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## **Impact of social capital in housing cooperatives on housing affordability of middle-income groups in the Netherlands**

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## Summary

The Netherlands is facing an urgent housing shortage where the housing market situation in the Netherlands encourages social inequality due to intense competition and housing financialization. It is extremely difficult for middle-income groups to get adequate and affordable housing as their income is higher than the eligibility threshold for social housing and too low to compete in homeownership or the private rental market. Through the new 2015 housing act, the Dutch government allowed housing cooperatives that potentially provide affordable housing for middle-income groups. Despite their potential, housing cooperatives in the Netherlands are still less explored, particularly in the micro-internal and internal-external relationships. Therefore, this research aims to investigate the potential of housing cooperatives as an alternative housing provision for middle-income groups by explaining the impact of embedded social capital on housing affordability for middle-income groups in the Netherlands. First, research is conducted with surveys to collect initial data more quickly and bring in more respondents efficiently. Then, survey results were cross-checked with interviews to dig deeper into members' experiences and get an idea of the actual process. Interviews were also conducted with facilitators in the field of housing cooperatives to get a reliable perspective on social capital and its impact on housing affordability. Results were analysed qualitatively by observing the frequency and pattern of relationship between variables from members' perspectives and experiences.

The results show that social capital is found in a housing cooperative through the dimensions and benefits felt by its members. Three social capital dimensions are generated gradually regarding the level of social relations, starting with the cognitive dimension, then structural, and finally relational. Members also experience the benefits of social capital in cooperative housing, where solidarity and access to decision-making processes are the most felt, followed by information and knowledge. Two benefits: access to the decision-making process and solidarity positively affect the housing affordability of the members by lowering the housing costs (utilities and maintenance costs) and non-housing costs (transportation and recreation costs). Members are also satisfied with the housing affordability ratio and cooperative abilities to enable them to reach their housing preferences. Furthermore, housing cooperatives not only have the opportunity to provide affordable housing but also serve the needs of groups with other motivations or specific goals. Recognizing housing cooperatives' potential as an alternative to providing adequate and affordable housing for middle-income groups, members should maintain continuously the social connection that generates social capital, and the government should give more attention and support.

## Keywords

Social capital, housing cooperative, housing affordability, middle-income group, adequate housing

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## Abbreviations

IHS	Institute for Housing and Urban Development Studies

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# Chapter 1: Introduction

## 1.1. Background Information and Problem Statement

The Netherlands is facing an urgent housing shortage, where the available supply is unable to meet the ever-increasing demand (Hoekstra, 2017; Boelhuwer, 2019; Jonkman et al., 2022). As a result, competition in the housing market is so intense leading to unreasonable prices and affordability problems. This condition is exacerbated by the domination of financial markets and companies seeking maximum profit in the housing market. Driven by the financialization concept, housing is not seen as a human right and social good but only as an instrument to accumulate wealth (Leijten & de Bel, 2020). The current situation in the Dutch housing market encourages social inequality (Boelhuwer, 2019), where it is extremely difficult for low and middle-income groups to get affordable adequate housing. Housing allocation in the social rental sector, which is more dedicated to low income-group, causes more pressure on the middle-income group (Hoekstra & Boelhuwer, 2014). They do not qualify for social housing because their income is higher than the eligibility threshold and find it troublesome to compete in homeownership or the private rental market because their income is too low (Boelhuwer, 2019).

To overcome social inequality caused by housing market conditions, as has happened in the Netherlands and many other countries, a collaboration between key stakeholders: national and local governments, communities, experts, and financial institutions, is needed. Multi-stakeholder arrangement is vital to ensure the provision of affordable housing as a realization of the right to housing (Farha, 2017). Housing cooperatives are considered promising as a platform for that kind of collaboration and an alternative to providing adequate housing through social movements that bridge cooperation in countering the tendency of housing commodification (Balmer & Gerber, 2018). Through the new 2015 housing act, the Dutch government allowed housing cooperatives (wooncoöperaties) as a legal housing form that bridges social-rented and owner-occupied sectors and potentially provides affordable housing for middle-income groups (Czischke & van Bortel, 2018). Despite its potential to satisfy housing demand and substantial added value for society, housing cooperatives in the Netherlands are still less explored, particularly in the micro-internal and the internal-external relationships (Ahedo et al., 2021). The housing cooperatives sector in the Netherlands is fascinating to study, particularly to understand the relationship and cooperation between individuals in collective action (Sukumar, 2001) and the role of cooperatives in helping this group of individuals to achieve their housing objectives (Ahedo, et al., 2021).

To explore housing cooperatives' potential as an alternative housing provision for middle-income groups in the Netherlands, it is essential to understand the system inside, especially regarding individual motivations to participate, internal relations between members, and the arrangement of the housing cooperative. All three can show the social relations between units in housing cooperatives and the resources embedded in this social structure or so-called social capital (Nahapiet & Ghoshal, 1998). The social capital embedded in the relationships between households becomes the basis for coordination and cooperation for mutual benefit (Putnam, 1995), and possibly increases households' ability to meet their housing costs while maintaining other basic costs (Burke et al., 2004). An in-depth look at the social capital outcomes (Adler & Kwon, 2002) of housing cooperatives as a social structure will provide an intriguing and beneficial discussion to seek solutions for housing affordability problems among middle-income groups in the Netherlands. Therefore, understanding the social capital in housing cooperatives and its impact on housing affordability might show housing cooperatives' potential as an alternative affordable form of housing in the Netherlands.

## 1.2. Research Objectives

The research objective is to investigate the potential of housing cooperatives as an alternative housing provision for middle-income groups by explaining the impact of embedded social capital on housing affordability for that specific group in the Netherlands. This study will clarify the dimensions and outcomes of social capital in housing cooperatives as social organizations by explaining the housing cooperatives' system and capacity to generate social capital. Members' motivations to participate in social activities, their interests to build a network, and relations between members are also critical to understanding the social capital outcome in housing cooperatives. After understanding the social capital situation in the housing cooperative, this study will analyse the relationship between social capital and housing affordability of middle-income groups in the Netherlands who participate in housing cooperatives. This study will examine the change in housing affordability components in housing cooperative members related to social capital dimensions and outcomes by interpreting members' answers in surveys and interviews. The relation will be analysed by finding and connecting patterns about processes that happened in the housing cooperative involving both variables from different member perspectives in various cooperatives. Defining and comprehending housing cooperatives and middle-income groups in the Netherlands as the object of study is also very important before analysing the interaction between the two concepts. Thus, an in-depth investigation of the two contexts through a literature review is required.

## 1.3. Research Questions

This research takes the form of exploratory research to investigate housing cooperative as subject and study the relationship between the concepts of social capital and housing affordability in its operation. To achieve the objectives as described above, the main research questions is:

**How does social capital from housing cooperative affect housing affordability for middle-income groups in the Netherlands?**

In answering the main research question, three sub-questions are needed:

- **How housing cooperatives operate in the Netherlands?**
- **How social capital is generated through housing cooperatives?**
- **How is the housing affordability of the different housing tenures of middle-income groups in the Netherlands?**

## 1.4. Significance of the Study

There is a diverse range of research on the relationships between various components of social capital and the built environment (Mazumdar et al., 2018). For instance, research on people and place relationships in the neighbourhood dynamics (Temkin & Rohe, 1998), effects of social capital on housing mobility (Briggs, 1998), and social capital relevance on urban and housing policy (Lang & Hornburg 1998). These studies show that resources derived from relationships between individuals have a remarkable impact on housing and urban development. This research will join the effort and enrich the understanding of social capital in the housing sector, especially in housing cooperatives, and its relationship with the housing affordability concept. Several studies have specifically discussed the social capital concept in housing cooperatives, for example, social capital in cooperative housing in linking actors at different levels in the spatial hierarchy (Lang & Novy, 2014). However, none have discussed its effect on the affordability aspect: the ability to access housing or expenses by households who are members of the cooperative. The focus on middle-income groups will also contribute

to exploring housing cooperatives' capacity as an alternative to providing housing for these groups. By understanding the relationship between the two concepts, relevant stakeholders can find effective forms of collaboration to increase affordability for middle-income groups and encourage the implementation of housing cooperatives as they show promising value to satisfy housing needs. Learning about middle-income groups' perspectives on housing cooperatives and the housing market in the Netherlands also helps policymakers evaluate the hierarchy of needs among the target groups they assist to find specific solutions to particular problems (Lang & Hornburg, 1998), which in this research is housing affordability and accessibility. For example, by knowing middle-income groups' motivations to join housing cooperatives, policymakers can explain whether these specific groups can no longer afford or access other types of housing on the market or if there are other reasons such as better location and/or better condition of the house. Therefore, policymakers can provide targeted solutions to solve real problems.

### **1.5. Scope and Limitations**

The scope of this research is on the impact of social capital in housing cooperatives on housing affordability of middle-income groups in the Netherlands. This study focuses on the perspective of housing cooperative members on their relationships with other members, the social capital that resulted from these relationships, and the impact of that capital on housing affordability. Opinions and experiences from members will be cross-checked with viewpoints from researchers, professionals, and academic journals. Focus on social capital aims to see the extent to which relationships between households in housing cooperatives can be the basis for coordination and solidarity, which are linked to housing affordability components to identify the potential of housing cooperatives as an alternative for more affordable and accessible housing. Other forms of capital, for example, financial capital, which can be found in housing cooperatives and impacted housing affordability will not be included in the study. The scope of research on housing cooperatives and the housing market in the Netherlands is limited to members' experiences in accessing housing and their reasons for choosing housing cooperatives. The research only intends to find to which extent the housing cooperative is seen as an option for middle-income groups to obtain adequate housing and the impact of their decision to choose cooperative housing on the affordability aspect.

The concepts of social capital and housing affordability have very broad explanations and many indicators. Due to limited time and resources, this study will not go into detail about these two concepts. The concept of social capital in cooperative housing will only be discussed through its presence or absence through dimensions and outcomes perceived by member perceptions through surveys and interviews. Likewise, the concept of housing affordability will be limited to its four components: housing cost, non-housing cost, household income, and household access to financial instruments. Changes in these four components will be examined through surveys and interviews with member housing cooperatives only to indicate whether there has been a change or not. The selection of indicators and limitations on each concept in this study will be explained further in the literature review and research operationalization.

## **Chapter 2: Literature Review**

### **2.1. Introduction**

This chapter will explain the concepts that will be used in the research based on the current academic debate and literature. The three concepts that will be explained are the concept of social capital, housing affordability, and housing cooperative, where the last one is the context in which the two initial concepts are studied. First, this chapter will explain the concept of social capital through its dimensions, outcomes, and conduct in housing cooperatives. The second concept, housing affordability, will be analysed through its components and the characteristics of the target group: the middle-income group in the Netherlands. And the third concept, cooperative housing, will be described through its definitions and operations throughout the world, especially in the Netherlands. After discussing the three concepts, this chapter will study the connection between social capital and housing affordability through the literature on relations inherent in a person with the ability to afford and access adequate housing. In the last part, this chapter will deliver a conceptual framework to summarize the discussion of the concepts.

### **2.2. Social Capital**

#### **2.2.1. Social Capital Dimensions**

The concept of social capital was introduced first by Jane Jacobs, who highlighted the importance of close, cross-sectoral, and developing over time relationships between individuals as a foundation for trust, cooperation, and collective action in communities in urban environments (Jacobs, 1965, as cited in Nahapiet & Ghoshal (1998). This concept quickly became popular, and its use continues to grow in various disciplines as many researchers use it to seek solutions in their respective fields (Adler & Kwon, 2002). Scholars define social capital differently but always have two essential characteristics: it facilitates certain needs or goals of related actors and originates from social relations between individuals (Coleman, 1990). Capital formed from these relations between members is only available and accessible to individuals who join and invest in the network (Bourdieu, 1986; Nahapiet & Ghoshal, 1998; Ha, 2010). Research on social capital has been widely carried out and often done by identifying its presence or absence in a social network and looking at its effect on other variables to be studied by collecting information about the outcomes, such as participation in networks or exchanges between members (Stone, 2001). It is not confusing if social capital is one of the well-known and frequently used concepts in social sciences. Although many researchers argue that this concept is ill-defined and too complex because each person explains it in a different way (Claridge, 2018). Social capital is also criticized for being too generalized to have a positive impact, although it often has adverse effects (Fine, 2002). Another criticism of social capital is its measurement methods, where there is no standard and definitive way to measure it. This variety of measurement methods stems from the fact that there are too many definitions of social capital. Therefore, researchers make their measurement methods based on the concepts they adopted in their study (Bjørnskov & Svendsen, 2003).

In their research on the role of social capital in creating intellectual capital, Nahapiet & Ghoshal (1998) classify social capital into three dimensions: structural, relational, and cognitive. Structural social capital relates to the configuration of relationships between units, which in the context of this research are members of the housing cooperative. The structural dimension of social capital is seen from the presence or absence of ties between members as measured by density, connectivity, hierarchy, and appropriability of the network. The connection between members can occur formally initiated by the association or informally through interaction between units and their participation in joint activities. Relational social capital is social capital

that results from personal relationships through the history of interactions. Usually, this type of social capital is seen from trust, norms of reciprocity, expectations, and a sense of identity. This dimension looks similar to structural social capital and is often mixed up. However, Nahapiet and Ghoshal (1998) in the same literature explain the difference between the two by adopting Burt's (1992) and Granovetter's (1992) works. Structural embeddedness focuses on the network of relationships between units, thus the information that we want to know from this dimension is what are the connections between units and how a unit can connect to other units within the same social structure. In contrast, relational embeddedness focuses on the type of relationship between units based on the quality of the relationship. Thus, the question is about the quality of the relationship between units, such as: how close units are with each other or how much a unit trusts each other. The last dimension, cognitive social capital, is social capital that comes from shared representations, interpretations, and systems of meaning among members. This dimension is viewed from the presence or absence of shared languages, values, and visions between units. Nahapiet and Ghoshal (1998) argue that this dimension is as important as the previous two dimensions even though it has received less attention in the literature on social capital. This dimension shows that the resemblance of ideas or codes between units can provide them with resources even though they are not in the same network or have close personal relationships as described in the previous two dimensions. This dimension is most commonly found today in social movements and activism, one of which is housing cooperatives.

The three dimensions of social capital by Nahapiet and Ghoshal (1998) will be adopted in this research and used to identify the presence and type of social capital in housing cooperatives. Each dimension will be shown by indicators which are measured based on the perception of the housing cooperative members. The indicators will be selected based on the definition of social capital dimensions by Nahapiet & Ghoshal (1998) and their application and interpretation from previous studies.

### **2.2.2. Social Capital Outcomes**

Several studies discuss the effect of social capital on socioeconomic measures, where its presence is associated with positive outcomes (Hamdan et al., 2014). For example, studies in Tanzania (Narayan & Pritchett, 1999) and Nigeria (Yusuf, 2008) show that social capital has a significant impact on household income. Not only does it provide benefits at the individual and household levels, such as higher income, life satisfaction, and social cohesion (OECD, 2001, as cited in Middleton et al., 2005), but social capital can also improve community welfare (Glaser, 2001). The relationship between social capital and household ability in those studies become the inspiration for this research to investigate more of the two concepts, especially about the affordability of households to get their preferred housing.

Although social capital is often associated with beneficial effects, it also has negative effects that can harm units, the relationship between them and even the social structure. For example, a high level of social capital can reduce the dialectical process in organizations, blur the boundaries between units, and eliminate the ability to learn individually and collectively due to being too committed to relationships rather than achieving goals (Pillai et al., 2017). This research also acknowledges that social capital can give good as well as bad outcomes. However, as the research objective is to investigate the potential of housing cooperatives as an alternative to providing housing, this study will focus on the benefits rather than the risks of resources in the relationship between members in housing cooperatives. This research will use the explanation of Adler & Kwon (2002) to determine the possible outcomes of social capital, which divides the benefits from social capital into three types: information and knowledge; influence, control, and power; and solidarity. The first benefit obtained through social capital between relevant stakeholders is information and knowledge. Social capital facilitates actors

with access to sources of information and knowledge that are wider, more accurate, more actual, and more relevant. The second benefit is influence, control, and power. Social capital allows actors in the social structure to achieve goals and fulfil their interests in certain situations because they can influence decision-making processes. The last benefit, solidarity, is obtained from close relationships and mutual trust between units. This benefit encourages units to comply with mutual agreements and regulations and increases commitment to the social structure to reduce bureaucratic and administrative costs. In addition, this benefit also improves the quality and quantity of the unit's investment in the social structure. For example, social capital creates solidarity between community members, thus enhancing their sense of volunteerism and participation in the community (Forenza et al., 2018).

This research will assess these three possible outcomes based on the perspective of member housing cooperatives to find out the benefits they get through their network in cooperative housing. Then, these benefits will be linked and analysed with the housing affordability component. For example, social capital in the housing cooperative allows households to get broader and more accurate information, thereby increasing their access to financial instruments.

### **2.2.3. Social Capital in Housing Cooperatives**

Social capital has long been studied in housing, the neighbourhood, and urban context. Usually, it is investigated concerning the quality of life of households or the quality of the neighbourhood, as Middleton et al. (2005) did in Birmingham, England, Ha (2010) did in Seoul, South Korea, and Hamdan et al. (2014) did in the Klang Valley, Malaysia. However, very few have researched this concept in households that voluntarily choose to live together and participate in efforts to realize the housing, such as in cohousing and housing cooperatives. A couple of researchers who did this were Lang & Novy (2014) and Ruiu (2016). Lang & Novy (2014) examined the vertical relationship between residents and management of the professional housing cooperative in Vienna, Austria. They argue that linking social capital provides more space for households to speak up and participate in decision-making inside and outside the neighbourhood. The accommodation and channelling of aspirations by management can increase tenants' involvement and contribution. There are three types of social capital based on vertical and horizontal relationships between units which Lang & Novy (2014) used in their research: bonding, bridging, and linking social capital. This research does not do the same classification but divides it based on three dimensions by Nahapiet & Ghoshal (1998) to get a more general perspective because three types of housing cooperatives will be studied. This is also done because this study uses income as the criteria to be investigated so that bridging social capital (relationships between members with different socio-demographic characteristics) cannot be fulfilled. Bonding social capital (relationships between members with similar socio-demographic characteristics) also cannot be fulfilled because some housing cooperatives have tenants of different ages and ethnicities. Linking social capital is also not appropriate because this study looks at the relationship between residents, who have the same power, not the relationship between residents and decision-makers in a housing cooperative.

Ruiu's research (2016) suggests that social capital resulting from cohousing is unique because it does not come entirely from primary or secondary social ties. (Bramanti as cited in Ruiu, 2016). Therefore, it is fascinating to examine the social capital generated from the relationship between housing cooperative members, which can be defined as close because they live together and share common facilities but also have certain limitations to maintain the quality. Ruiu (2016) also suggests that social capital can increase a sense of togetherness and belonging, mutual support, and security for residents, in addition to increased cooperation as described in Lang & Novy's (2014) research. Seeing the potential of social capital in a housing cooperative in these two studies inspired this research to see the correlation of social capital with economic aspects, which are identified through housing affordability.

## **2.3. Housing Affordability**

### **2.3.1. Housing Affordability Components**

Although it is considered too generalizing and difficult to validate (Hulchanski, 1995), the concept of housing affordability continues to be used and debated by many scholars, especially regarding its definition and measurement (Haffner & Hulse, 2021). A possible explanation is that this concept has beneficial value as an important determinant of the socio-economic condition of a country, although it is too complex to measure (Ezennia & Hoskara, 2019). Housing affordability is generally defined as the relationship between two variables: housing expenditure and household ability to pay, where there is an amount that is considered reasonable to spend based on housing standards and households' income (Howenstine, 1983; Whitehead, 1991; Milligan, 2003). Appropriateness and standards of housing are used to determine housing costs, which include tenure type, size, location, and access to employment (Maclennan & Williams, 1990; Hancock, 1993; Bramley, 1994; Leishman & Rowley, 2012). There are costs incurred that refer to certain housing standards chosen by the household. The costs must be balanced with the household's ability to pay, which is indicated by its income while meeting other basic expenses (Burke & Ralston, 2004; Stone, 2006). If the house price is too high and reduces the household's ability to meet other basic needs, then the house is considered unaffordable for the household (Thalmann, 2003; Bradbury & Saunders, 2021). Based on definitions from the literature above, this research will classify housing affordability components into four important components: housing cost, non-housing cost, households' income, and households' access to financial instruments. The impact of social capital on housing affordability will be assessed based on changes in these four components before and after households join the housing cooperative. Through surveys and interviews with housing cooperative members, this study wants to find out whether there are changes in these four components that are caused by member participation in a housing cooperative, not because of other things such as changes in housing conditions that cause changes in housing costs or changes in employment types that cause changes in household's income, and so on. Even if member participation is the contributing factor that changes the housing affordability components, this research will also find out whether the changes are caused by social capital and not by other factors in a housing cooperative.

The four components of housing affordability will be identified through a series of indicators that are asked of members based on their respective experiences. These indicators will be specifically classified based on the literature that has researched housing affordability. Housing costs will be divided into two parts: direct costs from the house based on tenure status: homeownership or rental housing (Stephens & Van Steen, 2011; Beer & Wagner, 2017) and necessary incidental costs that are important to maintaining the housing quality such as costs for gas, electricity, water, levies, and internet (Haffner & Boumeester, 2015). Non-housing costs are defined as vital expenditures and must be paid by households to maintain their well-being, such as food, education and training, healthcare, transportation, recreation, and child care (Kutty, 2005). The last components: household income and access to financial instruments are related to households' ability in accessing adequate houses. This ability is not only seen in their financial capacity but also in their competence to get financial assistance from other parties, such as banks or other financial institutions.

### **2.3.2. Housing Affordability of Middle-Income Groups in the Netherlands**

In defining the middle-income group, this study follows the framework by Hoekstra & Boelhouwer (2014) in their research about the lack of options for middle-income groups in the housing market in the Netherlands. The middle-income group is defined as households with an income above the income threshold of the social housing target group and below two times the

average income in the Netherlands (Hoekstra & Boelhouwer, 2014). By 2022, housing associations must allocate 80% of their housing stock to households with an annual income below 40,765 euros per year which will be used as the lower threshold. Based on data from the Centraal Planbureau (CPB) in December 2021, the average standardized income per year in the Netherlands is 34,800 euros, which doubled to 69,600 euros to be used as the upper threshold. Therefore, the middle-income groups in the Netherlands in this study are households with an income between 40,765 euros and 69,600 euros per year. This income range will be an important criterion in determining the eligibility of housing cooperatives' members as a source of information for the research.

In line with Hoekstra & Boelhouwer (2014), research by Jonkman & Janssen-Jansen (2015) also explains that middle-income groups in the Netherlands have difficulty accessing adequate housing, both owner-occupied housing and rental housing. By conducting a spatial analysis in several regions of the Netherlands, their work shows that the difficulty level of accessibility and affordability problems varies depending on where they look for housing. One of the conclusions from their research is that the accessibility and affordability problems of middle income in the Netherlands to get adequate housing is more qualitative than quantitative, where the households in this category prefer the quality of the house over price and affordability (Jonkman & Janssen-Jansen, 2015). This conclusion shows that the middle-income groups' preference for housing is related to their willingness to pay. Therefore, it is critical to know their housing preferences, shown by type of tenure, and their reasons for choosing, which can show the value of a house from their perspective. Both information will be juxtaposed with their willingness to pay, which is indicated by a percentage of income they must spend monthly for housing expenses. Their housing preferences and willingness to pay will be utilized to show the ideal condition for middle-income to get a house that satisfies them both in terms of quality and price. The ideal condition will be compared with the actual condition they experiencing in the housing cooperative to understand their satisfaction with the affordability aspect they get by joining the cooperative. In addition to the comparison, the motivation of middle-income groups in the Netherlands in choosing housing cooperatives also needs to be taken into account regarding the aspect of affordability. This is to find out their perception of housing cooperative and its implication to their housing affordability. Whether it is vital as it is the only option for them to get a house or in contrast, it is not substantial because they joined for other reasons, such as social cohesion or sustainability.

## **2.4. Housing Cooperatives in the Netherlands**

Scholars and organizations in various parts of the world have a different definitions of housing cooperatives. Sukumar (2001) defines housing cooperatives as collective organizations formed to achieve the housing goals of its members: construction, finance, management, etc. According to Cooperative Housing International, housing cooperatives as legal entities that operate under different legal frameworks in each country (Lehmann, 2014; International Co-operative Alliance, 2016) have a basic value of self-help, self-responsibility, democracy, equality, equity, and solidarity. Housing produced through cooperative schemes is seen as a collective economic good that is more accessible and affordable for a broad spectrum of the population. Thus, this type of housing can counterbalance the adverse effects of market-based private property housing and become the basis for more inclusive and self-sustaining housing policies or programs (Ahedo et al., 2021).

In the Netherlands, housing cooperatives are defined as associations in which members unite within a legal framework to shape their housing situation (Ahedo et al., 2021). People may have different motivations for engaging in a housing co-operative but usually they agree in the added value to the concept of living together. Cooplinc, an umbrella organization of housing

cooperatives in the Netherlands explain some values that are usually attached to cooperative members: independence, equality, justice, solidarity, integrity, transparency, social responsibility, and caring for others. In general, initiators of cooperative housing projects are looking for a more affordable form of housing, social cohesion and/or a more sustainable lifestyle (Ahedo et al., 2021). There are three types of housing cooperative in the Netherlands (van der Meer, 2015, as cited in Ahedo et al., 2021):

- a. cooperative rental housing in which there is collective ownership of the housing complex;
- b. the homeowners' co-operative (individual home owners organized in a cooperative organization);
- c. the management cooperative (dwellings are owned by a housing association but a cooperative of tenants is responsible for their management)

Housing cooperatives that will be the object of the study will be selected from those three types above by considering the two concepts to be studied: social capital and housing affordability. From the social capital concept, there is a requirement to choose a housing cooperative with members that not only share ownership but also live together in the same housing complex. Sharing ownership can be considered to have shared visions (cognitive dimension), and living together in the same housing complex can indicate the existence of a network (structural dimension), both formally through cooperatives and informally as neighbours or friends. In addition, living together also allows for personal interaction between members to create trust and a norm of reciprocity (relational dimension).

From the housing affordability concept, there is a requirement to choose housing cooperatives that have been operating, where the residents have lived in the housing complex. This constraint relates to the information required from households regarding changes in housing affordability components that they experience before and after joining cooperatives. If housing cooperatives are not operational and the members is not living in there, information after joining will not be available thus this research cannot compare the housing affordability components.

## **2.5. Social Capital and Housing Affordability**

Not much literature discusses the relationship between social capital and housing affordability. The only one that can be found to assist the discussion of the two concepts in this study is the article by Yi et al. (2016). Their research discusses the impact of relationships within the family or kinship on household decisions to buy a house in China. Significantly, households that invest in relationships with parents, in-laws, and other relatives are more likely to buy a house. However, spending on relationships with friends was not statistically significant to increase the household's housing affordability, as indicated by their ability to buy a house. Because their research is quantitative, they do not explain in more detail the process that occurs: how resources in social relations affect household decisions to get housing and their purchasing power. In addition, their research also concluded that households' decisions to buy a house in a particular area are significantly influenced by their relationship with family and relatives. The more relatives residing in one region, the higher the probability for the household to buy a house there. It can happen because the high social capital makes households want to live close to their family or relatives so they can often visit each other. The existence of families in an area also affects the information and accessibility of households to buy a house, which increases their housing affordability.

Research Yi et al. (2016) provide the base argument for this research in questioning the correlation between resources from social relationships with households' financial aspects,

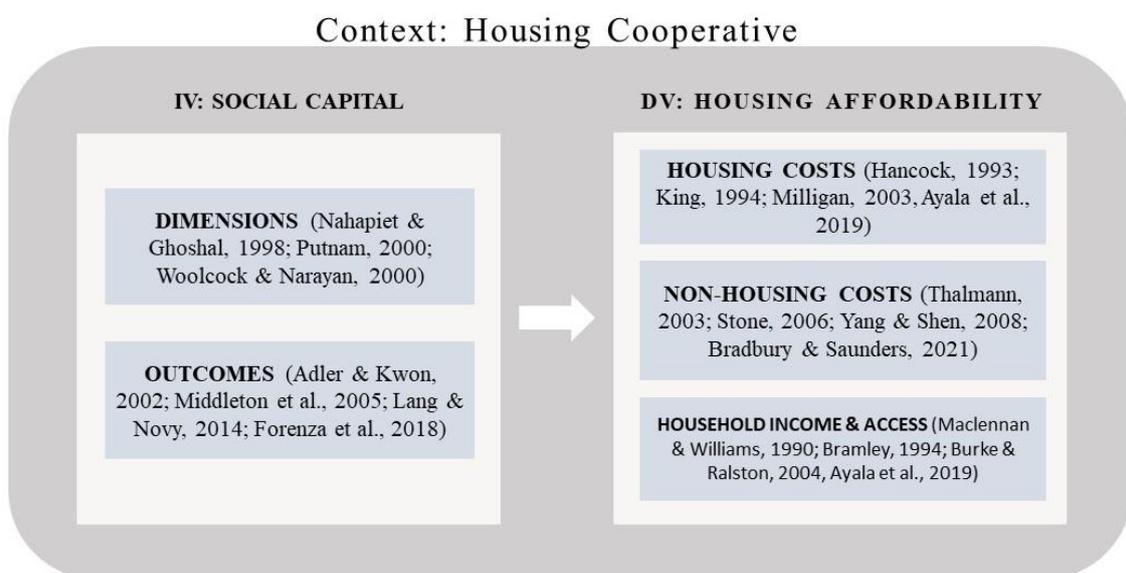
although some differences might change the results of the study. First, the research of Yi et al. (2016) analyses the relationship between household and family, where this relationship comes from very close primary social ties. On the other hand, this study analyses the relationship between households in cooperative housing, which is very unique as described previously in the section on social capital in cooperative housing. If the relationship between households in housing cooperatives is classified as a relationship between friends, thus the social capital does not affect housing affordability, as refers to the research results of Yi et al. (2016). However, member relationships in cooperatives cannot be fully classified as friends (secondary social ties) or family (primary social ties). Therefore, it is very interesting to see how the unique relationship between households in this cooperative affects the affordability of their housing.

The second difference is in the research method. Research Yi et al. (2016) used quantitative methods with data from the China Household Finance Survey (CHFS) which conducted interviews with 28,143 households from 29 provinces, municipalities, and autonomous regions throughout China. Through this large amount of data, they were able to explain the relationship between the two concepts, but could not explain the process that occurred and the household's perception of their relationship with family or relatives through the experience of the respondents. In contrast, this research uses qualitative methods to achieve personal information based on the experience of housing cooperative members in establishing a relationship. Also, by conducting qualitative methods, this research aims to get more diverse and valuable information about social capital in a housing cooperative and its impact on housing affordability.

## 2.6. Conceptual Framework

The conceptual framework of this research is illustrated in Figure 1 below. This framework was established based on an understanding of the concepts of social capital, housing affordability, housing cooperatives, and their relationship by placing middle-income groups in the Netherlands as research subjects. Social capital is placed as an independent variable that affects housing affordability as the dependent variable. The relationship between the two concepts is analysed through the perspectives and experiences of middle-income groups living in cooperative housing in the Netherlands.

Figure 1. Conceptual framework of the research



Source: Author, 2022

## **Chapter 3: Research Design and Methodology**

### **3.1. Introduction**

This chapter will explain the research design: data collection methods, operationalization of concepts and variables, and data analysis methods. This chapter will first discuss how research is conducted: how to collect and analyse data. Furthermore, this chapter will explain the operationalization of concepts and variables. The third concept: social capital, housing affordability, and housing cooperatives, will be translated into indicators that can be observed and measured in real life (Van Thiel, 2014). Finally, this chapter will discuss the challenges that are possibly encountered when conducting research.

### **3.2. Research Design and Methods**

Previously, in the literature review, it has been explained that this research will look at the relationship of the three concepts based on the perspectives of the individuals involved: members of housing cooperatives and professionals working in the field of housing cooperatives. Therefore, this research will use a qualitative technique, where non-numerical information will be gathered to answer research questions. This study will use a combination of several data collection methods as a mixed methodology has several advantages within the built environment research, such as potentially enhancing the quality of the study and counteracting a single approach's weaknesses (Amaratunga et al., 2002). Data collection methods used are surveys, semi-structured interviews, and desk research. The survey will be conducted to collect initial data showing the attitudes of housing cooperative members about the three general concepts, where a series of indicators will be used to explain those concepts commonly. The researcher chooses the survey method to gather more information faster and bring more respondents efficiently (Van Thiel, 2014) as there are many housing cooperatives in the Netherlands. The survey will be conducted by contacting housing cooperatives registered as Cooplinc members and distributing online questionnaires to them. The online survey will be distributed to all housing cooperatives that already operating. However, two opening questions in the survey will be used to find respondents who meet the criteria: middle-income group and live in cooperative housing. If both questions are answered according to the requirements, the respondent can proceed to the next question. But if not, the respondent will be immediately directed to the final page of the survey. Due to the lack of time, hopefully, this method will be able to capture the required information more quickly with a minimum of 25 members as the sample from the total population (Van Thiel, 2014).

After the survey is conducted, the researcher will contact respondents who are participating in the survey to conduct in depth interviews. The interview that will be performed is a semi-structured interview, where there is an interview manual or a question list used as an interview guide (Van Thiel, 2014). A list of questions will be prepared before the interview, based on the operationalization of various variables from the concepts described in the literature review chapter and respondents' answers to the previous survey. Consequently, the interview will dig deeper into the members' experiences and perspectives to get an overview of the processes that occur in the housing cooperative. In addition to housing cooperative members, interviews will be conducted with professionals working in the field of housing cooperatives: from Cooplinc and Woonst (housing cooperative facilitator in the Netherlands and Belgium). Interviews with professionals will be conducted to get another reliable perspective on social capital in a housing cooperative and its impact on housing affordability. Two professionals and a minimum of seven housing cooperatives' members who take part in the survey will be asked to participate in interviews to obtain more specific information.

The last method, desk research, will be carried out to verify the information obtained from the previous two methods. The researcher will use secondary data from academic journals, government reports or housing cooperatives documents available on credible channels to compare the primary data collected. Desk research can also help analyse the relationship between the three concepts based on theories or findings of researchers who have previously conducted studies on cooperative housing. The combination of the three methods and different sources of information will be used to triangulate the data, which can reduce systematic bias and cross-examine the integrity of participants' responses (Anney, 2014).

In analysing the data, the researcher will first assess information from housing cooperative members through a survey using descriptive statistical techniques. Descriptive statistics or also often called exploratory statistics are very suitable to get an initial picture of the data when exploring for the first time (Van Thiel, 2014). This method will be used to explain the characteristics of the research sample and show the attitude of respondents to the concepts given through a series of questions. By knowing the preferences and experiences of respondents through their choices in the survey, it is hoped that they can open a deeper analysis through interviews. In addition, data from surveys can also be used to see the relationship between variables, where researchers can find out which combinations of variables occur more frequently through the cross-tabulation method. Two or more variables indicated by respondents' answers in the survey will be classified with other combinations so that they show a multivariate frequency distribution. The results of this method will be verified through interviews to find out the process that occurs in more depth from different perspectives.

Next, the researcher will analyse the data from the interview, where the recordings will be transcribed and arranged according to the operationalization. By assigning codes to answers given by respondents in interviews, researchers can categorize and relate information to indicators needed to answer research questions. This categorized information can also be compared with similar information from different sources to gain an understanding of the situation in which the actors operate or the conditions in which the phenomenon occurs (Van Thiel, 2014). Interviews are very useful to get more detailed and personal information so that researchers can get a better insight into assessing complex reality conditions in which concepts are related. To carry out the analysis as described above, the researcher will use the ATLAS.ti application as a tool to store, organize, and analyse qualitative data from interviews.

### 3.3. Operationalization of Variables and Indicators

Table 1. Operationalization of variables and indicators

Concept	Variables	Sub-variables	Indicators	Data sources	Types	Methods
<b>Social Capital Dimensions</b>	Presence or absence of social capital dimensions in housing cooperative (Nahapiet & Ghoshal, 1998)	Structural social capital: availability of network and how it can establish	Duration	Members of housing cooperative	Primary data	Survey & interview
			Involvement in the network			
			Interaction			
			Participation in activities			
		Relational social capital: quality of relationship	Connection			
			Perception of relationship			
			Trust			
		Cognitive social capital: shared ideals or systems of meaning	Norms of reciprocity			
Shared motivation or vision						
<b>Social Capital Outcomes</b>	Types of social outcomes derived from housing cooperatives that benefit members in general and related to housing affordability (Adler & Kwon, 2002)	Information & knowledge	Better access to information & knowledge	Members of housing cooperative	Primary data	Survey & interview
		Connection to other stakeholders	Better connection to other stakeholders			
		Influence in decision-making process	Better representation in decision-making process			
		Solidarity	Better solidarity			
<b>Housing Affordability Components</b>	Changes in housing affordability components (Stephens & Van Steen, 2011; Haffner & Boumeester, 2015; Beer & Wagner, 2017; Milligan, 2003) resulted from participation in housing cooperatives	Housing costs	Changes in housing costs	Members of housing cooperative	Primary data	Survey & Interview
		Non-housing costs	Changes in non-housing costs			
		Household income	Changes in household income			
		Household access to financial instruments	Change in household access to financial instruments			

Concept	Variables	Sub-variables	Indicators	Data sources	Types	Methods
<b>Housing Affordability</b>	Amount that is considered reasonable to spend based on preferred housing standards and households' ability to pay (Howenstine, 1983; Whitehead, 1991; Milligan, 2003)	Housing standards	Preference of housing tenure	Members of housing cooperative	Primary data	Survey
			Motivation to join housing cooperative			
		Households' ability to pay	Preferred amount to pay based on preferred housing tenure			
			Actual amount to pay in housing cooperative			
			Perception on housing cooperative as alternative housing provision			
			Perception on housing market conditions			
<b>Housing Cooperatives in the Netherlands</b>	Associations in which members unite within a legal framework to shape their housing situation (Ahedo et al., 2021)	Housing cooperative characteristics in the Netherlands	Legal form	Members of housing cooperative; professionals in housing cooperative field (Platform31, Cooplinc, Woonst); academic literatures	Primary and secondary data	Interview and desk research
			Types			
			Connection with other stakeholders			
		Social capital in housing cooperatives	Relationship and network			
			Benefits from relationship and network			
		Housing cooperatives & housing affordability of middle-income groups in the Netherlands	Housing affordability issues			
			Motivation & interest to join housing cooperatives			
			Opportunities & challenges of housing cooperatives			

Source: Author, 2022

### **3.4. Expected challenges**

The researcher suspects that there will be several challenges in conducting this research. First, due to the complexity of the concept and a large number of variables, the survey will take a long time. Therefore, respondents will be reluctant to fill out the survey or even stop participating in the middle of the survey. To anticipate this, the researcher provides questions which can be directly selected so that respondents do not need to fill in the answers by writing. The researcher also explained the duration of the survey to the respondents before they filled it out so that the respondents could choose the right time to fill out the survey.

The second challenge that may be faced is that no or few are willing to participate in interviews, both from professional and housing cooperative members. To anticipate this, the researcher contacted the management team of the housing cooperative to ask for help in convincing the housing cooperative members to participate. In addition, respondents who have filled out the survey will also be contacted personally to persuade them to participate in the interview. The researcher also contacted as many professionals as could be reached to provide more choices and avoid shortages of respondents.

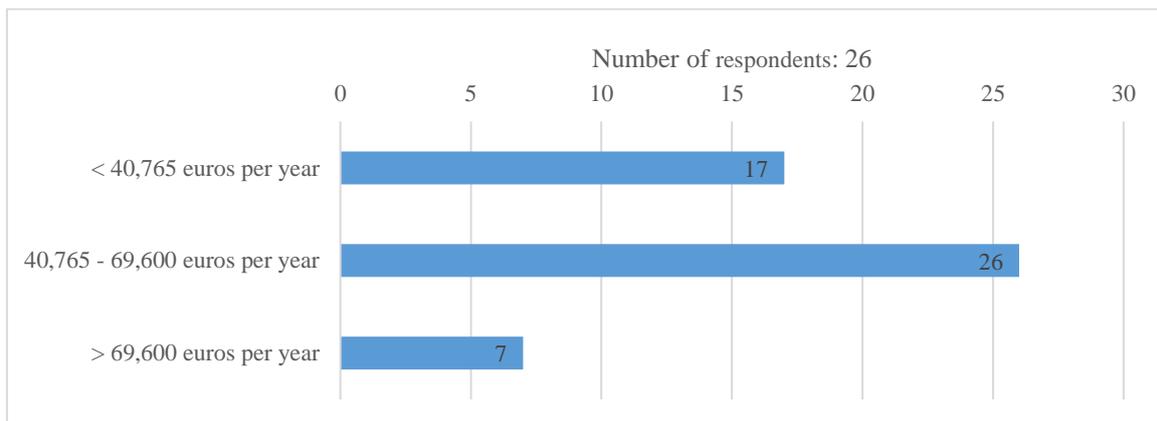
Finally, the researcher realizes that the use of mixed methods takes quite a lot of time and energy, moreover, in analysing the results of a survey with many questions and respondents. It is feared that researchers will focus too much on one method and ignore other methods. To anticipate this, the researcher has assigned which method will be used to answer each research question. Thus, the researcher can keep focus on the three methods because each has different goals and benefits.

## Chapter 4: Results, Analysis, and Discussion

### 4.1. General characteristics of the sample

Fifty housing cooperative members have filled the online survey as of July 11, 2022. However, only 26 members have met the middle-income criteria as shown in Graph 1. Based on the literature review in the second chapter, respondents who are suitable for the research are from middle-income households having an income between 40,765 to 69,600 euros per year. The online survey was designed to only accept responses from people who fit this criterion. Therefore, people who are not eligible cannot continue and will be directed to the last page.

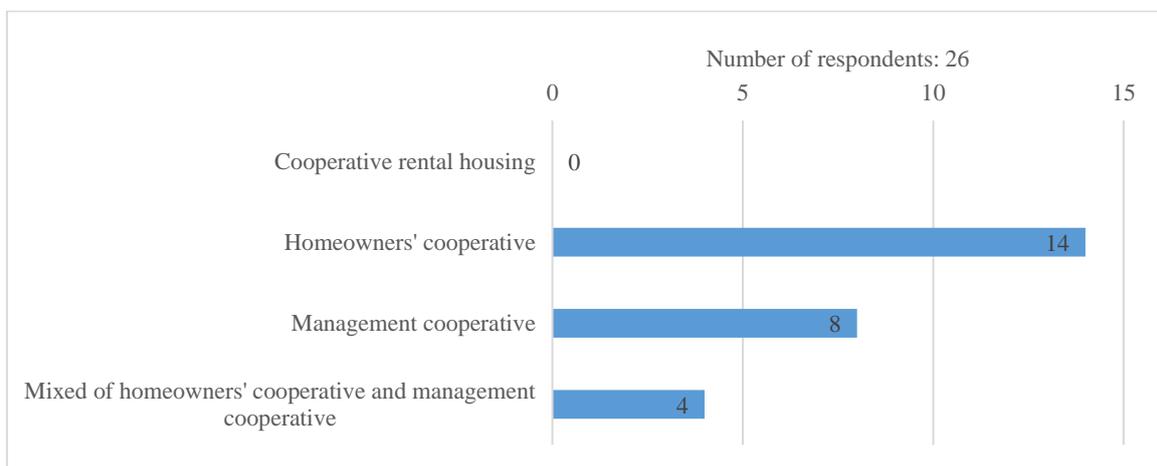
**Graph 1. Income of the respondents**



Source: Author, 2022

Of the twenty-six members who met the criteria, more than half answered that they are from homeowners' cooperatives. Graph two shows the types of housing cooperatives of the participating respondents.

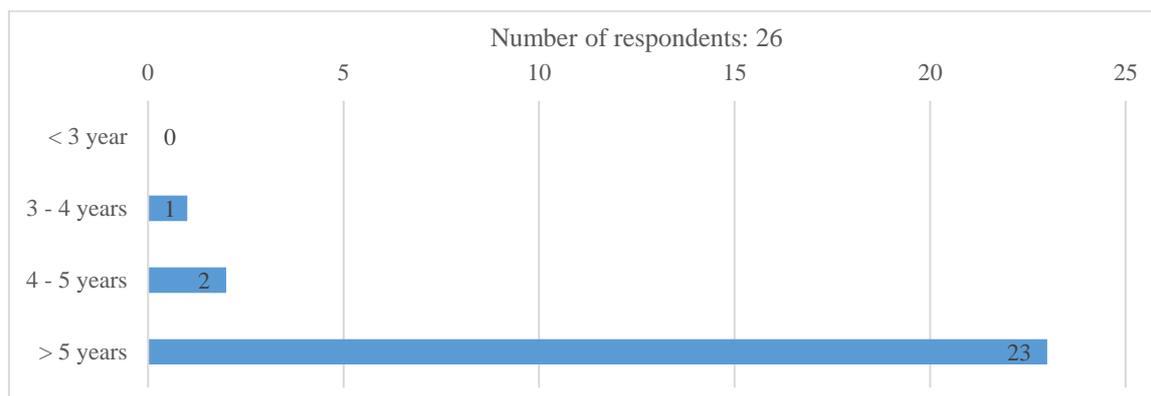
**Graph 2. Type of housing cooperative where respondents participate**



Source: Author, 2022

All respondents have been members for at least three years, and 88% have lived in a housing cooperative for more than five years, as shown in Graph three. The long period of joining cooperatives and living together displays that the respondents understand the situation in their housing cooperatives as they have undergone the socialization process for a long time and got various experiences inside. Hence, the information obtained from them is relevant and reliable.

**Graph 3. Period of joining and living together in housing cooperative**



Source: Author, 2022

Sixteen people refused to participate in the interview, making three cooperatives not have representatives. The researcher selected seven people from five different housing cooperatives which have different types: one management cooperative, two homeowners' cooperatives, and two combinations of management and homeowners' cooperative. The seven members were selected based on their answers in the survey, where particular things are substantial to investigate further. For example, a respondent who does not experience social networks in the housing cooperatives or another one who experiences changes in her affordability components due to participation in housing cooperatives. The following is a list of respondents who were interviewed:

**Table 2. List of respondents**

Code	Type	Organization	Organization Type	Location
M1	Member	Woongemeenschap Eikpunt	Mix of homeowners' cooperative and management cooperative	Lent
M2		Vereniging Poortgebouw	Management cooperative	Rotterdam
M3		Woongemeenschap Eikpunt	Mix of homeowners' cooperative and management cooperative	Lent
M4		VvE Vrijburcht	Homeowners' cooperative	Amsterdam
M5		VvE Vrijburcht	Homeowners' cooperative	Amsterdam
M6		Woonvereniging Heijtmorgen	Homeowners' cooperative	Reek
M7		Hof van Heden Hoogvliet	Mix of homeowners' cooperative and management cooperative	Rotterdam
P1	Professional	Woonst	Local facilitator	Breda
P2		Cooplinc	National facilitator	Amsterdam

Source: Author, 2022

## 4.2. Housing cooperatives in the Netherlands

Through the Housing Act of 2015 (Nieuwe Woningwet), the Dutch government states that a housing cooperative is an association with legal capacity that enables its members to provide, manage and maintain housing and the surrounding environment independently. However, this definition does not explain the legal form and types of cooperative housing. In this section, the researcher will explain housing cooperatives' operations in the Netherlands based on the experience of the two facilitators, which were cross-checked with members' perspectives. The discussion will be on the legal form of the cooperative first, followed by an analysis of the

relationship between cooperatives and key external stakeholders. Finally, the researcher will discuss the opportunity and challenges of housing cooperatives as affordable housing providers for middle-income groups through expert views, members' preferences, and member satisfaction with their cost-to-income ratio.

#### 4.2.1. Legal form and type of housing cooperatives

According to the two facilitators, housing cooperative is interpreted diversely depending on each function and purpose as they do not have a specific legal definition. P1, as a local facilitator, explained that there are two legal forms of housing cooperatives in the Netherlands based on function and property ownership. The first one is Vereniging or association of people, which is usually used in management cooperatives type where housing association or private landlords own the dwelling and the cooperative is responsible for building maintenance and management of tenants, including the social network within. This type also used in cooperative rental housing, where the cooperatives owned the dwellings collectively. The second is Vereniging van Eigenaren (VvE) or the owners' association, which is usually used in homeowners' cooperatives. In the second type, each member has full rights to their own dwelling and the VvE looks after the common interests between them, such as the construction and maintenance. P2, as a facilitator at the national level and chairman of Cooplinc, gave the same answer when asked about this:

*“Well, it is hard, because cooperative does not have a specific legal definition. Our legal definition is the Vereniging, the association of people, as management or owner. That is the model that we see the most.”* (Interview, July 2022)

The statements of these two facilitators are consistent with the classification in the literature review of this study by Ahedo et al. (2001). Platform 31, a research organization that studies housing cooperatives in the Netherlands, provides a similar explanation. Although, it adds one more type where cooperative is a company that owns and manages its houses, in which the housing association is a shareholder of the company (Platform 31, 2018).

**Table 3. Classification of housing cooperatives in the Netherlands**

	Cooperative rental housing	Homeowners' cooperative	Management cooperative
Legal form	Vereniging	VvE	Vereniging
Building ownership	Housing cooperative	Each homeowners in cooperative	Housing association or private landlords
Building maintenance	Housing cooperative	Housing cooperative	Housing cooperative and housing association

Source: Author, 2022

#### 4.2.2. Housing cooperatives' connection with external stakeholders

Housing cooperatives in the Netherlands always connect with three important external stakeholders from their formation until the management phase: banks or financial institutions; government, both local and national; and housing associations. Banks are vital stakeholders for the housing cooperative to obtain loans in purchasing plots of land and dwellings. However, many banks in the Netherlands see housing cooperatives as complex and risky lenders (Ahedo et al., 2021). Also, based on the explanations of the two professionals, banks consider a housing cooperative (Vereniging) as a business entity or company, so it only gets a maximum loan of 70%. Therefore, the cooperative must get the remaining 30% outside the bank loan. Being treated as a company also makes housing cooperatives must do complex screening processes and get high-interest rates. Banks must check the cooperative as an organization and all the individuals who are members, as P2 explained:

*“Banks don't really know how to check if a group of individuals who go together collectively asking for money. When they look at the group as a collective, they need to look at them as a business but in the same time they have the duty of care (zorgplicht in Dutch) for every individuals inside the group. It doubles up the process.”* (Interview, July 2022)

Being treated as a business entity also gives high-interest rates that discourage cooperative members from buying land or dwellings even though this scheme is more affordable. P1 describes his experience when he supported one cooperative to purchase a land:

*“We have to pay the market price. We go to the bank, then we have to pay like 10% of interest. So, that's not possible. Probably twice as expensive as before. So, nobody's going to do it. It's not going to happen.”* (Interview, June 2022)

According to P1, P2, and M2, currently, three banks in the Netherlands are willing to give more support to housing cooperatives: Rabobank, Volksbank, and ASN Bank. Also, several housing cooperatives in the Netherlands asked for loans from banks in Germany, such as GLS Bank, which has a social philosophy. Cooplink is collaborating with cooperative banks in the Netherlands and SVN (Stimulingsfonds Volkshuisvesting: independent non-profit financial institutions) to create a national fund for housing cooperatives to cover the remaining 30% outside bank loan. In addition, Cooplink is also exploring other options to help housing cooperatives get funding through a crowdfunding scheme.

The second stakeholder is the government at the municipal, provincial, and national. Political will from public officials and political pressure from the community are two essential components that distinguish the government's treatment of housing cooperatives in different areas of the Netherlands. Local governments who see cooperative housing as a potential alternative to supply affordable housing will provide support in the form of easier administrative processes, access to land or buildings, and other financial incentives, as explained by P2:

*“It's very, very diverse. For example, the (political) coalition in Amsterdam want 10% of all housing to be housing cooperatives. People can submit their housing cooperative for a land leasehold from the municipality, which has restrictions for example, the owner cannot sell the property or they cannot put the rents up higher than a certain level. However, if we look at Rotterdam, Rotterdam says they want housing cooperatives. We've seen the alderman responsible for housing said that they want to support housing cooperatives. But the alderman who responsible for finance sell an old school to the highest bidder rather than to a housing cooperative.”* (Interview, July 2022)

Public interest in housing cooperatives also helped in putting pressure on the government. More new cooperatives initiated by the community in an area will increase the government's interest and supportive treatment. One member of a housing cooperative in Lent (M1) shared his experience:

*“We had a lot of support from the municipality and from the province. Then, with this housing corporation, we took part in a city design project where we became a pioneer. So, they use us as a pioneer to aspire others, and to attract a certain kind of people because our work is very environmentally conscious like this.”* (Interview, June 2022)

Respondents also describe the varied treatment of cooperative housing from the third stakeholder: the housing association. Some housing associations in the Netherlands see housing cooperatives as partners in supplying affordable housing. However, some see cooperatives as competitors even though the new housing act instructs collaboration. It states that a group of tenants who are no longer eligible to live in social rental housing can apply for financial

incentives to purchase dwellings from the housing association (Ahedo et al., 2021). P1 shared his experience when he helped a cooperative buy dwelling from the housing association:

*“The (housing) corporation say they cannot sell it (the dwelling) to us for discount. We have to pay the market price.”* (Interview, June 2022)

P2 also recounted his experience with distinct treatments by the housing association:

*“TALIS (housing association) works together with Woningbouwvereniging Gelderland (housing cooperative), they make a number of projects possible. But we also see some of housing association worried that if there's a location going to housing cooperatives and not to them, like in Amsterdam. We also see some of them think that they can create enough affordable housing, so don't see any role for housing cooperatives.”* (Interview, July 2022)

Table 4 provides summarized experiences from all respondents in dealing with external stakeholders.

**Table 4. Respondents' perception of external stakeholders**

Stakeholder	Perception	Respondent	Experience
Financial institutions	Positive	M2, P2	Give mortgage and incentives for cooperative
		M5	Act as guarantor of cooperative
	Negative	P1	Give high-interest rates
		P2	Limit loan to cooperative
		P2	Complex screening process
Government	Positive	M1, M7, P2	Subsidize land, dwelling, or rent for cooperative
		M1	Give support for developing social cohesion
		M4, M5, P1	Inform cooperative for available land
		P2	Fund the feasibility study for cooperative
	Negative	M2	Cut maintenance subsidy
		M2	No support in purchasing property
		M2	No assistance in conflict with housing association
		M7	Complex regulation
P1, P2	Prefer sell dwellings to highest bidder		
Housing Association	Positive	M1, M7, P2	As a partner to build housing
		M3	As a partner to maintenance housing
		P2	Sell dwelling to cooperative at affordable price
	Negative	M2	Does not provide maintenance
		M2, P2	Does not transparent about financial
		M7, P1	Only looking for profit
		P2	Consider cooperative as competitor

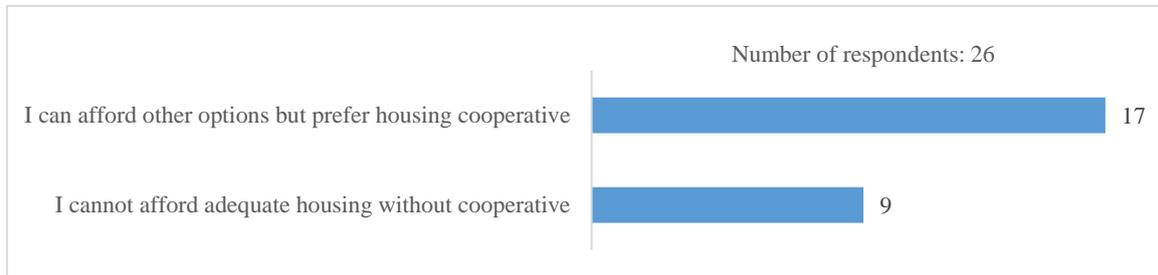
Source: Author, 2022

#### **4.2.3. Housing cooperatives and housing affordability of middle-income groups**

Housing affordability issues in the middle-income group are one of the opportunities for housing cooperatives to become an alternative for adequate housing provision. All respondents, both in the survey and in the interview, gave similar comments about their difficulty purchasing

or renting a house in the Netherlands, especially in urban areas. Although all of them are struggling, some households can access other suitable housing options because of their income and access to loans. However, despite being able to access other housing options, 65% of members in the survey prefer to live in cooperative housing, as shown in Graph 4.

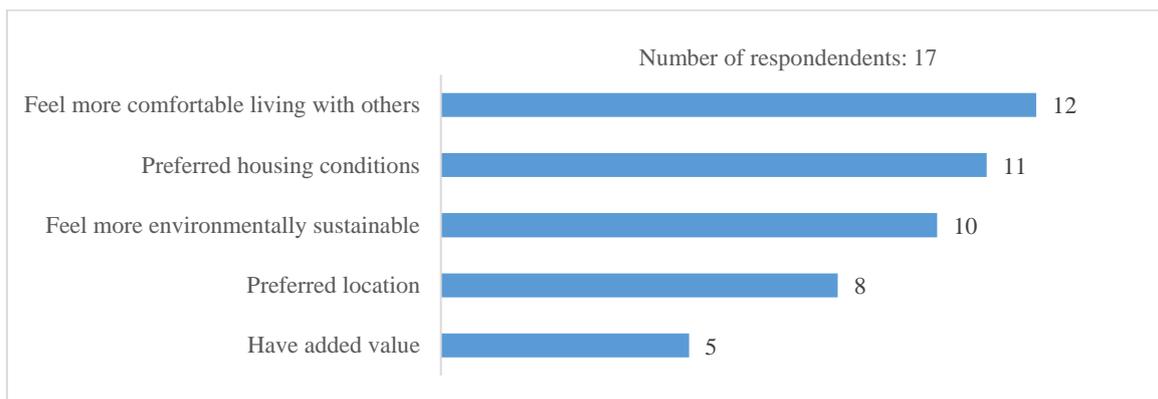
**Graph 4. Respondents' perspectives on housing cooperative as affordable housing providers**



Source: Author, 2022

Seventeen members who prefer cooperative housing even though they can access other housing options gave three main reasons: they feel more comfortable living with other people in a community, have better housing conditions, and feel more environmentally sustainable, as shown in Graph 5:

**Graph 5. Reasons to prefer housing cooperatives**



Source: Author, 2022

Interviews with seven members also confirmed the survey results in Graph 5, that cooperatives can provide collective housing for people with other motivations than to get an affordable dwelling. Some members join because they want to live in an intimate community where they can build social connections and share. Sharing is also critical for the second reason: preferred housing conditions, because, by sharing, members get better housing conditions: additional shared rooms, shared facilities, or better location. One member commented on this:

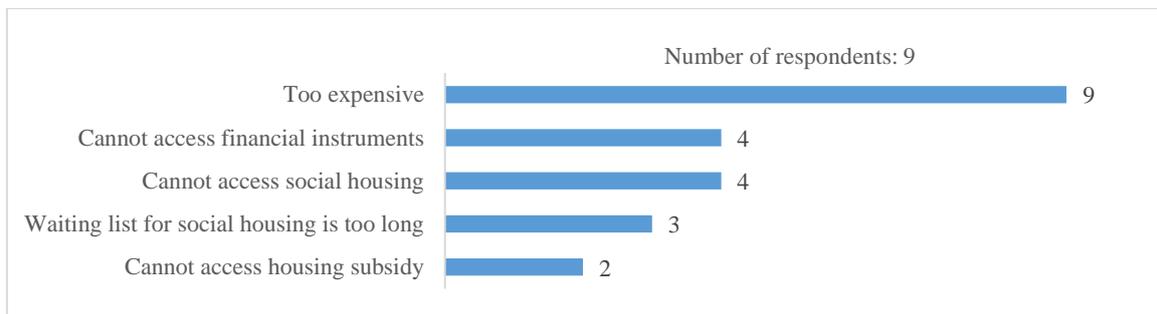
*“You would have to pay more for a big room on a very nice location like this. I have a nice view and high ceiling here. So, if this is a student house that was commercially managed, it will be more expensive.”* (M2, Interview, July 2022)

Other members join the cooperative because they want to live more ecologically sustainable. They are concerned about climate change and want to reduce their carbon footprint, as explained by M6:

*“We also choose who can live here to join us. Our community based on ecological principles. We don’t want big cars or too much meat here. When people do that, they don’t fit to live here.”* (M6, Interview, July 2022)

The survey results also show nine members can only access adequate housing through housing cooperatives as houses they considered acceptable were too expensive and inaccessible, as shown in Graph 6.

**Graph 6. Reasons can only access adequate housing through cooperatives.**



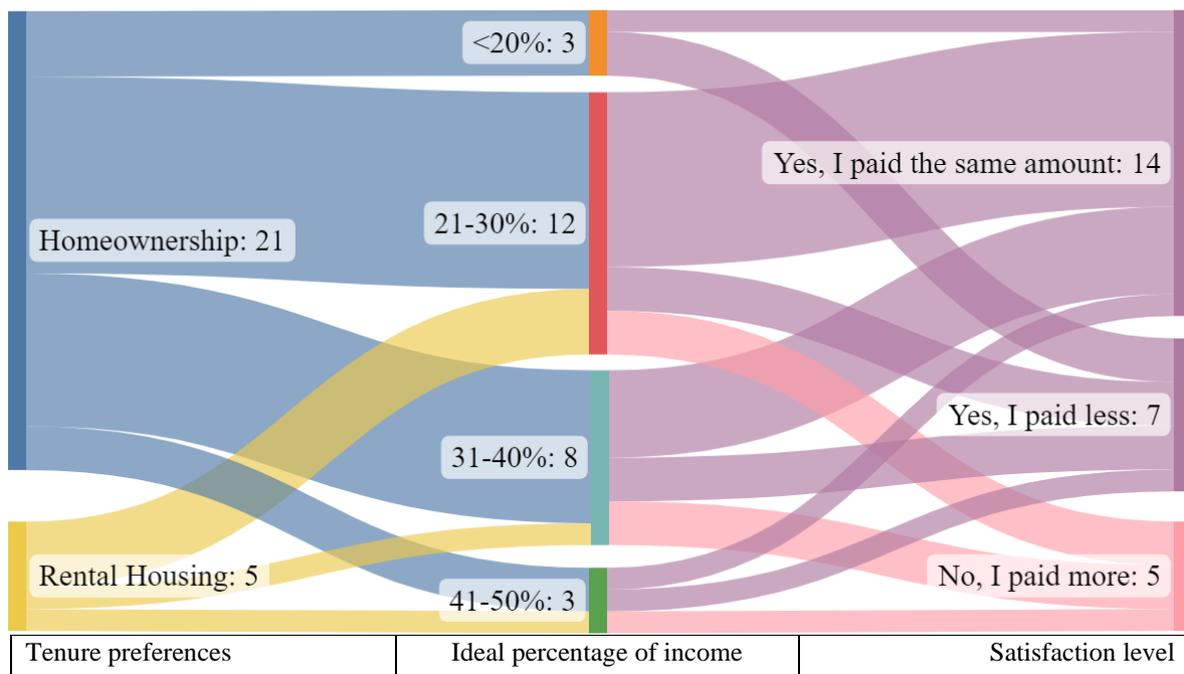
Source: Author, 2022

The researcher found that some of the interview participants cannot access acceptable housing for themselves and their families without cooperatives. Before living in a housing cooperative, they lived in other places with conditions deemed less acceptable. They want to move, but other options are not affordable. The housing cooperative enabled them to reach the house they wanted, as a member tells his experience:

*“We lived in Rotterdam, in Hoogvliet as well, but in a different area. We owned a maisonette, on the third and fourth floor. But my wife got fed up with the stairs and she would like to have a garden. But we just couldn't afford it. I am a teacher. Teachers do not make that much money. We could not afford to buy a terraced house that was up to what we liked. And then this project gave us the ability to do so.” (M7, Interview, July 2022)*

The housing cooperative's potential as an affordable housing provider for the middle-income group can also be seen in Figure 2, which shows the members' tenure preferences, ideal housing affordability percentage, and their satisfaction with the actual conditions in cooperative housing.

**Figure 2. Tenure preferences, ideal ratio, and satisfaction level of members in housing cooperative**



Source: Author, 2022

21 out of 26 middle-income groups participating in the survey prefer homeownership to rental housing because by owning they feel more financially stable and have more control. Interview results with seven members also concluded the same reasons, although three of the members are currently still renting. They feel that members are more flexible in making decisions and prioritize cooperative interests over the interests of external parties if they own the house.

The centre of the Sankey chart shows members' perceptions of the ideal percentage of their monthly income for housing costs. Members' perceptions are varied, even though they concentrate in the normal range of 21-40%. With the ideal percentage according to each member, the survey wanted to find out their level of satisfaction with the ratio between their income and housing costs. Twenty-one members are satisfied because they paid the value they expected, and even seven of them paid less. These results were further investigated, by interviewing 2 out of 5 people who were dissatisfied with their housing affordability ratio. The researcher found that both respondents were dissatisfied with their income situation, not the cooperative housing costs. They have no problem paying more as they are satisfied with the housing condition and community in the cooperative. One of the respondents, M3, gave his opinion on this point.

*“There are some people owe me money, but they don't pay it. It's less fortunate for me. Because the cost is higher here and my income is lower. But I like it because I can join social activities here. I like here better, for the community.”* (Interview, July 2022)

Both facilitators included about another housing cooperatives' added value: independence, especially for tenants in management cooperative as they can get more autonomy over the rent increase and maintenance costs. The ability to create a housing situation independently can also make housing cooperative members less need more support from the government or other organizations, thereby reducing dependence and cost inefficiency. Both facilitators considered cooperatives that own dwellings: housing rental cooperatives and homeowners' cooperatives are more independent and affordable. However, both types will experience more difficult processes because they must purchase a plot of land and build the house independently.

To maximize those potentials, housing cooperatives in the Netherlands must solve challenges during the cooperative formation, housing provision, and cooperative operation after obtaining a house. In the formation phase, the challenge is lack of public interest in a housing cooperative. It is difficult to find new members due to less information and knowledge about housing provision through this organization. Lack of interest also due to the lack of facilitators and expertise at the local level who can reach a wider population. There are still many unknown phenomena inside cooperatives, and an increasingly individualized society makes people reluctant to try sharing and collective systems in cooperatives.

The next challenge is the housing provision, which is considered more complex than buying or renting houses in the general housing market. This challenge not only lowers the public interests but also makes the municipality not interested. Therefore, they do not provide more assistance to the cooperative. In addition, only a few municipalities in the Netherlands still have a land leasehold system, which can provide affordable land for cooperatives and control the affordability. Time-consuming and complicated processes make other external stakeholders less willing to cooperate and often lead to conflicts.

After the cooperative finds a house and the members can move in, the next challenge is to keep shared commitment and respect common rules. Several respondents shared their experiences about decreased contribution and participation of members after getting the house, which create unresolved conflicts and disconnected social networks within the cooperative. Moreover, some members violated the collective agreement and sold their houses to the highest bidder.

### 4.3. Social capital in housing cooperatives

Both professionals state that it is crucial to have a common goal that continues to develop following the dynamics of the cooperative. Shared vision, one of the cognitive dimensions of social capital, gives collective cohesiveness that makes actors deeply involved and contribute their resources (Adler & Kwon, 2002). Shared motivations and mutually agreed values are essential in opening up other social capital dimensions to create deeper social relationships and more diverse resources, which is essential in maintaining the cooperative. They are also necessary for determining mutual agreements and boundaries in the cooperative. For example, in management cooperatives, with the approval of the housing association, members may select new tenants that meet their criteria. Another example is members of some homeowners' cooperatives have special agreements to maintain social connections and housing affordability, as P2 said:

*“For example, there can be requirements that they (homeowners) have to sell the house to somebody within the group within a period of time that defined by the legal documents. So, you cannot sell the house in the open market unless for the first six months or first year no one in the cooperative or someone who fit in the group want to buy it. There are also some groups which have a legal document that limits the price.”*

Differences in goals and reluctance to implement regulations in a cooperative will adversely affect the social conditions among members, reduce the ability to achieve targets, and indirectly reduce its potential as an alternative affordable housing provider. One member of the homeowners' cooperative in Amsterdam (M4) shared his experience with this issue:

*“People moved out and they keep the house as an investment or they rent it to expats or students or whatever. But because of that, our togetherness and our community are falling apart. Therefore, you need a rule as a solid base. It is really bad where people live in a neighbourhood but don't know each other. You cannot make an agreement or decision (together) if you don't know your neighbours. But if they change all the time because of the investment, you cannot build relationships and get to know them.”* (Interview, July 2022)

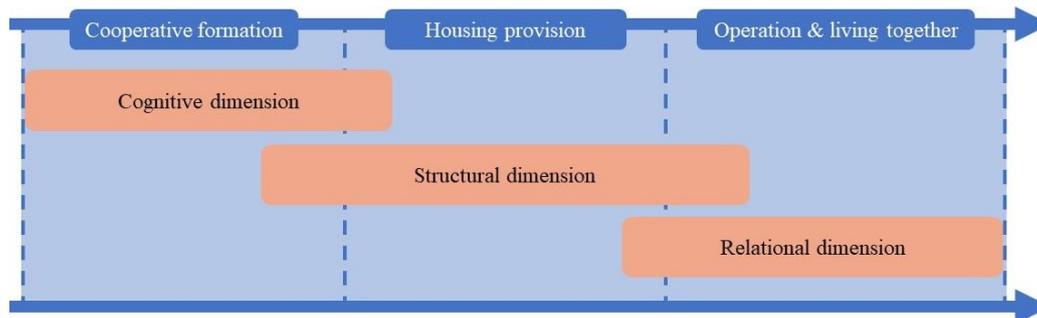
Maintaining shared visions in a cooperative will benefit the members and the larger community surrounding it. The two professionals explained that members could get benefits such as lower costs through sharing, more control over the home and its environment, and being able to add new housing features that increase living satisfaction. In the larger community, cooperatives initiate social activities that add harmony to the neighbourhood and become a pioneer in modern technology utilization. Also, because housing cooperatives gain more control, members require less support from public institutions. The opinion of these two facilitators is relevant to members' perspectives obtained through surveys and interviews, which will be discussed further in the next section.

#### 4.3.1. Social capital dimensions

A survey with 26 members showed positive results from all indicators on the three social dimensions of capital, as shown in Graphs 7, 9, and 11. Most members feel their motivation is fulfilled, and have shared motivation and values with other members, which indicates the existence of cognitive social capital. The survey results also show a social network in housing cooperatives where members are actively involved and have ties with other members through interactions and participation in joint activities. The respondents also answered that there is relational social capital in housing cooperatives that occurred as a result of personal relationships through the history of interactions among members. The researcher investigates further through interviews with seven members who participated in the survey to dig deeper into their answers.

The interview results show three dimensions of social capital exist in housing cooperatives. Furthermore, the results show the cognitive dimension: shared motivations and mutually agreed values are essential in opening up other dimensions which can create deeper social relationships and more diverse resources in housing cooperatives. For example, in cooperatives with the aim of social cohesion, there will be more common areas where members can meet and hold joint activities or a more intense cooperative meeting schedule. Common areas and joint activities will expose members to new possibilities of collaborations or resource exchange. Figure 3 shows the relationship between social capital dimensions at different phases.

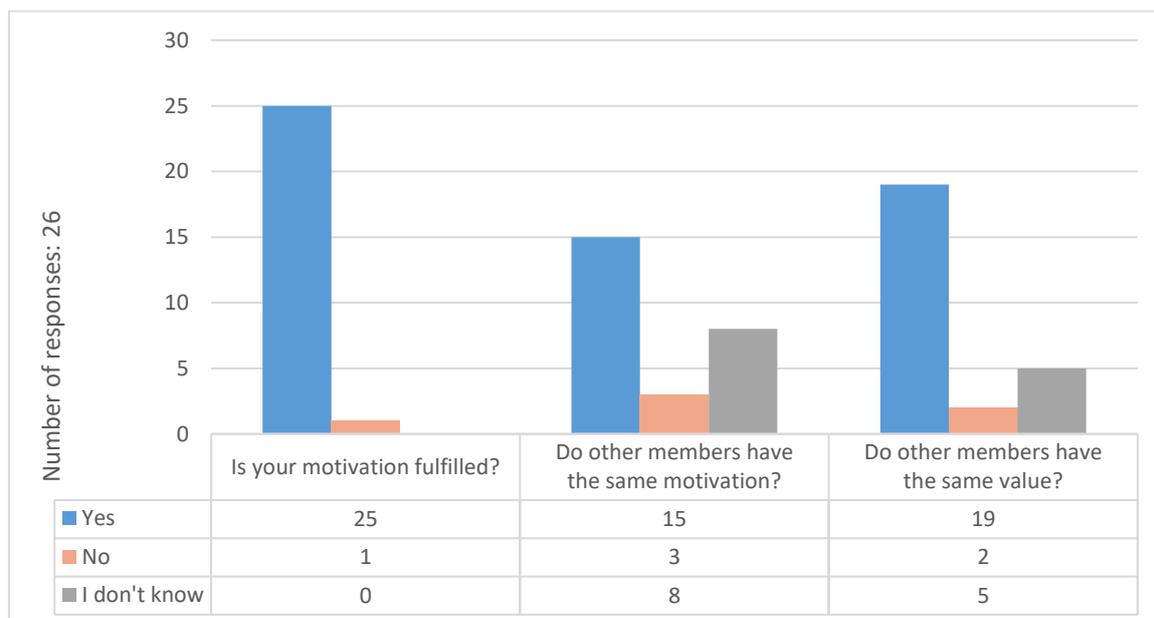
**Figure 3. Relationship between social capital dimensions during different phases of housing cooperative**



Source: Author, 2022

As explained in the literature review, member relationships in cooperatives are unique (Ruiu, 2016) as they cannot be fully classified as friends or family. The cognitive dimension is the initiator of social relations between members, through shared motivations or values, as no relationships between them before. The resemblance of ideas or codes between members provides them with resources even though they are not in the same network or have close personal relationships, as Nahapiet & Ghoshal (1998) explained. Members form legal associations to gain collective power and control and contribute their resources to this association in achieving a common goal.

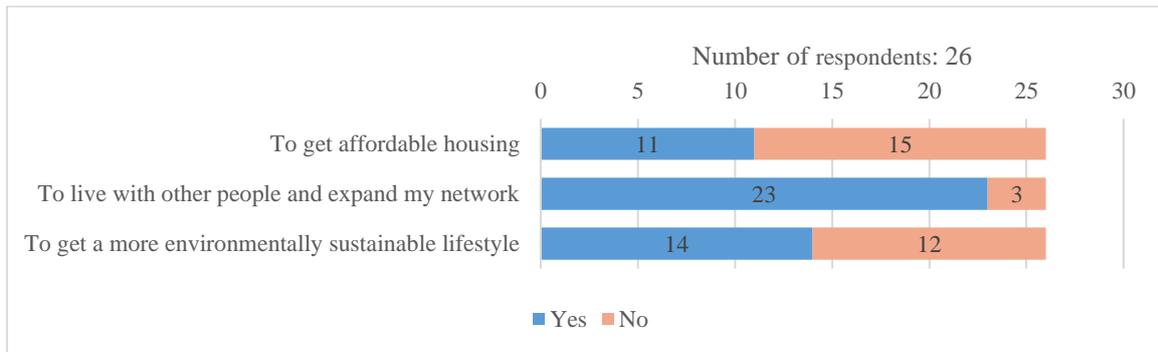
**Graph 7. Members' perceptions on cognitive social capital in their housing cooperative**



Source: Author, 2022

The survey results show positive perceptions of the fulfilment of motivation and shared motivation or values between members, as shown in Graph 7. The cognitive dimension can determine substantial things in cooperatives, such as mutual rules, agreements between members, and house specifications (tenure, design, location, etc.). Graph 8 shows the motivations of the 26 members in the survey, where living together and building closer social relationships were the most chosen.

**Graph 8. Motivation to join housing cooperative**



Source: Author, 2022

The survey results are also fitted the interview results with seven members, where social cohesion is the main motivation for members to join the housing cooperative. They also admit other motivations, such as getting affordable housing and living more ecologically sustainable, although both are just additional. Table 5 summarize members' statements who took part in the interview, which shows social cohesion as the primary motivation to join.

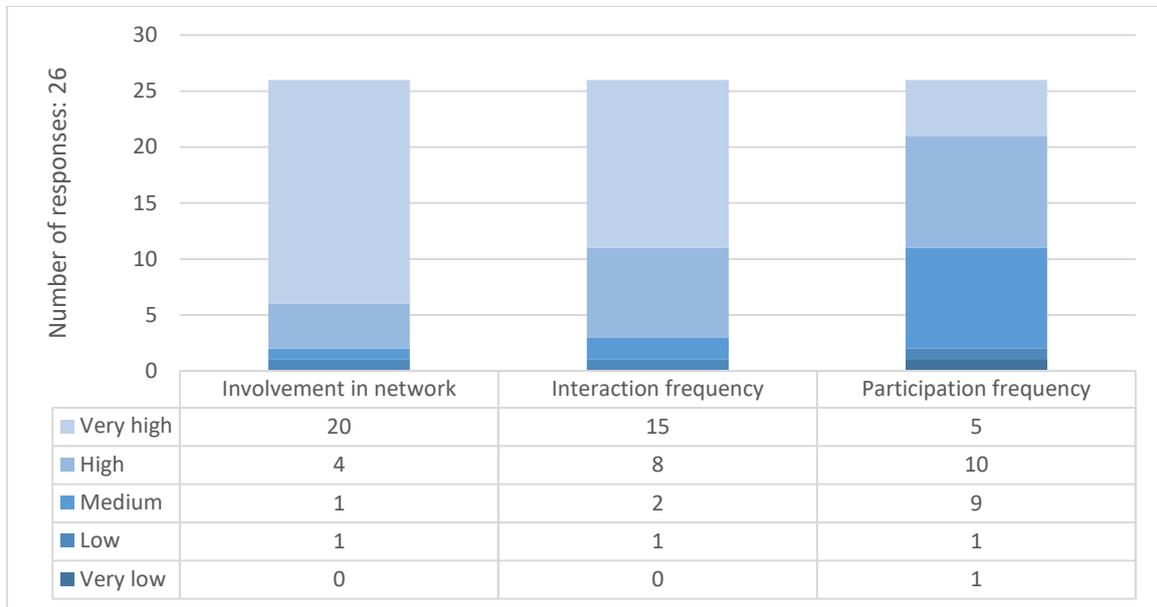
**Table 5. Social cohesion as main motivation from members in interview**

Respondent	Comment
M1	"I have a friend and she has personal problems. She asked help in communities but she did not find anything that fitted at that moment. So, we start one in our own way, the way she fitted. So, the reason why we started this community was, in fact, because we want to help her, yeah, with her problems, together."
M2	"When I moved here (in Rotterdam), my girlfriend is the only one I know and maybe her friends. I had no social network. I want to live in housing cooperative because it's easy way to get to know some more people."
M3	"My friend told me about this project. It is pleased me more and more. We did all kinds of things together here; we are talking about what we wanted and do activities together. I don't know for sure but most people come for social activities here."
M4	"We really want to have a meaning here also in the neighbourhood, to give something back. This is a new area, you know. We didn't want to make it kind of exclusive, like a satellite. Where you only go to work and then go back to your house. We really wanted to have a mix between relaxing, entertainment, housing, working."
M5	"There is not a financial issue. We like to live together. We know that my friend, the architect, will live here also. We want to live in the same neighbourhood with him. We feel very comfortable in the same project and to have the same idea."
M6	"When you live outside (the city), it's not really social to live on your own. So, we need to live with at least one family and to do such a project. We are sure that there must be several families in Holland who want to do that, but how we find them?"
M7	"It was all very positive for us, especially to me. That's why we decided to join, that's because not just the house, but also the garden. The fact that you could do things together there."

Source: Author, 2022

The housing cooperative, initially created from the shared visions and values of its members, will generate a social network inside, which provides new and different resources for members through the ties between them (structural dimension of social capital). The survey results show a positive perception of social networks and ties between members through interaction and participation, as shown in Graph 9.

**Graph 9. Members' perceptions on structural social capital in their housing cooperative**



Source: Author, 2022

The survey results also show that 26 members actively participate in housing cooperative activities. There are diverse activities, from scheduled regular meetings to interest or hobby activities, as shown in Graph 10. The survey results are explored further by interviewing seven members on how interaction and participation in joint activities created structural social capital.

**Graph 10. Type of activities in housing cooperatives for members to participate**



Source: Author, 2022

Based on the interview results, the structural dimension of social capital is formed through ties between the housing cooperative members. These ties provide resources that affect members' satisfaction with their living conditions. They are created formally, designed through cooperatives, or organically through interactions between members. Formal ties resulted from member roles in the network, member participation in scheduled activities, or the design of the house and shared spaces. These three help members have the opportunity to interact with other members who they do not know before or have nothing in common. Meanwhile, organic ties

come from interactions through similarities between members, for example, having similar professions, interests, or situations in the family, such as having children at the same age.

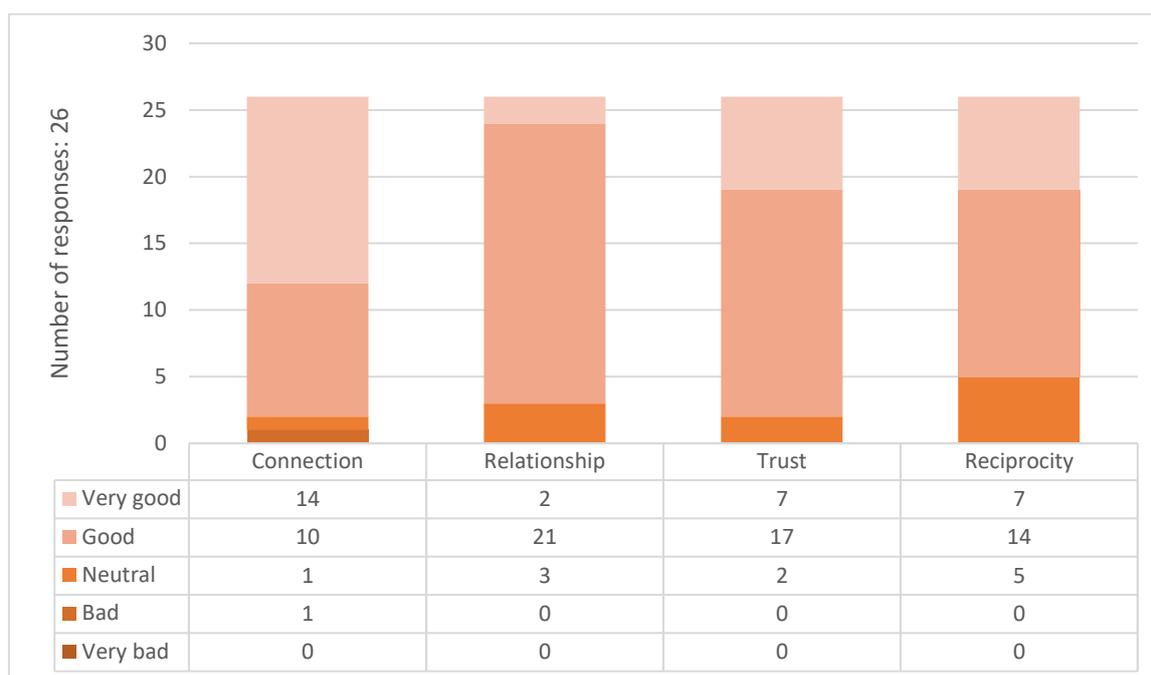
**Table 6. Factors that generate structural social capital**

Respondent	Duration	Specific role	Scheduled activities	Housing design	Organic activities
M1	6 years	Founder; Was in Housing council	Regular meeting once in 6 months	Common area; community kitchen; shared storage; garden, guest room	Start meditation group
M2	10 years	Treasurer	Regular meeting once in a month	Common area; workshop room; band studio; bar; shared storage; guest room	Start local band shows; have dinner together with neighbours
M3	6 years	Communication group	Regular meeting: once in 6 months	Common area; community kitchen; shared storage; garden, guest room	Join meditation group; start information group about reading dreams
M4	15 years	Housing council	Regular meeting: once a year	Different entry for members and guests; inner garden; greenhouse; shared storage; shared bicycle shed; workshop room; shared harbour; kids' playground; theatre	Start walking group; start maintenance group for theatre;
M5	15 years	Founder; Theatre group	Regular meeting: once a year	Different entry for members and guests; inner garden; greenhouse; shared storage; shared bicycle shed; workshop room; shared harbour; kids' playground; theatre	Start reading group; have dinner together with neighbours
M6	37 years	Founder	Regular meeting once in a month	Houses are interconnected; one entrance for all households; common area; garden	Farming together
M7	13 years	Was in Housing council	Regular meeting once in a month	Common area; garden; shared bike shed; shared storage; shared bicycle shed;	Gardening together

Source: Author, 2022

The shared goals and the existence of a social network in housing cooperatives are preconditions for creating relational social capital from personal relationships through the history of interactions between members. Hence, there will be other new resources that members get from relational embeddedness based on the quality of the relationship. Twenty-six members who took part in the survey gave a very positive view of relational social capital in housing cooperatives, as shown in Graph 11:

**Graph 11. Members' perceptions on relational social capital in their housing cooperative**



Source: Author, 2022

The interview results confirm the survey findings that there is a close relationship between the members, resulting in new resources. The members feel that the intimate connections make each member feel part of something and require them to support each other. Therefore, they do not hesitate to help and trust others will help them. Having close relationships, mutual trust, and norms of reciprocity enable members to meet their needs or solve problems in their daily lives. Proximity among members also provides a sense of comfort, where they feel they belong in the housing and identify as one of the group. A housing cooperative is their "new family" who can help and must support them, and vice versa. The seven members gave their views on relational social capital, which are summarized in Table seven.

**Table 7. Relational social capital in housing cooperative from members' perspectives**

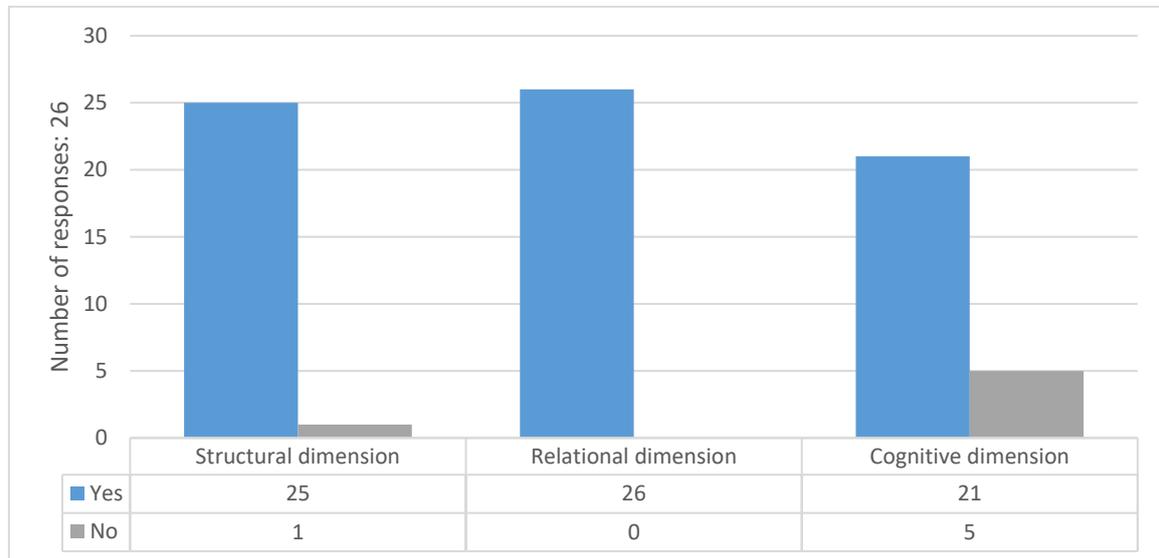
Respondent	Comment
M1	"Yes, some ask about this and that. People help each other in many ways, yes. It is really good."
M2	"It is also nice to do stuff here like organize an activity, or have dinner with people or whatever. It's not like you live separately in a building, but we live together in a house. Like a home."
M3	"Sometimes I invite my neighbours to have dinner together. Also, we share things from our house. If there is something left, other people can use it. And the friendship, that's also a benefit."
M4	"People who rent don't have this connection with us because they are not owners. It's different if you live here as an owner. Looking after the building and the community is different issue."
M5	"Sometimes maybe you are a bit ill then your neighbour will do the shopping. There's no problem. Hardly need to ask for it. They will do it."
M6	"We help each other when one of us do not able to do things he has to do. We know, outside of our own family, people here (in cooperative) would help us."
M7	"It was really good. Nice atmosphere. Friendly. It is nice to be part of something, it gives you a good feeling to contribute. It gives you a lot of energy, a lot of satisfaction."

Source: Author, 2022

### 4.3.2. Social capital benefits

As implicitly explained in the previous sections, social capital in housing cooperatives is also found through the benefits received by its members. Most members in the survey feel that they receive benefits from social capital, both from the structural, relational, and cognitive dimensions, as shown in Graph twelve.

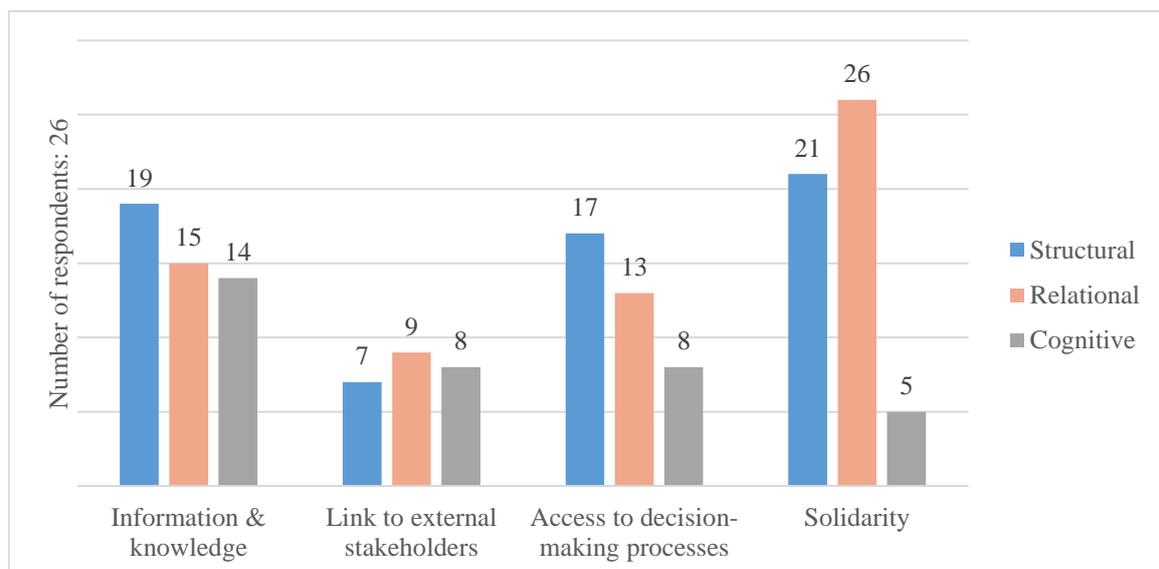
**Graph 12. Members' perception on social capital benefits**



Source: Author, 2022

Furthermore, the survey results also show four types of benefits obtained by members based on the classification by Adler & Kwon (2002). As seen in Graph thirteen, solidarity is the most felt benefit by the members, followed by information and knowledge, then access to decision-making, until the last: link to external stakeholders. These results are further explored with interviews to confirm the connection between the dimensions and the benefits. Interviews were also conducted to find specific examples of benefits and the processes experienced by members.

**Graph 13. Types of benefits from each social capital dimension**



Source: Author, 2022

The interview results confirm the findings from the survey, where solidarity and access to decision-making are the most perceived benefits, followed by information and knowledge. Most members have experiences in four specific connections as shown in Table eight. They felt solidarity from two dimensions: structural and relational, while access to decision-making and information came from the structural dimension. This result is in line with Adler & Kwon's (2002) and Forenza's (2018) explanation about positive mutual support and cooperation among participants in the same network, which will increase if there is a history of personal relationships. The interview results also show that the housing cooperative provides a network for its members to obtain social capital that links them to decisive resources and decision-making, as found by Lang & Novy (2014).

**Table 8. Connections between the social capital dimension and benefit**

	Information & knowledge	Link to external stakeholders	Access to decision making process	Solidarity
Structural dimension	M2, M3, M4, M5	-	M3, M4, M5, M6, M7,	M1, M2, M3, M4, M5, M6, M7
Relational dimension	M5	-	-	M1, M2, M3, M4, M5, M6, M7
Cognitive dimension	-	M7	-	M3, M4, M6

Source: Author, 2022

The connection in Table eight is explained further in Table nine about members' experience feeling the benefits of social capital in housing cooperatives.

**Table 9. Members' experience on social capital benefits**

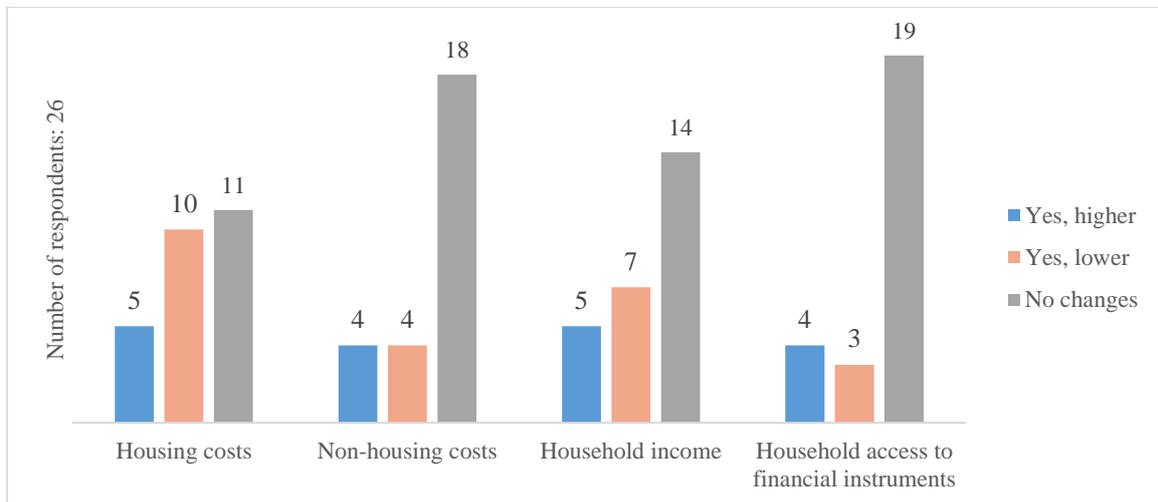
Connection	Respondent	Experience
Structural – Knowledge	M5	“So, at that moment, one of my neighbour was worked as a pension expert, very expert. And he helped me to negotiate about my retirement compensation. That saves me a lot of money till my death.”
Structural – Access to decision-making	M3	“Some people need bigger house and they complained. So, it was about changing the house because we want that everybody lives in a house according to number of people in their family. We talked and decide we can change; it is not a problem.”
Structural – Solidarity	M4	“Well, my guest fell down the stairs last Saturday here and needs a wheelchair but I didn’t have it. I asked for the wheelchair in our group. And then someone said that she has a wheelchair. And, after that I get the wheelchair.”
Relational – Solidarity	M6	“Sometimes when I’m on the station, I called them to pick me up. Or when we were on holiday, they help to feed the animals, the chickens, dog, and our cats. We help each other when one of us do not able to do things he has to do.”

Source: Author, 2022

#### 4.4. Changes in housing affordability components due to social capital benefits

Graph 14 shows that only a few members feel that their housing affordability component changes after joining a housing cooperative. Only the changes in housing costs were chosen by more than half of the members, which ten members felt their housing costs were lower.

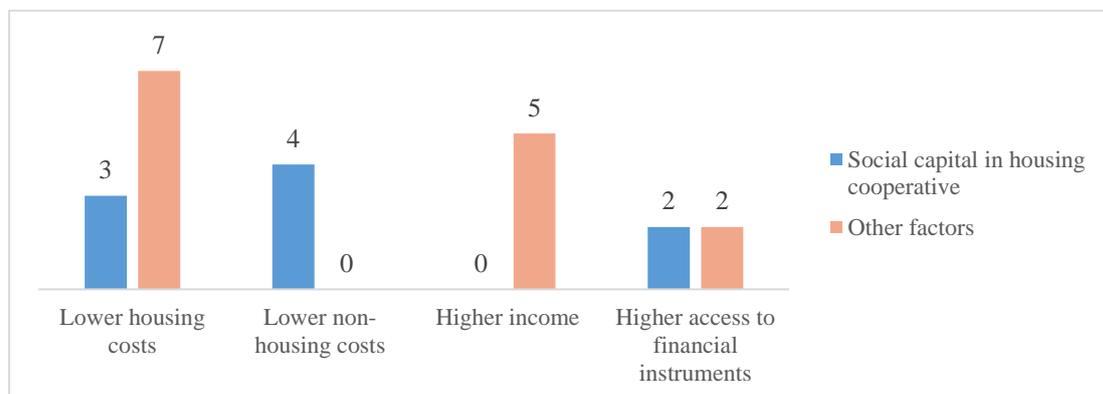
**Graph 14. Changes in members' housing affordability components after join housing cooperative**



Source: Author, 2022

Furthermore, the survey results show members' perceptions of the factors that cause changes. Members who feel their housing affordability increase after joining a cooperative, in which they experience a decrease in costs and an increase in ability to pay, provide answers regarding the factors that cause it, as shown in Graph 15. Out of ten people who feel their housing costs have decreased, only three people say social capital in cooperative housing is one of the causes. All three felt the reduction in their necessary incidental costs (gas, electricity, water, taxes, levies, internet, etc.) was due, in part, to the fact that the cooperative allowed them to participate in decision-making and created solidarity among members. The remaining seven members feel that the influencing factors are changes in house specifications (location, tenure, area, etc.) and changes in economic conditions in the Netherlands. All four members whose non-housing costs were lower after joining the housing cooperative felt that one of the changing factors was the social capital in the cooperative. They experienced decreases in education and training, recreation, and transportation costs because, in part, housing cooperatives connect them to information and knowledge and create solidarity among members.

**Graph 15. Members' perceptions of the factors that cause changes in housing affordability components**



Source: Author, 2022

Of the five people who experienced an increase in income, none chose social capital in housing cooperatives as one of the factors that caused it, but they answered the changes occurred due to a change in job or a change in position in the same job. In addition, two out of four people who felt they had higher access to financial instruments after joining a cooperative answered that social capital in cooperative housing was one of the factors. Both felt that housing cooperatives provided them with information and knowledge and connected them with external stakeholders, which increased their access.

The results of this survey were further analysed by interviewing seven members, some of which felt an increase in their housing affordability after joining the cooperative and stated that social capital was one of the contributing factors. The analysis is implemented by coding members' statements using ATLAS.ti and connecting them with two variables: social capital benefits and changes in housing affordability components. By looking at the co-occurrence of the two codes representing two different variables, the researcher tried to see the frequency and pattern of the experiences of the seven informants.

**Table 10. Co-occurrences of social capital benefits and increases in housing affordability components**

	Information & knowledge	Link to external stakeholders	Access to decision making process	Solidarity
Lower housing costs	-	-	M4, M5, M6, M7	M2, M4, M5, M6, M7
Lower non-housing costs	-	-	-	M2, M3, M4, M5, M6, M7
Higher income	M5	-	-	-
Higher access to financial instruments	-	M7	-	-

Source: Author, 2022

As shown in Table 10, there are three co-occurrences between two variables experienced by most of the interview participants. First is the access to the decision-making process helps members reduce their housing costs. All members who encountered this relationship gave answers about the same process, where they can communicate their aspirations about more preferable and affordable housing conditions to internal and external stakeholders. Their aspirations are accepted and implemented through a democratic decision-making system in a social network in the housing cooperative, which reduces their housing costs. The changing component is necessary incidental costs, the same as the survey results, where all four respondents experienced a decrease in their electricity and maintenance costs. M5 tells his experience with this.

*“I always want to have solar panels, but there was problem with the government about some regulations. After some negotiations, now we have the solar panels. The energy costs are dropping down. Now I pay zero for electricity, but of course we have to pay for the panels”* (Interview, July 2022)

The second co-occurrence can be seen in the solidarity between members of the housing cooperative, which causes a decrease in housing costs: utilities and maintenance costs. Both costs decrease due to sharing costs, equipment, or efforts from members. This finding is in line with that described by Putnam (1995) that the solidarity created from social capital is embedded in the relationships between units and becomes the basis for coordination and cooperation for mutual benefit. Facilitator P2 gives his opinion on this matter.

*“By doing simple work in day-to-day management, you can make quite massive savings if you compare to what happened in housing associations. Somebody says oh, the lamp needs to be replacing. And then somebody just go either do it by themselves or they go to somebody in the maintenance group to do it. They have their own equipment and their own lamp; they shared the costs for them. So, that's a huge saving. Housing association pay 50 euros for changing a lamp. Cost of a LED lamp is 7,5 euros, so they waste 42,5 euros for internal costs, which is the cost of getting somebody to do it.”* (Interview, July 2022)

As explained by Adler & Kwon (2002) and Narayan & Pritchett (1999), solidarity as one of the social capital benefits in the network can reduce transaction costs, or what is known as internal costs by P2. Coordination and cooperation between members in a housing cooperative allows them to share their duties and responsibilities over the house so that there is no need to involve external parties, which saves costs. In addition, because of the trust and norm of reciprocity, they share equipment and labour, so there is no need to buy new tools or hire workers, as explained by M6.

*“When we need some changes in the house or maintenance, we got help from the community here. Like when we want to renovate the roof and put solar panel. We did it together, it is very good, because you don't have to hire labour forces, it cut the cost.”* (Interview, July 2022)

The third co-occurrence is seen in solidarity that lower non-housing costs, where a clear pattern occurs in the decrease in transportation and recreation costs. Lower transportation costs because members share vehicles or members rent out theirs to other members at a low price. These two transactions are limited only to people who are in solidarity with the owner of the vehicle, either from the same network in cooperative or maybe further, only to people who have close relationships, as explained by M3.

*“I have a car and I share it. I get some money from it, but not much. Everybody who asks can have it, but there are about three or four people asked it regularly. Its only for people from here, you know, people that live here.”* (Interview, July 2022)

Members feel lower recreation costs because they can do their hobbies and interests at home by sharing the expenses with other members. Instead of getting it elsewhere at a higher price and more struggle, members can do activities of leisure they like at home. Being in a network allows members to know each other's interests and look for similarities. Same interest and solidarity make members share the costs that must be paid by each member or household, as Forenza et al. (2018) said that solidarity improves members' participation and contribution to the network. Sharing costs between members allows them to get the preferred recreation they cannot get by themselves, or to get it without spending a lot of money. M4 describes his satisfaction with his cooperative housing in sharing various types of recreation.

*“We have a theatre program for the neighbourhood. We watch movies every Friday night. There are some parents with children, and they started a judo club in there.”* (Interview, July 2022)

## **Chapter 5: Conclusions and recommendations**

### **5.1. Housing cooperative operation in the Netherlands**

Housing cooperatives in the Netherlands are interpreted diversely depending on each function and purpose, as they do not have specific legal definitions. The most common legal form is Vereniging (association) and Vereniging van Eigenaren or VvE (owner's association). Vereniging is a legal form where the members become a single entity and have collective ownership, usually used in management cooperative and cooperative rental housing. VvE is also an association that looks after the common interests of its members, but the ownership is in each member, usually used in the homeowners' cooperative. Three main external stakeholders related to housing cooperatives are banks or financial institutions, governments, and housing associations. Their support is influenced by their perceptions of the potential and benefits of the cooperative. However, member housing cooperatives also play a critical role in showing their abilities, convincing those stakeholders, and increasing public interest through creative and innovative concepts.

### **5.2. Opportunities & challenges of housing cooperatives in the Netherlands**

Housing cooperatives have the potential to be an alternative provider of affordable housing for middle-income groups in the Netherlands, where housing costs are overpriced and inaccessible, as described by members in surveys and interviews. Several members stated that the housing cooperative enabled them to reach the house they preferred, which was unaffordable in the general housing market. They are also satisfied with the ratio between their income and the housing costs they have to pay in the housing cooperatives, which means this option is affordable. Members who are unhappy with the affordability are more concerned about their income than the cost of housing because they feel it is reasonable for more spaces and connections they get. Housing cooperatives not only have the opportunity to provide affordable housing but also serve the needs of groups with other motivations or specific goals, such as social cohesion or environmental sustainability, or the elderly group to get collective healthcare and support.

The housing cooperative must solve three challenges in three different phases to maximize the potential above. The first is to increase public interest in the housing scheme through housing cooperatives. By completing this challenge, the cooperative will get a positive response and more assistance from key external stakeholders, which can help solve the second challenge. The second challenge is to create more affordable and uncomplicated processes of housing provision with more support from external parties. The third challenge is to keep effective and beneficial operations in managing cooperative, house, environment, and social relations. By making members actively participate and maintain a commitment to achieving a common goal, the cooperative can continue to grow to satisfy the needs of its members and accomplish new targets, which will attract more public interest and solve the first challenge.

### **5.3. Social capital in housing cooperatives**

Social capital in a housing cooperative is found through the dimensions and benefits felt by its members. Three social capital dimensions are generated gradually regarding the level of social relations between members, starting with the cognitive dimension, then structural, and finally relational. The cognitive dimension, which comes from shared motivations and values, creates a social network and initiates social relationships among members who previously did not know each other. Members build more connections through interaction and participation in joint activities at the same network that provides different new resources. Interaction and participation could be designed formally through cooperatives to achieve common goals or

organically through the members' proximities and similarities. Shared motivation and ties among members in the same network create personal relationships and more intimate relationships through the history of interactions between members, which produces another new resource called relational social capital. Intimate connections between members of the housing cooperative make them feel mutual trust and help each other to meet their needs or solve problems in their daily lives.

Members also experience the benefits of social capital in cooperative housing, where solidarity and access to decision-making process are the most felt, followed by information and knowledge. The three benefits relate to structural and relational dimensions, where these two dimensions create positive mutual support and cooperation among participants in the same network, which will increase if there is a history of personal relationships.

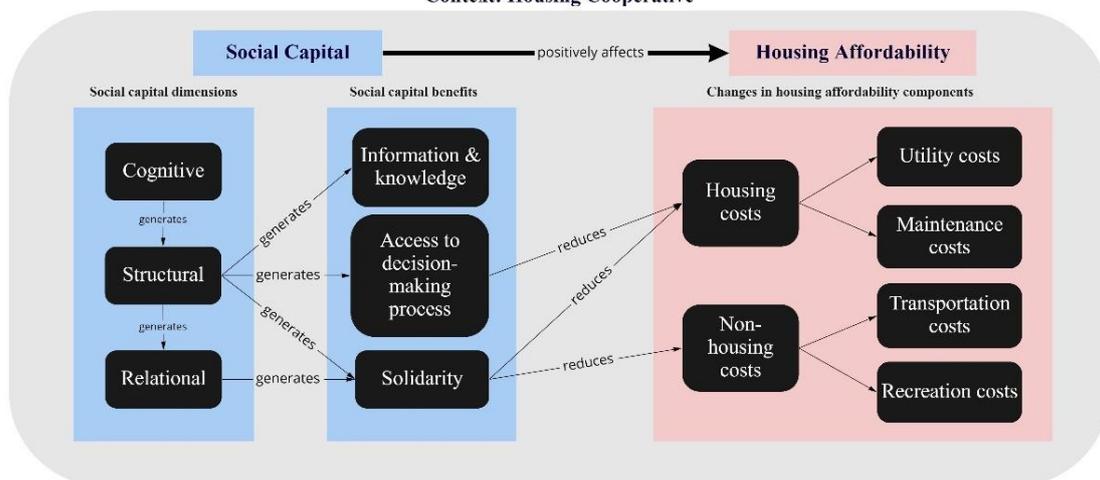
#### 5.4. The impact of social capital on housing affordability

Social capital in the housing cooperative positively affects the housing affordability of its members, as shown in Graph 16. Survey results show that middle-income groups living in housing cooperatives are satisfied with the ratio between their income and housing costs. However, only a few members feel the change in their housing affordability components after joining the housing cooperative, mostly in the cost rather than the income or access. Interview results also showed the same outcome: changes occurred in the cost component where two social capital benefits helped reduce housing and non-housing costs. The first benefit is access to the decision-making process, which helps reduce housing costs. Members feel that their inputs on affordable and desirable housing conditions are more listened to through cooperatives. They feel that their aspirations are accepted and implemented to create better living conditions at lower costs, particularly electricity and maintenance costs.

The second benefit, solidarity, reduce housing and non-housing costs of housing cooperative members. Lower housing costs: utilities and maintenance occur because solidarity among members makes them coordinate well to share responsibilities and resources in managing the house. They do not have to buy new equipment or involve external parties, which could reduce or even removes the transaction costs. Solidarity can also reduce non-housing costs: transportation and recreation costs, where members who have the same needs or interests work together to get them at less expensive prices. With solidarity, members who have resources are willing to share with others or rent them out at a lower price. Members also contribute their money to collectively purchase the goods or services needed so that each member can pay less.

Graph 16. Impact of social capital on housing affordability of housing cooperatives members

Context: Housing Cooperative



Source: Author, 2022

## **5.5. Recommendations to increase the potential of housing cooperatives as affordable housing providers for the middle-income groups**

The researcher found that social capital in housing cooperatives helps middle-income groups to realize the living conditions they want, financially, socially, and environmentally. Therefore, shared vision, social networks, and personal relationships between members need to be maintained continuously to preserve collective resources, develop more types, and enlarge the benefits for members and external parties. Cooperative can do it from the start by strictly selecting new members to see people who are suitable and willing to contribute to achieving the agreed common goals. Differences in goals or commitments in cooperatives could ruin connections and create conflicts that can reduce cooperatives' usefulness, one of which is maintaining housing affordability. After finding members with the same objective, the cooperative must continuously develop shared goals to be achieved in certain periods to give each member a sense of responsibility. By actively involving all members, they will feel a sense of identity and belonging in the housing complex and cooperative as an organization which maintains social capital in the housing cooperative.

The government should pay more attention to housing cooperatives' potential as an alternative to providing adequate and affordable housing for middle-income groups. The government can provide a specific legal form or a specific type of association on housing cooperatives to distinguish them from other business entities so that cooperatives get priority or more support from external stakeholders. Implementing a land leasehold system for cooperative leases is one good incentive to increase public interest and ensure the affordability of housing in cooperatives through external controls. Cooplink also can act more to strengthen networks between housing cooperatives on the ground and to increase public interests.

## **5.6. Potentials for further research**

Further research can be done to compare the living situation in housing cooperatives and outside them, for example, by comparing the affordability level of tenants in a management cooperative with tenants in a private landlord or housing association. Cost comparative studies can specifically show amount differences, involved parties, and how the process works. By doing this research, we can investigate to what extent the cost efficiency is obtained and replicate the model in other cooperatives.

As mentioned in Adler & Kwon's (2002) research about negative social capital outcomes, further research can also be done to investigate that phenomena in housing cooperatives received by members or external parties. The researcher found several cases where the tight relationship between members creates a little bloc that can split the whole community. Furthermore, several respondents said that close networks and relationships potentially make cooperatives feel exclusive and reduce interactions with other communities, which can create social segregation.

The researcher realizes many flaws in this study and recommends several things. First, in research on social capital and housing affordability, where many uncommon terms are used, direct data collection methods are more advantageous to clarify complex concepts or questions to respondents. Interview methods are preferred as they can get deeper and new information from respondents. Second, in research on new phenomena that relate to personal matters like housing cooperatives, it is challenging to find respondents who are willing to participate and reveal their stories. It is important to prepare from the beginning to anticipate the shortage of participants in both the survey and interviews

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# Appendix 1: Research instruments and time schedule

## 1. Survey questionnaire

### Survey on Social Capital and Housing Affordability in Housing Cooperative

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This study wants to investigate the potential of housing cooperatives as an alternative housing provision in the Netherlands. This survey will ask about your social relationship with other members of the housing cooperative, resources that you get from the relationships, and how that relationship give benefits to your housing affordability.

If you have any questions about the survey, please email me at: 630254rp@eur.nl.  
Thank you very much for your participation! I really appreciate your input!

Intro1: How much is your household income per year?

- < 40,765 euros per year (1)
- 40,765 - 69,600 euros per year (2)
- > 69,600 euros per year (3)

*Respondents who did not choose the second option on the Intro1 question cannot continue the survey and are directed to the final page.*

Intro2: Are you a member of a housing cooperative **and** live in the same housing complex or neighbourhood as other members

- Yes (1)
- No (2)

*Respondents who did not choose the first option on the Intro2 question cannot continue the survey and are directed to the final page.*

Intro3: What is the name of the housing cooperative where you joined and lived?

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Intro4: What is the type of your housing cooperative?

- Cooperative rental housing in which there is collective ownership of the housing complex (1)
- The homeowners' cooperative (individual homeowners organized in a cooperative organization) (2)
- The management cooperative (the housing is owned by a housing association but a cooperative of tenants is responsible for their management) (3)
- Other, please specify: (4) \_\_\_\_\_

Intro5: How long have you been a member and lived in the cooperative housing?

- < 1 year (1)
- 1 - 2 years (2)
- 2 - 3 years (3)
- 3 - 4 years (4)
- 4 - 5 years (5)
- > 5 years (6)

Network1: Do you feel you are part of the social network within the housing cooperative?

- No, there is no social network within the housing cooperative (1)
- No, I am not part of the social network in the housing cooperative (2)
- Yes, I am part of the social network because I am a member and I live in the housing cooperative (3)
- Yes, I am part of the social network because I am a member, I live, and I have social relations in the housing cooperative (4)
- Yes, I am part of the social network because I am a member, I live, I have social relations, and I have specific role in the housing cooperative (5)

Interaction1: How often do you interact with other members in your housing cooperative?

- Never interact (1)
- Once a month or less (2)
- 2 or 3 times a month (3)
- Once a week (4)
- Several times a week (5)
- Every day (6)

Interaction2: What type of interaction do you have? You can choose more than one option

- Greet when pass by each other (1)
  - Have a small talk (2)
  - Have a meaningful discussion (3)
  - Do activities together inside the housing complex (4)
  - Do activities together outside the housing complex (5)
  - Other, please specify: (6)
- 

Participation1: How often do you participate in social activities held by the housing cooperative?

- Never (1)
- Rarely (2)
- Sometimes (3)
- Frequently (4)
- Always (5)

Participation2: What social activities do you participate in? You can choose more than one option.

- Regular housing cooperatives meeting (1)
  - Decision making activities (2)
  - Workshop and/or skill training (3)
  - Gardening and/or environment related activities (4)
  - Sport activities (5)
  - Cooking and/or eating together (6)
  - Other, please specify: (7)
- 

Outcome1: Do you feel you get benefits by networking, interacting, and participating in housing cooperatives?

- Yes (1)
- No (2)

Outcome2 Please explain what is the benefit by choosing one or more of below statements.

- I get new information and knowledge (1)
- I get links to other stakeholders (2)
- I get access to participate in decision-making process (3)
- I get solidarity among members (4)

Relationship1: How many members in your housing cooperative that you know?

- There is no member housing cooperative that I know (1)
- I know 25% of the members of the housing cooperative (2)
- I know 50% of the members of the housing cooperative (3)
- I know 75% of the members of the housing cooperative (4)
- I know all the members of the housing cooperative (5)

Relationship2: How is your relationship with the members you know?

- Very bad (1)
- Bad (2)
- Neutral (3)
- Good (4)
- Very good (5)

Trust1: How much do you trust other members in your housing cooperative?

- I do not trust them at all (1)
- I do not trust most of them (2)
- I only trust very few of them (3)
- I trust most of them (4)
- I trust all of them (5)

Trust2: Have you ever entrusted the care of something valuable like your children, pets, plants, etc., to other cooperative members when you were not home?

- Yes (1)
- No (2)
- I do not have children, pets, or plants (3)

Reciprocity1: How sure are you that other housing cooperative members will repay your help?

- They will not repay my help (1)
- Most likely they will not repay my help (2)
- There is a possibility that they will repay my help (3)
- Most likely they will repay my help (4)
- They will definitely repay my help (5)

Reciprocity2: "If I have a problem or an accident at home, the other housing cooperative members will help me immediately because I will do the same for them." Do you agree with this statement?

- Strongly disagree (1)
- Disagree (2)
- Neither agree or disagree (3)
- Agree (4)
- Strongly agree (5)

Outcome 1: Do you feel you get benefits by having a good relationship, trust, and norm of reciprocity with other housing cooperative members?

- Yes (1)
- No (2)

Outcome2: Please explain what is the benefits by choosing one or more of below statements.

- I get new information and knowledge (1)
- I get links to other stakeholders (2)
- I get access to participate in decision-making process (3)
- I get solidarity among members (4)

Motivation1: What is your motivation in joining housing cooperative? Please choose one or more below statements

- I want to get an affordable housing (1)
- I want to live with other people and expand my network (2)
- I want to get a more environmentally sustainable lifestyle (3)
- Other: (4) \_\_\_\_\_

Motivation2: Is that motivation(s) fulfilled?

- Yes (1)
- No (2)

Motivation3: Do you think you have the same motivation as other members to join the housing cooperative?

- Yes (1)
- No (2)
- I do not know (3)

Values1: Do you think you have the same value as other members to live together in the housing cooperative?

- Yes (1)
- No (2)

Values2: Please explain what is the value by choosing one or more of below options.

- Independence (1)
- Equality (2)
- Justice (3)
- Solidarity (4)

- Integrity (5)
- Transparency (6)
- Social responsibility (7)
- Caring for others (8)
- Other: (9) \_\_\_\_\_

Outcome1: Do you feel you get benefits by having the same motivation and/or values as other housing cooperative members?

- Yes (1)
- No (2)

Outcome2: Please explain what is the benefit(s) by choosing one or more of below statements.

- I get new information and knowledge (1)
- I get links to other stakeholders (2)
- I get access to participate in decision-making process (3)
- I get solidarity among members (4)

Tenure1: What type of housing tenure do you prefer?

- Homeownership (1)
- Rental housing (2)

Tenure2: Please explain why by choosing one or more of the below statements.

- I get an asset by owning a house (1)
- I can pass the house on to my children and grandchildren (2)
- I have a better social status when I own a house (3)
- I feel more financially stable when I own a house (4)
- Other: (5) \_\_\_\_\_

Tenure3: Please explain why by choosing one or more of the below statements.

- Rental housing is more affordable (1)
- Rental housing is more flexible (2)
- Rental housing has better location (3)
- Less concerned about the financial burden (down payment, property taxes, decreasing value, etc.) (4)
- Other (5) \_\_\_\_\_

Tenure4: With the type of tenure that you chose earlier, what percentage of your monthly income should you allocate to housing costs without sacrificing other basic expenses?

- < 20% (1)
- 21% - 30% (2)
- 31% - 40% (3)
- 41% - 50% (4)
- 51% - 60% (5)
- > 60% (6)

Tenure5: Is that the same percentage that you pay now in the housing cooperative?

- Yes, it is the same (1)
- No, I pay less (2)
- No, I pay more (3)

Affordability1: Will you be able to get a house that is affordable **and** suits your preferences if you do not join housing cooperative?

- Yes (1)
- No (2)

Affordability2: If you can afford other options that suit your preferences, why choose housing cooperative? Please explain by choosing one or more of the below options.

- More affordable (1)
- Preferred housing conditions (2)
- Preferred location (3)
- Preferred type of tenure (4)
- Feel more comfortable living with others (5)
- Feel more environmentally sustainable (6)
- Other: (7) \_\_\_\_\_

Affordability3: If there is no choice that suits your preferences and is affordable for you, please explain the reasons by choosing one or more below statements.

- I cannot afford to buy or rent a house in the housing market because it's too expensive (1)
- I have difficulty accessing loans from banks or other financial institutions (2)
- I am not eligible to get the housing subsidy even though I need it (3)
- I cannot access social housing because my income exceeds the threshold allowed by the government (4)
- Waiting list for social housing is too long (5)
- I get discrimination from stakeholders (landlord, real estate company, bank etc.) in the housing market (6)
- Other: (7) \_\_\_\_\_

Housing1: Are there any changes to the housing costs that you have to pay after joining the housing cooperatives?

- Yes (1)
- No (2)

Housing2: Are your housing costs higher or lower than before?

- Higher (1)
- Lower (2)

Housing3: What components of your housing costs have changed? Please choose one or more below options.

- Direct housing costs (mortgage or rent) (1)
- Necessary incidental costs (gas, electricity, water, taxes, levies, internet, etc.) (2)

Housing4: To which factors do you attribute these changes? Please choose one or more below options.

- Change in housing conditions (size, features, number of rooms, etc.) (1)
- Change in housing location (neighbourhood, access, safety, public facilities, etc.) (2)
- Change in housing tenure (homeownership, rental housing) (3)
- Participation in housing cooperatives (4)
- Change in land use situation around housing area (new development, new government plant, disinvestment, neighbourhood decay, etc.) (5)
- Changes in economic conditions in the country related to housing costs (inflation, interest rate, income, etc.) (6)
- Other: (7) \_\_\_\_\_

Housing5: You chose participation in housing cooperatives as contributing factor, please explain how by choosing one or more of the below statements.

- Housing cooperative connects me to information and knowledge which change the housing costs that I have to pay (1)
- Housing cooperative links me with other stakeholders which change the housing costs that I have to pay (2)
- Housing cooperative allows me to participate in decision makings which change the housing costs that I have to pay (3)
- Housing cooperative creates a sense of solidarity between members which change the housing costs that I have to pay (4)
- Other: (5)

Non-Housing1: Are there any changes to the non-housing costs that you have to pay after joining the housing cooperatives?

Yes (1)

No (2)

Non-Housing2: Are your non-housing costs higher or lower than before?

Higher (1)

Lower (2)

Non-Housing3: What components of your non-housing costs have changed? Please choose one or more below options.

Food costs (1)

Education & training costs (2)

Healthcare costs (3)

Transportation costs (4)

Child care costs (5)

Recreation costs (6)

Other: (7)

Non-Housing4: To which factors do you attribute these changes? Please choose one or more below options.

Change in household preferences (3)

Change in household situations (new family members, child's age, etc.) (8)

The providers change the expenditures prices (9)

Participation in housing cooperatives (10)

- Change in social and political conditions in the country (11)
- Change in economic conditions in the country (12)
- Other: (7) \_\_\_\_\_

Non-Housing5: You chose participation in housing cooperatives as contributing factor, please explain how by choosing one or more of the below statements.

- Housing cooperative connects me to information and knowledge which change the non-housing costs that I have to pay (1)
- Housing cooperative links me with other stakeholders which change the non-housing costs that I have to pay (2)
- Housing cooperative allows me to participate in decision makings which change the non-housing costs that I have to pay (3)
- Housing cooperative creates a sense of solidarity between members which change the non-housing costs that I have to pay (4)
- Other: (5)

Income1: Are there any changes to your household income after joining the housing cooperatives?

- Yes (1)
- No (2)

Income2: Are your household income higher or lower than before?

- Higher (1)
- Lower (2)

Income3: To which factors do you attribute these changes? Please choose one or more below options.

- Change in number of earners in the household (1)

- Change in salary within the same employment (2)
- Change in salary because change in employment (3)
- Participation in housing cooperatives (4)
- Change in social and political conditions in the country (5)
- Change in economic conditions in the country (6)
- Other: (7) \_\_\_\_\_

Income4: You chose participation in housing cooperatives as contributing factor, please explain how by choosing one or more of the below statements.

- Housing cooperative connects me to information and knowledge that change my household income (1)
- Housing cooperative links me with other stakeholders that change my household income (2)
- Housing cooperative allows me to participate in decision makings that change my household income (3)
- Housing cooperative creates a sense of solidarity between members that change my household income (4)
- Other: (5)

Access1: Are there any changes to your household access to financial instruments after joining the housing cooperatives?

- Yes (1)
- No (2)

Access2: Are your household access to financial instruments are better or worse than before?

- Better (1)
- Worse (2)

Access3: To which factors do you attribute these changes? Please choose one or more below options.

- Change in household financial literacy (12)
- Change in household connection to financial institutions (19)
- Participation in housing cooperatives (15)
- Change in financial infrastructure and technology in the country (16)
- Change in financial policy in the country (20)
- Change in social and political conditions in the country (21)
- Change in economic conditions in the country (22)
- Other: (7) \_\_\_\_\_

Access4: You chose participation in housing cooperatives as contributing factor, please explain how by choosing one or more of the below statements.

- Housing cooperative connects me to information and knowledge that change my household access to financial instruments (1)
- Housing cooperative links me with other stakeholders that change my household access to financial instruments (2)
- Housing cooperative allows me to participate in decision makings that change my household access to financial instruments (3)
- Housing cooperative creates a sense of solidarity between members that change my household access to financial instruments (4)
- Other: (5)

Interview1 Please write down your name and your contact (phone number or email address) where I can contact you for verification about this survey

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## 2. Interview guides for members of housing cooperative

### A. Introduction Part

1. Welcoming the respondent
2. Introduction of the interviewer
3. Purpose of the interview
4. Duration of the interview, types of questions, and plan of the interview
5. Privacy and ethics
6. Consent for recording
7. Informed consent
8. Confirmation of respondent consent

### B. Questions

1. Sub-variable: structural social capital and its outcomes

Questions:

- a. Confirming respondents' answers in the survey and asking in more detail about the structural social capital in their housing cooperatives.
- b. Do you feel you need to build a social network, interact, and participate in the housing cooperative?
- c. Why do you feel it is necessary/unnecessary to do that?
- d. (If the respondent gets structural social capital outcome)
  - Could you please explain the outcome(s) you received from networking, interacting, and participating in the housing cooperative?
  - Can you please explain how the process happened until you got that outcome?
- e. (If the respondent does not get the structural social capital outcome)
  - Why do you think you don't get the outcome of networking, interacting, and participating in housing cooperatives?

2. Sub-variable: relational social capital and its outcomes

Questions:

- a. Confirming respondents' answers in the survey and asking in more detail about the relational social capital in their housing cooperatives.
- b. Do you feel you need to build good relationship with other housing cooperative members by knowing and trusting them?
- c. Why do you feel it is necessary/unnecessary to do that?
- d. (If the respondent gets relational social capital outcome)
  - Could you please explain the outcome(s) you received from knowing and trusting other housing cooperative members?
  - Can you please explain how the process happened until you got that outcome?
- e. (If the respondent does not get the relational social capital outcome)
  - Why do you think you don't get the outcome from knowing and trusting other housing cooperative members?

3. Sub-variable: cognitive social capital and its outcomes

Questions:

- a. Confirming respondents' answers in the survey and asking in more detail about the cognitive social capital in their housing cooperatives.
- b. Do you feel it is necessary to have shared vision and/or values with other housing cooperative members?
- c. Why do you feel it is necessary/unnecessary?
- d. (If the respondent gets cognitive social capital outcome)
  - Could you please explain the outcome(s) you received from having shared vision and/or values with other housing cooperative members?
  - Can you please explain how the process happened until you got that outcome?
- e. (If the respondent does not get the cognitive social capital outcome)
  - Why do you think you don't get the outcome from having shared vision and/or values with other housing cooperative members?

4. Sub-variable: affordability ratio & willingness to pay

Questions:

- a. (If the respondent chose: the same or pay less than the percentage in the survey)

In the previous survey, you answered that \_\_\_% of your monthly income should be allocated for housing costs. You also answered that the percentage is the same or higher than what you paid, which means you pay less than the percentage. Does that mean you are satisfied with the housing costs you must pay in the housing cooperative? Or do you have any suggestions for improvements regarding affordability?
- b. (If the respondent chose: pay more than the percentage in the survey)

In the previous survey, you answered that \_\_\_% of your monthly income should be allocated for housing costs. You also answered that the percentage is the lower than what you paid, which means you pay more than the percentage. Why do you still choose to live in cooperative housing? Are you sacrificing other expenses? Or are you improving your ability to pay? How is the process?

5. Sub-variable: motivation and expectation to join housing cooperative

Questions:

- a. In the previous survey, you answered \_\_\_\_\_ as your motivation for joining the housing cooperative. Could you please explain further the process that happened until you came up with that motivation and decided to join the housing cooperative?
- b. Where do you live before? Are the living conditions the same? Do you find it better in the housing cooperative? Or worse?

6. Sub-variable: changes in housing costs

Questions:

- a. (If the respondent answered that participating in a housing cooperative is a factor causing changes in housing costs)

In the previous survey, you answered that there was a change in your housing costs after you joined a housing cooperative. You also answered that one of the factors that led to this change was housing cooperatives. Can you explain further how this process happened?

- b. (If the respondent answered that participating in a housing cooperative is not a factor causing changes in housing costs)

In the previous survey, you answered that there was a change in your housing costs after you joined a housing cooperative. You also answered that housing cooperative is not one of the factors that led to this change. Can you explain further how this process happened?

7. Sub-variable: changes in non-housing costs

Questions:

- a. (If the respondent answered that participating in a housing cooperative is a factor causing changes in non-housing costs)

In the previous survey, you answered that there was a change in your non-housing costs after you joined a housing cooperative. You also answered that one of the factors that led to this change was housing cooperatives. Can you explain further how this process happened?

- b. (If the respondent answered that participating in a housing cooperative is not a factor causing changes in non-housing costs)

In the previous survey, you answered that there was a change in your non-housing costs after you joined a housing cooperative. You also answered that housing cooperative is not one of the factors that led to this change. Can you explain further how this process happened?

8. Sub-variable: changes in households' income

Questions:

- a. (If the respondent answered that participating in a housing cooperative is a factor causing changes in household income)

In the previous survey, you answered that there was a change in your household income after you joined a housing cooperative. You also answered that one of the factors that led to this change was housing cooperative. Can you explain further how this process happened?

- b. (If the respondent answered that participating in a housing cooperative is not a factor causing changes in household income)

In the previous survey, you answered that there was a change in your household income after you joined a housing cooperative. You also answered that housing cooperative is not one of the factors that led to this change. Can you explain further how this process happened?

9. Sub-variable: changes in household's access to financial instruments

Questions:

- a. (If the respondent answered that participating in a housing cooperative is a factor causing changes in household's access to financial instruments)

In the previous survey, you answered that there was a change in your household's access to financial instruments after you joined a housing cooperative. You also answered that one of the factors that led to this change was housing cooperative. Can you explain further how this process happened?

- b. (If the respondent answered that participating in a housing cooperative is not a factor causing changes in household's access to financial instruments)

In the previous survey, you answered that there was a change in your household's access to financial instrument after you joined a housing cooperative. You also

answered that housing cooperative is not one of the factors that led to this change.  
Can you explain further how this process happened?

### **C. Closing**

1. Giving opportunities for respondents to ask questions
2. Confirmation for consent
3. Closing sentence and thank the respondent

### **3. Interview guides for facilitators**

#### **A. Introduction Part**

1. Welcoming the respondent
2. Introduction of the interviewer
3. Purpose of the interview
4. Duration of the interview, types of questions, and plan of the interview
5. Privacy and ethics
6. Consent for recording
7. Informed consent
8. Confirmation of respondent consent

#### **B. Questions**

1. Topic: Facilitator's organization
  - a. How was your organization founded?
  - b. What is the purpose of your organization?
  - c. How your organization can facilitate groups to form housing cooperatives?
  - d. How many housing cooperatives are currently joining or getting help from your organization?
2. Topic: Housing cooperatives in the Netherlands
  - a. How do housing cooperatives operate in the Netherlands? What is its legal form? Is it a business entity or a non-profit organization?
  - b. How many types of housing cooperatives are in the Netherlands? What is the difference between these types? What type are the most at this time?
  - c. What is the system in cooperative housing? Are different types have different systems? Who are the internal stakeholders involved (supervisory board, board, management, members, etc.)?
  - d. How do housing cooperatives coordinate with external stakeholders (central government, municipality, housing associations, banks, etc.) to achieve their goals? What went well? What should be improved?
3. Topic: Housing cooperative and social capital
  - a. Do you recognize social capital dimensions in housing cooperative? What do you think is the most common dimension? How social capital can be generated in cooperative?

- Structural social capital from networking, interacting, and participating?
  - Relational social capital from a close relationship, trust, and norms of reciprocity?
  - Cognitive social capital from shared visions and values?
- b. Are there certain conditions to develop social capital in cooperative housing? For example, scheduled joint activities, common rooms or gardens, etc.
  - c. Are there any benefits that members receive beyond their expectation (motivation to join) by having relationships and getting social capital in a housing cooperative? Such as new information and knowledge, links to other parties, more control through participation in decision making, or solidarity.
4. Topic: Housing cooperative and affordability of middle-income groups in the Netherlands
    - a. What is the public interest in housing cooperatives in the Netherlands, especially from the middle-income groups?
    - b. What is the general motivation for middle-income groups to join housing cooperatives?
    - c. What are the opportunities for housing cooperatives to become affordable housing providers for the middle-income groups? What challenges stand in the way (e.g., permits, lands, public interest, financial problems, etc.)?
    - d. What is the housing affordability of middle-income groups in the Netherlands? What is the common problem they encountered in getting adequate housing?
    - e. Do middle-income groups' affordability change by participating in housing cooperatives? What components can change (housing costs, non-housing costs, household income, household access to financial instruments)?

### **C. Closing**

4. Giving opportunities for respondents to ask questions
5. Confirmation for consent
6. Closing sentence and thank the respondent

## 4. Time schedule

Table 11. Research timeline

No.	Action	May		June					July				Aug
		I	II	I	II	III	IV	V	I	II	III	IV	I
1	Preparation for data collection												
2	Survey												
3	Analysis of survey results and preparation for interview												
4	In-depth interview												
5	Data checking and preparation for analysis												
6	Data analysis												
7	Thesis writing												

Source: Author, 2022

## Appendix 2: IHS copyright form

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