putnam (2000) states it: “Neighborhoods with high levels of social capital tend to be good places to raise children. In high-social-capital areas public spaces are cleaner, people are friendlier, and the streets are safer” (ibid., p. 307). This clearly resonates with Dutch restructuring policy. Local authorities, housing associations and care providers stimulate neighbourhood involvement, shared norms and trust between residents, promoting self-help and voluntary work in community groups (Dekker, 2007; Lelieveldt, 2004; Ministerie van VROM, 2000, p. 174-175).

Social capital may have a curbing effect on residents’ propensity to move. Access to various kinds of support and other resources through local social networks is ‘location-specific capital’ which is easily lost after moving elsewhere (DaVanzo, 1981; Dawkins, 2006; Skifter Andersen, 2008). Mutual trust, shared norms and collective action can only develop after a certain amount of time, repeated cursory social interactions and positive experiences with other residents. These may generate positive neighbourhood externalities (social capital) which can, in turn, raise satisfaction with the neighbourhood and its social climate (Kan, 2007; Putnam, 2000, p. 307). As such, social capital may positively affect residential stability.

Currently, we know little of residents’ social capital in recently restructured neighbourhoods that experienced substantial population changes. Much research has focussed at ‘traditional’ neighbourly contacts between residents, while neglecting other social capital ‘building blocks’ such as public familiarity, unwritten social norms, reciprocity and trust. Moreover, policymakers and also researchers do mostly not distinguish all relevant resident categories in restructured areas. Distinguishing between original residents and newcomers (Elias & Scotson, 1965) is interesting but incomplete, as more mobility patterns can be discerned. For example, ‘original’ residents may move within the same neighbourhood. And residents from directly adjacent neighbourhoods can move in, being familiar with the area.

Two research questions are at the core of the paper. First, what are levels of social capital among stayers, movers and newcomers in the neighbourhood? Second, to which extent are social capital and residents’ propensity to move related, if controlling for socioeconomic characteristics, neighbourhood perceptions and housing aspects? I must emphasise that the *policy* effects of urban restructuring are beyond the scope of this paper. Social capital data are only available for the situation after the completion of the restructuring in my study areas.

The paper is divided into six sections. The second section describes the residential mobility implications of restructuring. Section three discusses theories of social capital, mainly in the context of neighbourhoods and residential mobility. The fourth section presents the research areas, data and methods. The fifth section contains the main results and a discussion. The final section presents the concluding remarks and policy implications.

2. Urban Restructuring and Residential Mobility

In many Dutch cities, early post-war neighbourhoods receive full attention of policymakers and researchers. Low-cost social rented apartments are overrepresented in these areas, which are threatened by problems such as low education, concentration of employment and poverty, social insecurity, conflicts between residents, neglect of public spaces and limited housing career opportunities. Trust in the local authorities, housing associations and in the future of the neighbourhood is often low (Ministerie van VROM, 2000; Priemus, 2004). In 1997, the Dutch government launched an ambitious restructuring program to tackle the problems of these areas. Demolition, sale or upgrading of social rented housing and new construction of more expensive owner-occupied and rental housing should create a more diversified housing stock. Simultaneously, neighbourhood layout, public space, services and infrastructure should be improved (Ministerie van VROM, 1997).

Recently, urban restructuring has shifted from a predominantly physical strategy to a more socially oriented and economic approach (VROM-Raad, 2006). In practice, however, demolition and new construction are still very substantial. Since 1997, over 121,000 social rented dwellings have been demolished in Dutch cities (CFV, 2008; Van der Flier & Thomsen, 2006). Until 2015, tens of thousands of households are directly affected. This renewal-related mobility changes the population characteristics more fundamentally than 'normal' moving patterns. Middle-class households are a primary target group. Apart from increased spending power in local stores, a more implicit assumed effect is that middle-class residents may reinforce social networks and access to social capital for lower income groups, through providing information on job opportunities or other information that may enable upward social mobility (Kleinhans *et al.*, 2007; Van Beckhoven & Van Kempen, 2003).

This is easier said than done. Middle and higher-income households often ignore these areas in their search for a new dwelling. But even if they live in those post-war districts, they

often leave because of a lack of attractive housing career opportunities (Ministerie van VROM, 2000; Priemus, 2004, p. 203). Research has already shown that the policy can succeed in retaining and attracting middle and higher-income households to restructured neighbourhoods (Kleinhans *et al.*, 2007) or areas subject to comparable interventions (Green *et al.*, 2005; Silverman *et al.*, 2005; Van Beckhoven & Van Kempen, 2003). Considering the variety in moving distances, previous locations and changes in housing situation, a more refined typology than a dichotomy of old versus new residents is required to characterise all residential moves (in)directly related to restructuring (cf. Green *et al.*, 2005):

- **Stayers** who remain living in the same dwellings in the restructured area. Often, only a part of the neighbourhood is demolished, or restructuring measures did not require the stayers to move (e.g. renovation). By definition, all stayers already lived in the area before the restructuring started. Thus, many have a much longer length of residence in the neighbourhood than other resident categories.
- **Movers within restructured neighbourhoods.** This category both includes residents who moved voluntarily to untouched, renovated, or newly constructed houses, as well as those who experienced forced relocation from demolished dwellings within the same neighbourhood.
- **Movers from surrounding neighbourhoods.** This group includes all movers from adjacent neighbourhoods to the restructured area. A common finding in housing research is that many moves cover short distances (Mulder & Hooimeijer, 1999).
- **Newcomers** are new residents from anywhere outside the restructured area and its surrounding neighbourhoods. The newcomers mainly moved to the newly constructed dwellings, but also to the original or renovated dwellings.
- **Movers out of restructured areas:** The majority of these are residents who are forced to move to a different neighbourhood, due to demolition or upgrading of their dwelling. The issue of forced relocation is beyond the scope of this paper. Elsewhere, it is studied in depth (e.g. Clampet-Lundquist, 2004; Ekström, 1994; Goetz, 2002; Kleinhans, 2003). A less noticeable part of the movers out of restructured areas relocated voluntarily, although the distinction between voluntary and forced moves is not always easy to make.

I use this typology as a starting point for my empirical analyses (see section 5 and onwards). It does not enable us to look beyond the previous housing situation, so we cannot trace people who lived in the study areas before restructuring started, moved out and then moved back in.

3. Social Capital in a Neighbourhood Context

3.1 Theories of Social Capital

Social capital has come into the international spotlight through the works of Bourdieu (1986), Coleman (1988) and Putnam (1993, 2000). In broad terms, social capital refers to resources that are accessible through social interactions and networks, reciprocity, norms and mutual trust (Bourdieu, 1986; Coleman, 1988; Fine, 2001; Portes, 1998; Putnam, 1993, 2000).

Several authors have criticised the usefulness and validity of social capital in the scientific debate (Fine, 2001, Foley & Edwards, 1999; Middleton *et al.*, 2005). The basics, however, are quite straightforward. Through making connections with others, and maintaining these over time, people are able to work together and achieve things that they either could not achieve by themselves, or only with difficulty and at high costs. To the extent that social interactions and networks constitute a resource, they form a kind of capital (Field, 2003, p. 1). Portes (1998) emphasises that “it is important to distinguish the resources themselves from the ability to obtain them by virtue of membership in different social structures...” (ibid., p. 5). Accessibility has two important aspects: “the perception that a specific resource exists and some form of social relationship that brokers individual or group access to those particular social resources” (Foley & Edwards, 1999, p. 146). Putnam’s treatment of the social concept has been criticised for many reasons, such as circular definition, a romanticised and nostalgic view on communities and his direct equation of social interactions with social capital (e.g. Field, 2003; Halpern, 2005; Portes, 1998). Especially with regard to the last point, the treatment in this paper is more in line with the ideas of Bourdieu and Portes than of Putnam.

The nature of the resources is partly dependent on the kind of relationships. The literature often refers to ‘bonding capital’ and ‘bridging capital’ (Putnam, 2000), although linking capital sometimes appears as a third dimension (Halpern, 2005; Woolcock, 1998). *Bonding capital* is created in the strong social ties between certain family members, close friends, members of ethnic groups and, occasionally, neighbours. Strong ties are a major source of practical, material or emotional support, especially through shared norms of reciprocity and helpfulness. These shared norms are not by all means positive. In some cases, they may deliberately exclude outsiders and impose suffocating norms on group members (Briggs, 1998; Portes, 1998). This has been called the ‘dark side of social capital’ (Portes & Landolt, 1996). Power is highly important: “people who realise capital through their networks of social capital do so precisely because others are excluded” (DeFilippis, 2001, p. 801; cf.

Crawford, 2006). *Bridging capital* lies in the weak, less dense, cross-cutting ties between heterogeneous individuals such as friends of your friends, acquaintances, or colleagues from work. It may help people to ‘get ahead’ by access to resources in other social circles than your own (Granovetter, 1973). Thus, it concerns a different type of resources than bonding capital.

Bonding and bridging capital are not ‘either-or’ categories into which social networks can be neatly divided, but ‘more or less’ dimensions along which we can compare different forms of social capital (Putnam, 2000, p. 23). If Dutch policymakers try to stimulate shared social norms, involvement and collective action between residents, they appear to aim at weak ties and bridging capital. However, direct application of these network-related terms is problematic in a neighbourhood context (see e.g. Blokland, 2003), as I explain below.

3.2 Social Capital in Neighbourhoods

Studying social capital in neighbourhoods raises several problems. Most important is the conflation of neighbourhoods and communities. ‘Neighbourhood’ is only one of the many contexts in which people establish and maintain their social networks (Bridge, 2002, p. 25; Fisher, 1982, p. 41). For most people, social networks extend well beyond the ‘home area’ or neighbourhood. Notwithstanding this observation, neighbourhood is a specific spatial context in which residents choose or are forced to live in. Herein, cursory, everyday social interactions between residents, characterised by limited or even non-existent verbal communication and a short duration are highly interesting. These cursory interactions may develop into strong ties, but they usually remain of a weak nature and of “a shifting, moving, fluid character” (Lofland, 1985, p. 118). More importantly, they may produce social capital without necessarily being a member of each other’s network (see also Crawford, 2006, p. 962). Neighbourhood residents ‘accidentally’ run into personal encounters in staircases, over fences, on streets and squares, in playgrounds, neighbourhood shops and community centres. There is a mutual dependency in the extent to which residents live peacefully alongside each other, maintain common norms and trust, and cooperate successfully if a shared interest is at stake. In a negative sense, residents feel this dependency clearly if nuisance occurs. Yet, the benefits of trust, shared norms and collective action are a resource from cursory, everyday social interactions. In sum, we study the kind of social capital that facilitates ‘smooth living’ in a restructured neighbourhood.

Cursory interactions can result in weak ties and public familiarity. Public familiarity implies that residents get sufficient information from everyday interactions to recognise and ‘categorise’ other people (Fischer, 1982, p. 60-61; Blokland, 2003, p. 90-93). Henning and

Lieberg (1996) define weak ties as “unpretentious everyday contacts in the neighbourhood” (ibid. p. 6), ranging from nodding acquaintances to modest levels of practical help. As such, weak ties are an important ‘road’ to public familiarity, as they can render much information about other residents. In turn, public familiarity can yield social capital in different forms. Weak ties were not only significant for support, but also for a sense of security and feeling at home (ibid; Briggs, 1998; Crawford, 2006). Similarly, collective action of residents does not necessarily require strong ties. For example, installing identical flower boxes to windows to maintain an unequivocal façade style can be agreed on without strong contacts. While social networks and strong ties have more potential for imposing conformity to certain behavioural norms (see further on), cursory interactions are probably more frequent and involving far more and different residents. Forrest and Kearns (2001) argue that “the less robust and less deep-rooted are neighbourhood networks, the more stable and conflict-free may be the social order in which they sit” (ibid., p. 2134). Neighbourliness requires “the skilful achievement of friendly distance” (Crow *et al.*, 2002, cf. Bridge, 2002, p. 15), to ensure that reciprocity is upheld and privacy not violated

Trust, another building block of social capital, is a highly complex, but important aspect. A basic level of trust is a condition for social interaction, support and reciprocity. Trust may also develop as a positive effect of interactions and mutual support (Brehm & Rahn, 1997). “The causal arrows among civic involvement, reciprocity, honesty, and social trust are as tangled as well-tossed spaghetti” (Putnam, 2000, p. 137). In a neighbourhood, the predictability of residents’ behaviour is at the basis of trust. Trust can contribute to feelings of safety and lower barriers to interactions with others. “People who trust others form personal ties and participate in voluntary associations more often than do mistrusting individuals” (Ross *et al.*, 2001, p. 570; Brehm & Rahn, 1997; Putnam, 2000). Trust enables asking to or providing other residents with practical help or working together to achieve something for the neighbourhood, for example precautionary measures against burglary. Conversely, a deteriorating neighbourhood poses threats to predictability and social interactions between residents (Lelieveldt, 2004; Ross *et al.*, 2001). Especially in deprived neighbourhoods, high residential turnover may undermine public familiarity and trust, resulting in decreasing levels of social interaction. On the bright side, residents may interpret investments in the physical infrastructure as a sign of public interest in their neighbourhood, raising their optimism and trust in its future (Flint & Kearns, 2006, p. 45).

Social capital may also be produced through social norms. In a neighbourhood setting, norms are unwritten social rules for interactions with other residents and one’s behaviour in

public spaces. Social capital is hidden in benefits of shared norms and social control, such as nuisance that fails to occur, a clean street, informal agreements how to use scarce parking space, and parents also keeping an eye on other playing children than their own (Carpiano, 2007; Foley & Edwards, 1999, p. 152; Halpern, 2005, p. 11; Putnam, 2000). Residents' willingness to intervene in unpleasant situations partly depends on the quality of social interactions and mutual trust (Sampson *et al.*, 1997, p. 919). Social capital theory claims that effective enforcement of norms is only possible if a social structure has closure (Coleman, 1988, p. 105-107). Closure is the extent to which different persons in a social setting are interconnected. In a neighbourhood, this would mean that residents must know each other well in order to exercise social control. However, Bellair (1997) suggested that the mere presence of social interactions is sufficient for a basic level for social control. Likewise, even the perceived presence of community participation may foster a sense of empowerment from which residents may conclude that people are looking after the neighbourhood's concerns (Carpiano, 2007, p. 642). As for the violation of unwritten norms, residents may adopt varying sanctioning strategies to display their disapproval. Common strategies are directly addressing the 'trespasser', disapproving glances or by gossiping that damages the trespasser's reputation (Halpern, 2005, p. 11). Even with occasional interactions, social capital can be accessed as residents can profit from social control exercised by other residents (Putnam, 2000, p. 20). Additionally, landlords can stimulate initiatives of residents who want to establish basic norms for their apartment buildings. This 'codification' may simplify residents' efforts of norm enforcement.

To conclude, casual and cursory connections between residents can produce a variety of resources, which can create or support a favourable social climate. Social capital has both an individual and a collective dimension. The resources can accrue to both the 'groups' of residents involved in cursory connections, as well as individual residents. Micro levels, such as streets, squares, and building blocks are probably more important spatial levels for social interaction than neighbourhood level as such (Blokland, 2003; Fisher, 1982; Grannis, 1998). On these micro levels, residents engage most in everyday cursory interactions and can develop public familiarity. Moreover, the size of administrative neighbourhood units is much bigger than the neighbourhood perception of most residents, i.e. "an area of 5–10 minutes walk from one's home" (Kearns & Parkinson, 2001, p. 2103; cf. Wassenberg *et al.*, 2006). In the next subsection, I focus on the connection between social capital and propensity to move.

3.3 *Social Capital and Propensity to Move*

Many residential moves can be related to events in life course trajectories, such as changes in household composition, changes in the socio-economic situation (education, income, job) and changes in residents' local environments (Clark *et al.*, 2006; Mulder & Hooimeijer, 1999). Another important motivation is the increase of residential stress due to a 'mismatch' between a household's residential needs and preferences and the characteristics of its current housing and neighbourhood (Lu, 1998, p. 1474; Speare *et al.*, 1975). Following Morris *cum suis* (1976), the propensity to move refers to people's desires, plans, inclinations or expectations about mobility in the near future (Van Ham & Feijten, 2008).

As mentioned, Dutch policies aim to stimulate intra-neighbourhood social capital, to combat selective migration and to create stable neighbourhoods. The question here is: does social capital function as a kind of 'glue' that binds residents to their current neighbourhood, apart from other mobility drivers? According to Putnam (2000), people inclined to move within five years are less likely to attend church, attend club meetings, volunteer or work on community projects than those who expect to stay put (*ibid.*, p. 204). Other research shows that social ties between residents are crucial for residential satisfaction and propensity to move (Amerigo & Aragonés, 1997; Parkes *et al.*, 2002). Individuals or families with more social attachment to local groups and networks may be less likely to leave the area (Pevalin & Rose, 2003, p. 54; Skifter Andersen, 2008). Local kinship ties and social networks of children may deter inter-neighbourhood mobility of families with children, largely due to forms of bonding capital such as in-kind assistance and emotional support (Dawkins, 2006). These forms of 'location-specific capital' are place-bound and difficult to redevelop after a move (DaVanzo, 1981). The lowest-income groups appear more sensitive to this mechanism as they are more likely to rely on informal social networks that may provide costly services such as day-care for children, transportation and recreation (*ibid.*, p. 879, see also Connerly, 1986). Thus, a move from the neighbourhood would require the time-consuming and difficult effort of re-establishing new viable social ties. This 'opportunity cost of residential mobility' (Kan, 2007, p. 437) may, ultimately, not deter households from moving, because other push factors may be stronger. Kasarda and Janowitz (1974) showed that residents want to leave their local community if it fails to meet their housing aspirations, even when reporting strong neighbourhood attachment and intensive local participation (*ibid.*, p. 329). According to Temkin and Rohe (1998), neighbourhoods rich in social capital and of a higher socioeconomic status are more likely to remain stable over time. Dipasquale and Glaeser (1999) suggest that homeownership positively influences the formation of social capital, and

as such, creates additional barriers to mobility. This finding is particularly relevant for urban restructuring, which usually results in higher levels of homeownership. Finally, in a repeated survey in former South Yorkshire coalfield neighbourhoods, Green and colleagues (2005) found that limited access to social capital in the neighbourhood was a powerful driver for all out-movers. In sum, access to social capital in the neighbourhood can reduce propensity to move, net of other moving triggers.

However, mobility intentions do not always result in actual relocations. Many factors compound the relation between satisfaction, moving intentions and actual moves and give rise to behavioural inconsistencies in residential mobility (De Groot *et al.*, 2007; Lu, 1998, 1999). Actual mobility behaviour occurs in the absence of constraints and restrictions that prevent intentions from being realised (Duncan & Newman, 1976; Kan, 1999; Lu, 1999; Mulder & Hooimeijer, 1999). Despite the far from perfect relation between moving propensity and actual mobility, studying moving propensity is worthwhile. Otherwise, “we would miss all those people who want to leave but are unable to do so because of housing-market constraints and the direct and indirect monetary and nonmonetary costs of moving” (Van Ham & Feijten, 2008, p. 1152). Thus, residents’ propensity to move tells us something about the mismatch or consonance between their preferences and their immediate living environment.

4. Data and Methods

4.1 Research areas and data collection

The empirical data were collected in two post-war neighbourhoods, located in the southern part of the city of Rotterdam. Both neighbourhoods were constructed in the 1950s, in an era of severe housing shortages as a result of the Second World War. De Horsten is one of the seven neighbourhoods in Zuidwijk, an early post-war district in Rotterdam-South. Zuidwijk was designed along principles of the garden city movement, resulting in repeated block structures and much green public space. The other neighbourhood is Hoogvliet Northwest. It is part of the peripheral borough Hoogvliet, approximately ten kilometres southwest from the city centre of Rotterdam. Hoogvliet Northwest initially provided housing for employees of the petrochemical industries nearby. After the economic crises of the 1970s and 1980s, Hoogvliet witnessed selective outmigration of employed and middle-class residents. In combination

with a relatively large share of Antillean residents and its peripheral location, Hoogvliet has suffered from a bad reputation ever since, also to a bigger extent than De Horsten.

Both study areas were initially dominated by social rented, multi-family apartments. In the second half of the 1990s, urban restructuring transformed the housing stock of both areas. In De Horsten, almost 800 social rented multifamily dwellings were demolished and replaced with more than 650 new dwellings, in a mix of affordable and expensive rented apartments and owner-occupied single-family homes. The net decrease of the housing stock amounted to 127 dwellings. In Hoogvliet Northwest, almost 440 social rented multifamily dwellings were demolished and 42 were merged into larger homes. New construction yielded 330 homes, both social rented and owner-occupied and both apartments and single-family dwellings. The net decrease of the housing stock amounted to 92 dwellings. In both research areas, restructuring measures were completed at the end of 1999. Nowadays, both neighbourhoods now consist of approximately 1,000 houses of varying forms, tenures, prices and quality.

The surveys were conducted in the early summer and autumn of 2003. About 1,941 written questionnaires were distributed to all households in both study areas. We recollected questionnaires in a personal door-to-door campaign. This yielded 917 usable questionnaires, i.e. 47 per cent response, almost equally divided between De Horsten and Hoogvliet Northwest. Next, I compared neighbourhood census data on household composition, age, ethnic background and tenure with the equivalent survey variables. This analysis (not shown here) indicated that the response properly reflects the characteristics of the population in both areas. Finally, I classified respondents into my residential mobility typology (see section 2).

Table 1. Resident categories in De Horsten and Hoogvliet Northwest

Category	De Horsten		Hoogvliet Northwest	
	n	Per cent	n	Per cent
Stayers	42	9.0	199	44.4
Movers within the neighbourhood	63	13.4	58	12.9
Movers from surrounding neighbourhoods	136	29.0	94	21.0
Newcomers	219	46.7	96	21.4
Missing (unknown)	9	1.9	1	0.2
Total (n=917)	469	100.0	448	100.0

Table 1 shows that the varying size and nature of the executed restructuring efforts has resulted in highly different residential compositions. In De Horsten, almost 70 per cent of the total housing stock has been demolished and subsequently replaced by newly constructed

housing. For Hoogvliet Northwest, demolition accounted for 40 per cent of the housing stock. Consequently, stayers are the largest category in Hoogvliet Northwest and also form a much bigger share of the response than in De Horsten. Contrary, the proportion of newcomers is much higher in De Horsten. The proportion of movers *within* the neighbourhood is the same in both areas. The newcomers arrived mainly from other districts in Rotterdam, as well as other municipalities in the region around Rotterdam.

4.2 Measures

The dependent variable, propensity to move, is a dummy, indicating an expectation to move within five years or not. This dummy was constructed from the following survey question: “How long do you expect to remain in your current dwelling?” Answer categories ranged from “less than two years”, “between two and five years”, “more than five years” to “don’t know”. Usually, a measure of propensity to move only includes an intention to move within two years. My reasons for also including the category “between two and five years” here are twofold. First, residents without an immediate moving trigger but who perceive an upcoming trigger beyond two years are interesting from a social capital point of view. According to Putnam (2000), people inclined to move within five years are less likely to attend church, attend club meetings, volunteer or work on community projects than those who expect to stay (*ibid.*, p. 204). Not only short-term triggers but also a propensity to move between two and five years may affect residents’ investments in social interactions and participation. Second, all resident categories apart from stayers have lived five years at the most in their current dwelling. Turnover levels are probably not yet comparable with restructuring areas completed longer ago. A broadening of the time horizon of propensity to move will not exclude residents expecting a moving trigger beyond two years from the moment of inquiry.

Social capital is a priori the most important independent variable. Section 3 made it clear that social capital is a multidimensional concept. The survey contained 22 indicator variables (see Appendix 1). These variables reflect particularly the nature of the interaction that may ‘access’ social capital, but also reflect the kind of resources at stake. Most variables are measured on a five-point Likert-scale. A Principal Components Analysis (PCA) revealed three components: social interactions and public familiarity (SC1), norms and trust (SC2), and associational activity (SC3, see Appendix 1). However, additive indices of two of these components have Cronbach’s α -values below 0.7. Moreover, these additive indices are highly correlated, which prohibits their inclusion as separate independents in a multivariate analysis. To do justice to the multidimensionality of social capital, I calculated component scores, as

part of the PCA. To compute a component score for a given case for a given component, one takes the case's standardized score on each variable (in the component), multiplies it by the corresponding component loading of the variable for the given component, and sums these products. I included the component scores in the analysis as uncorrelated variables. This solved the multi-collinearity issue of social capital in its current operationalisation.

Apart from the three components of social capital, the multivariate analysis includes other common predictors of residents' propensity to move. Included are age (in years), household composition (households with or without children), labour market position (paid employment or otherwise), net household income per month (lower versus middle and higher income), and ethnic background (native Dutch or ethnic minority). Data on educational levels were not available. Length of residence is also included, although the resident categories broadly reflect this trait. The newcomers and movers have, by definition, only been living in their house since the completion of the restructuring efforts, for or five years ago. The stayers have been living at least five years in their dwelling.

Relevant housing features in the analysis are tenure (social or private rented versus owner-occupied) and dwelling type (single- or multi-family dwelling). Urban restructuring strongly modifies these characteristics of the housing stock. Measures of housing and neighbourhood perception are also included. Most straightforward are satisfaction with the current dwelling and the general satisfaction with the current neighbourhood (both scales ranging from 1 = very unsatisfied to 5 = very satisfied). Perceived neighbourhood quality is a measure of residents' perceptions of physical quality of their immediate living environment. This index contains five items measuring how often vandalism, graffiti on buildings, litter and dog dirt on the streets, nuisance of other residents and unsafety on the streets occur, according to the respondent (Brown et al., 2003; Ellaway et al., 2001; Parkes *et al.*, 2002). Each item is measured on a four-point scale (1 = often occurs here, to 4 = never occurs). Scales with reversed meanings were recoded accordingly. The scores of the perceived neighbourhood quality index range between 1 and 4 (Cronbach's $\alpha = 0.80$).

Interpretation of neighbourhood satisfaction and perceived neighbourhood quality are, of course, dependent on respondent's perception and spatial delineation of the neighbourhood. A limitation of the current study is that no spatial interpretation was asked from respondents. However, a strong body of evidence shows that it is often a small area, close to their residence (see section 3.2). The same applies to the importance and relevance of spatial micro-scales for social capital (Blokland, 2003; Fisher, 1982; Grannis, 1998; Lelieveldt, 2004).

To rule out multicollinearity, nonparametric correlations between all independents were calculated. Apart from an expected strong correlation (Spearman's $\rho = 0.68$) between length of residency and resident category, all other correlations were low or moderate. Thus, multi-collinearity problems distorting the results are unlikely.

5. Results and discussion

5.1 Bivariate analyses

As a start, we need an indication of residents' access to social capital in the neighbourhood. For these illustrative purposes, I combined all social capital variables (see Appendix 1) in a composite measure (cf. Putnam, 2000, p. 291). This Social Capital Index has a Cronbach's α -value of 0.75. Table 2 contains the average Social Capital Index scores for the resident categories, table 3 shows their propensity to move. This yields three interesting results. First, the resident categories in both neighbourhoods differ significantly in the average SCI-score. Strikingly, in De Horsten, stayers have a much lower level of social capital than the movers and newcomers. They may have lost contact with other residents who were relocated out of the area. Moreover, the old blocks in which they live starkly contrast to the directly adjacent new dwellings. This has created both a physical and social cleavage in the neighbourhood, which is likely to affect the potential for favourable interactions and social capital negatively. Secondly, the newcomers in both areas have a relatively high level of social capital (cf. Green *et al.*, 2005). The reasons for this are explained elsewhere (Kleinhans *et al.*, 2007). In short, the majority are owner-occupiers with broadly comparable socioeconomic positions and they experienced a joint new start in the restructured neighbourhood. Consequently, they have likely put more effort in getting to know their neighbours and new area, partly due to their initial enthusiasm for their new situation and their vested interest through home ownership.

Table 2. Social Capital Index: mean scores per resident category (n=871)

Areas	Stayers	Movers within restructured neighbourhoods	Movers from surrounding neighbourhoods	Newcomers	Average per area
<i>De Horsten</i>	2.27	2.64	2.68	2.71	2.65
(SD)	(0.39)	(0.41)	(0.32)	(0.34)	(0.37)
<i>Hoogvliet Northwest</i>	2.73	2.68	2.61	2.68	2.68
(SD)	(0.32)	(0.27)	(0.34)	(0.33)	(0.32)

Social Capital Index: all respondents with more than five missing values for variables in the index are excluded.

The higher the index score, the higher the average level of social capital of the resident category (index range: 1 - 5).

De Horsten: ANOVA Sum of Squares between groups = 6.62; df = 3; F = 18.06; p<0.001

Hoogvliet: ANOVA Sum of Squares between groups = 0.87; df = 3; F = 2.83; p<0.05

Third, it appears that 20 per cent of respondents in de Horsten and 17 per cent in Hoogvliet expects to move within five years (see table 3; cf. Van Bergeijk *et al.*, 2008). In de Horsten, the stayers stand out in their relatively high propensity to move, which is in line with their high dissatisfaction with the dwelling and neighbourhood combined with high occupancy turnover rates in the respective blocks (Kleinhans *et al.*, 2007, p. 1084). Contrary, in Hoogvliet stayers are much less inclined to move, which is partly explained by a long-standing attachment to the area as a result of employment in the nearby petrochemical industries. Simultaneously, newcomers in Hoogvliet relatively often report the intention to move, but not significantly more often than newcomers in Hoogvliet (bivariate test not shown here). Overall, the propensity to move does not differ significantly between the two areas.

Table 3. Propensity to move for all resident categories, per cent (n=917)

Areas	Stayers	Movers within restructured neighbourhoods	Movers from surrounding neighbourhoods	Newcomers	Average per area
De Horsten	(38)	(60)	(134)	(216)	(448)
In less than two years	21.6	11.7	6.0	7.8	8.9
In two to five years	10.8	8.3	8.2	13.8	11.2
In five years or more	13.5	36.7	35.8	28.1	30.4
I don't know	54.1	43.3	50.0	50.2	49.6
Total*	100.0	100.0	100.0	100.0	100.0
Hoogvliet-Noordwest	(193)	(58)	(94)	(96)	(441)
In less than two years	6.7	3.4	5.3	8.3	6.3
In two to five years	7.8	6.9	8.5	19.8	10.4
In five years or more	23.8	29.3	34.0	20.8	26.1
I don't know	61.7	60.3	52.1	51.0	57.1
Total*	100.0	100.0	100.0	100.0	100.0

*Percentages excluding the missing values of 21 cases (4.5 per cent) in de Horsten and 7 cases (1.6 per cent) in Hoogvliet. The absolute numbers of respondents are between brackets.

De Horsten: Pearson $\chi^2 = 18.21$; df = 9; Cramer's V = 0.12; p<0.05. **Hoogvliet:** Pearson $\chi^2 = 17.70$; df = 9; Cramer's V = 0.12; p<0.05

Research areas (difference): Pearson $\chi^2 = 6.04$; df = 3; Cramer's V = 0.08; p=0.11 (not significant).

5.2 *Multivariate analyses*

As the dependent variable is a dummy, logistic regression analysis is appropriate to establish predictors of the propensity to move. Table 4 depicts three logistic regression models of the propensity to move. In this way, we can study the relation between residents' social capital and their propensity to move, if we subsequently control for additional independent variables. The third and final model includes the resident classification, area designation, the three social capital components described in section 4.2, socioeconomic characteristics, dwelling and neighbourhood satisfaction, tenure, dwelling type and perceived neighbourhood quality. Explanatory power increases from the first to the third model (Nagelkerke's R^2 up to 0.32). Hosmer and Lemeshow Goodness-of-Fit tests (see bottom table 4) indicate that each model fits satisfactorily to the data.

Most importantly, the final model shows no significant relationship between any of the social capital components and propensity to move. Initially, the first two models showed that propensity to move was significantly connected to social interactions (SC1) and norms and trust (SC2), but not to associational activity (SC3). To the extent that social capital is connected to propensity to move, social interactions, norms and trust do matter, but not associational activity. Statistical significance disappeared after controlling for dwelling and neighbourhood satisfaction, housing features and the perceived neighbourhood quality. Further analysis (not shown here) indicates that the effect of social capital on the propensity to move is mediated by three variables: dwelling and neighbourhood satisfaction and perceived neighbourhood quality. Thus, even if residents have access to relatively high levels of social capital within their neighbourhood, their propensity to move appears not strongly affected. This finding is opposed to other research suggesting a curbing effect of social ties and social capital (Connerly, 1986; Dawkins, 2006; Pevalin & Rose, 2003; Skifter Andersen, 2008). Table 4 shows this most clearly for the newcomers, who are almost three times more likely to report an inclination to move than stayers, net of all other factors and despite their relatively high levels of social capital. Earlier research has shown that residents want to leave their local community if it fails to meet their aspirations, despite strong neighbourhood attachment and local participation (Kasarda & Janowitz 1974, p. 329). Which factors, then, appear important in the analysis?

Table 4. Predictors of residents' propensity to move (n=871)

Independent variables	(Model 1)			(Model2)			(Model 3)		
	B	Exp(B)	95% CI for Exp(B)	B	Exp(B)	95% CI for Exp(B)	B	Exp(B)	95% CI for Exp(B)
Category of residents									
- Stayers (reference category)	0			0			0		
- Movers within the neighbourhood	0.03	1.03	0.38 – 2.81	0.12	1.12	0.39 – 3.20	0.29	1.34	0.44 – 4.08
- Movers from surrounding neighbourhoods	0.16	1.17	0.47 – 2.96	0.33	1.39	0.54 – 3.63	0.48	1.61	0.59 – 4.45
- Newcomers	0.70	2.01	0.82 – 4.93	0.70	2.02	0.79 – 5.17	0.99*	2.70	1.01 – 7.24
Neighbourhood (0 = Hoogvliet; 1 = Horsten)	-0.09	0.91	0.59 – 1.42	0.30	1.35	0.83 – 2.18	-0.37	.069	0.39 – 1.23
Length of residency	0.00	1.00	0.96 – 1.04	0.05*	1.05	1.01 – 1.10	0.05*	1.06	1.01 – 1.11
SC1 Social interactions (<i>factor scores</i>)	-0.44***	0.65	0.53 – 0.79	-0.43***	0.65	0.52 – 0.82	-0.22	0.80	0.63 – 1.02
SC2 Norms and trust (<i>factor scores</i>)	-0.26*	0.77	0.63 – 0.95	-0.25*	0.78	0.62 – 0.97	-0.11	0.90	0.70 – 1.14
SC3 Associational activity (<i>factor scores</i>)	-0.06	0.94	0.76 – 1.16	-0.06	0.94	0.75 – 1.18	-0.03	0.98	0.76 – 1.25
Age (in years)				-0.07***	0.93	0.91 – 0.95	-0.07***	0.94	0.91 – 0.96
Household with children (0 = without children)				-0.47	0.63	0.38 – 1.02	-0.22	0.80	0.47 – 1.38
Paid employment (0 = unemployed, retired)				-0.70*	0.50	0.28 – 0.90	-0.61*	0.54	0.29 – 1.00
Net household income per month									
- Less than €1,500 (reference category)				0			0		
- €1,500 - €2,500				0.06	1.06	0.60 – 1.85	0.43	1.54	0.82 – 2.88
- More than €2,500				0.50	1.65	0.89 – 3.07	1.05**	2.86	1.34 – 6.12
- Missing				-0.83	0.44	0.18 – 1.09	-0.63	0.53	0.19 – 1.48
Ethnicity (0 = ethnic minority; 1 = native Dutch)				0.14	1.15	0.69 – 1.93	0.11	1.12	0.65 – 1.93
Satisfaction with the current dwelling							-0.53**	0.59	0.42 – 0.82
Satisfaction with the current neighbourhood							-0.17	0.84	0.61 – 1.16
Tenure (0 = rent; 1 = owner-occupied home)							0.32	1.38	0.72 – 2.66
Dwelling type (0 = single-family dwelling; 1 = multi-family dwelling)							1.29***	3.64	1.97 – 6.74
Perceived Neighbourhood Quality (index)							-0.46*	0.63	0.42 – 0.95
Constant	-1.75***			1.43			3.80***		
Improvement (Initial -2LL = 617.10)	32.88			54.12			52.25		

Df	8	15	20
Significance	0.000	0.000	0.000
Nagelkerke R ²	0.08	0.21	0.32
Hosmer & Lemeshow Goodness-of-Fit Test Chi ²	8.48	9.60	9.57
Significance	0.39	0.29	0.30

NOTE: Logistic regression for the propensity to move: 0 = no move expected or planned within five years/don't know; 1 = Move expected or planned within five years. Significance levels: * p<0.05 ** p<0.01 *** p<0.001 (two-sided).

All respondents with more than five missing values for variables in the Social Capital Index are excluded from the analyses.

Age has a significant dampening effect, which is congruent with the literature and other research (Clark & Dieleman, 1996; Dieleman & Mulder, 2002; Lu, 1998; Speare *et al.*, 1975). The older the respondent, the lower the chances that he reports a propensity to move within five years. It is common knowledge that young adults in the early stages of their housing career are more likely to move within a few years. Surprisingly, *household composition* has no significant effect on the propensity to move. From the literature, it appears that households with children are less likely to have a moving intention than household types without children (Mulder & Hooimeijer, 1999; Van Ham & Feijten, 2008). Here, however, there appears to be no difference with other household types.

Labour market position, i.e. having paid employment, appears to halve residents' propensity to move (*ceteris paribus*). Having a paid job appears to bind residents to their current housing situation. On the one hand, the range of housing options is generally smaller for unemployed, for whom financial resources are far more limited. This especially applies to residents who want to buy a dwelling or move on to another owner-occupied dwelling. On the other hand, having a stable job may dampen the propensity to move, especially if no other push factors are perceived. At the same time, *middle and higher-income households* are almost three times more likely to express an inclination to move than the lowest income group (cf. Duncan & Newman, 1976; Lu, 1999; Ministerie van VROM, 2004). Closer inspection of the income data reveals that we are dealing predominantly with middle-income households. The share of households with a higher net household income (i.e. €3,000 per month or more) amounts to only 12 per cent in De Horsten and 7 per cent in Hoogvliet-Northwest. Net income may be a proxy for education, which could not be included as an explanatory variable. Highly-educated people tend to be more mobile than lower-educated residents, as they often have more resources to change their housing situation (Clark & Dieleman, 1996). In another Dutch study, the effect of income was only significant if level of education and employment status were not taken into account (De Groot *et al.*, 2007, p. 23).

No significant differences appear between native Dutchmen and ethnic minorities. The latter group consists of 11% Surinamese, 3% Antillean, 3% Indonesian (incl. Molukken), 2% Turkish and 1% Moroccan. Approximately 7% had a different ethnic background than one of these. Previous studies have found that non-western immigrants have more difficulties in fulfilling their housing preferences than native Dutchmen and are less inclined to move (for an overview, see De Groot *et al.*, 2007, p. 12). But this is finding not repeated here.

As for *tenure*, the general premise is that homeowners are less likely to move than renters, partly due to the costs associated with leaving an owner-occupied dwelling (Clark &

Dieleman, 1996; Duncan & Newman, 1976; DiPasquale & Glaeser, 1999). Here, the propensity to move is not significantly different for homeowners and renters. This is not as surprising as it may seem. It may indicate that once homeowners have decided to move within the owner-occupied sector of the housing market, they encounter fewer obstacles than renters (De Groot *et al.*, 2007, p. 23; see also Kan, 1999).

Dwelling satisfaction has a negative relation with the propensity to move. Residents who are satisfied with their dwelling are approximately half as likely to consider a move than unsatisfied residents. This effect is in line with most housing theories and earlier research (Lu, 1998, Mulder & Hooimeijer, 1999; Parkes & Kearns, 2003; Speare *et al.*, 1975). Likewise, a higher *perceived neighbourhood quality*, i.e. cleanliness and safety, is associated with a lower propensity to move (cf. Ministerie van VROM, 2004, pp. 62-63). General *neighbourhood satisfaction*, while not significant, shows a similar relationship. These findings are in line with other Dutch and British research, which shows that urban restructuring often positively affects dwelling and neighbourhood quality (for an overview, see Kleinhans, 2004).

Finally, *dwelling type* matters strongly. Residents in multi-family dwellings are 3.6 times more likely to express propensity to move than those living in single-family dwellings, all else being equal (cf. Clark & Dieleman, 1996; Parkes *et al.*, 2002; Van Bergeijk *et al.*, 2008; Van Ham & Feijten, 2008). This is not a function of dwelling satisfaction, which is corrected for. Bivariate analyses (not shown here) indicate that the multi-family apartments in the case study areas are predominantly inhabited by one- and two-person households, so crowding is not a likely explanation. Other push factors appear to play a role, but the available data do not provide a clear answer here.

6. Concluding remarks and further research

In this paper, I studied the social capital and propensity to move of four different resident categories in two Dutch restructured neighbourhoods. For this purpose, social capital is operationalised as the benefit of cursory interactions, trust, shared norms, trust and collective action. Following the literature, I argued that social capital is an asset on micro-scales *within* neighbourhoods, such as building blocks, streets, parks, playgrounds and over garden fences (cf. (Blokland, 2003; Fisher, 1982; Grannis, 1998). A survey among stayers, movers within

the neighbourhood, movers from surrounding districts and newcomers yielded social capital levels of these groups and a picture of their propensity to move within five years.

The resident classification is relevant for different social capital levels. Surprisingly, newcomers have access to relatively high levels of social capital, compared to stayers and the movers. While stayers scored highest in Hoogvliet Northwest, stayers in De Horsten have far less access to social capital than movers and newcomers. This difference is likely explained by the fact that much more dwellings were demolished in De Horsten and the much stronger physical and social cleavage between the old stock and new constructed dwellings (see also Kleinhans *et al.*, 2007). In both study areas, movers from surrounding neighbourhoods are just behind the newcomers in their social capital scores.

Most importantly, there is no significant relationship between (access to) social capital and residents' propensity to move, if controlling for socioeconomic characteristics, housing and neighbourhood perceptions and housing features. In the context of recently restructured neighbourhoods, residents' access to social capital appears of secondary importance for their propensity to move. The effect of social capital on propensity to move is mediated by primary 'mobility drivers': dwelling and neighbourhood satisfaction and perceived neighbourhood quality. This is a refinement of research that does not make explicit distinctions in importance of various social, neighbourhood and housing aspects simultaneously affecting residents' propensity to move (e.g. Connerly, 1986; Skifter Andersen, 2008). More interestingly, this finding is opposed to research suggesting a curbing effect of social ties and social capital on propensity to move (Connerly, 1986; Dawkins, 2006; Kan, 2007; Pevalin & Rose, 2003; Skifter Andersen, 2008). This may also be the result of the operationalisation of social capital in my research, which emphasises local support networks and strong ties much less than other research in poverty neighbourhoods. Ultimately, residents may want to move out if their current housing situation fails to meet their aspirations, despite social attachments and local participation (Kasarda & Janowitz 1974, p. 329). Several other factors do significantly affect the propensity to move. Both age and paid employment have a restraining effect. Being satisfied with the dwelling and having positive perception of neighbourhood quality is also inversely correlated with the propensity to move. However, residents with higher incomes and residents living in a multi-family dwelling are significantly more inclined to move within five years than residents with lower incomes and living in single-family dwellings, respectively.

The initial stages of the analysis have shown that not all dimensions of social capital are equally important to propensity to move. Leaving out the mediating factors dwelling and neighbourhood satisfaction and perceived neighbourhood quality, only two of the three social

capital components appeared significant: social interactions and public familiarity, and norms and trust. Associational activity of residents is not at all connected to propensity to move. Involving residents in local affairs and associational activities is unlikely to bind them to their neighbourhood, whereas the other two components may have slightly more potential to do so. Especially social interactions and public familiarity are important for feeling at home and a sense of security (cf. Briggs, 1998; Fisher, 1982; Henning & Lieberg, 1996; Lofland, 1985).

This study has several shortcomings. First, the results are valid for our case studies, but not necessarily for all Dutch restructured areas, which are highly diverse in terms of housing stock, population, measures and the resulting intra-neighbourhood shares of stayers, movers, and newcomers (cf. Van Bergeijk *et al.*, 2008). Second, changes in social capital levels before and after urban restructuring could not be measured due to the cross-sectional design. Consequently, we cannot trace the true nature of the links between propensity to move and social capital over time. Third, we do not know to where residents want to move, only if they are inclined to move or not. Finally, we do not know whether the newcomers and movers from surrounding neighbourhoods already had any previous connection to their current neighbourhood which may affect their access to social capital.

Nevertheless, some policy implications can be deducted. First and foremost, measures that improve residents' dwelling satisfaction and the neighbourhood quality, are likely to 'slow down' residents' propensity to move. This is only to the extent that their propensity to move is affected by environmental factors, not by changes in the life-cycle of households, labour market career or other factors that bear no direct relationship with 'neighbourhood'. In other words, physical renewal should remain an important element of regeneration efforts, despite tendencies to tone it down in favour of social or economic regeneration measures (Forrest & Kearns, 1999; Parkes *et al.*, 2002, p. 2436; VROM-Raad, 2006).

Second, there is empirical support for policy efforts to provide attractive housing career opportunities within neighbourhoods dominated by inexpensive social rented multi-family dwellings. Residents in single-family dwellings which primarily appeared through new construction are far more unlikely to express a propensity to move than residents in multi-family apartments. This is a sensible strategy from a social capital viewpoint (Dekker & Bolt, 2005, p. 2467; Green *et al.*, 2005, p. 38). Social capital levels of movers within the neighbourhood are higher than or comparable to those of long-term stayers. So their access to social capital is at least not disturbed by their intra-neighbourhood move. Further longitudinal research should clarify whether their levels of social capital are likely to increase, decrease or remain stable after their intra-neighbourhood move.

Thirdly, the finding that middle- or higher income households are more inclined to move from substantially restructured areas, everything else being equal, is worrisome. It is clearly at odds with the policy target to attract or retain middle-income families from outside and within the same neighbourhood. A possible explanation is a mismatch between their housing preferences and the characteristics and quality of the restructured neighbourhood. Compared to low-income households, they have more options to improve their housing situation and might be more inclined to move (Lu, 1999; Skifter Andersen, 2008; Van Ham & Feijten, 2008). Maybe the liveability problems are still not solved, or adjacent areas are still unattractive and/or still awaiting intensive restructuring, which may ‘threaten’ the already improved neighbourhood. Or the dwelling characteristics may fail to match with residents’ preferences after all. At the same time, people move for a variety of reasons which are not necessarily connected to the outcomes of restructuring. And the outward mobility of middle- and higher income households may have lost its pre-restructuring selective character if they are succeeded by a comparable influx of middle- or higher income households, not just a few years after restructuring, but also on a longer term. This is an empirically unresolved issue with a clear challenge for further research.

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Appendix 1: The Social Capital Index

Below are the social capital indicators used in the survey. Many indicators are derived from validated social capital surveys (such as Grootaert *et al.*, 2002).

1. In this neighbourhood, we are on good terms with each other
2. I must solve many problems for myself because few people support me *
3. If I help a neighbour with something, I expect him to return a favour in the future *
4. It is not easy to establish contacts with the people around here *
5. In case of emergency, I can always ask someone in this neighbourhood for help
6. There are tensions here between newcomers and people who have lived here for a long time *
7. Actual support offered to neighbours during the last two months +
8. Active membership in a voluntary association (resident organisation, sport club, church, and other) +
9. Voluntary work in an association or in general +
10. Cooperation with other residents in the last year to achieve something for the neighbourhood +
11. The people around here would cooperate well to get something done for the neighbourhood, e.g. a face-lift of the public park
12. In this neighbourhood, there is a good level of social control
13. The residents in this neighbourhood take no account of each other *
14. I feel jointly responsible for the liveability in this neighbourhood
15. The residents have common norms with regard to keeping this neighbourhood tidy
16. Residents should not meddle with each other's affairs
17. If you encounter a person in this area, would you know if he or she lives in this neighbourhood?
18. If a resident parks his car on the sidewalk, would you ask him to move it to a parking place?
19. Generally speaking, residents in this neighbourhood can be trusted
20. When I go on a holiday, I can leave my house key safely with my neighbours or other residents
21. One cannot be too careful in dealing with people you do not know *
22. I don't mind several ethnic groups living in this neighbourhood alongside each other.

* Items with a reversed meaning and were recoded accordingly

+ Bivariate items (0 = no; 1 = yes).

A Principal Components Analysis pointed out three main components of social capital, each with an 'eigen value' of more than 1 (Kaiser Criterion; see Stevens, 1996, p. 367):

SC1 Social interactions: variables 1, 2, 4, 5, 7, 13, 20 (Cronbach's $\alpha = 0,73$)

SC2 Norms and trust: variables 3, 11, 12, 15, 17, 19 (Cronbach's $\alpha = 0,61$)

SC3 Associational Activity: variables 8, 9, 10 (Cronbach's $\alpha = 0,56$)

The remaining six variables can be joined in three pairs. However, a factor or component with only two variables is not truly a factor (Stevens, 1996, p. 373). Therefore, these 'components' are not analysed separately. The matching variables are adequately included in the overall Social Capital Index.