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Student Housing Policy, Investor Behavior, and Subtle Shifts in the Composition of Student Housing Supply

Ruben Offringa
Master's thesis in Real Estate Studies
Faculty of Spatial Sciences, University of Groningen
Supervisor: dr. M.N. Daams

Abstract

This paper discusses the effects of rental licensing and student zoning policies on the shift of the student housing market from shared housing towards a larger proportion of purpose-built student accommodation (PBSA). A qualitative case study design is used, rooted in desk research on the rationale and intended effects of student housing policy. Importantly, in-depth interviews with established investors in student housing are conducted to better understand the influence of student housing policy on the investment decisions of private real estate investors. Resultant insights indicate that zoning policies enable PBSA investment and that rental licensing strongly limits, and in some cases even eliminates, investment opportunities in shared student housing. Both factors are found to influence the choice of what type of student housing is invested in. This more in depth finding supports the, in previous research stated, expectation that student housing policy, in addition to the financialization of the student housing market, contributes to the shift in the student housing market from shared housing to PBSA. Newly documented in this study is the finding that student housing conversion policy may unintendingly lead to the creation of a new market.

Keywords: Student housing, studentification, student housing policy, purpose-built student accommodation (PBSA), shared housing, houses of multiple occupation (HMO)

Colophon

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Version	Final
Author	Ruben Offringa
Student ID	S3198332
Supervisor	dr. M.N. Daams
2nd Assessor	S. van Lanen
E-mail	r.d.offringa@student.rug.nl
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1. Introduction

When thinking of student housing, you probably envision the "traditional" student house - a former family home that is converted to accommodate multiple students who share facilities. Yet, a growing number of students live in another form of student housing: purpose-built student accommodation (PBSA). This generally is a more luxurious and self-contained form of student housing in a large multi-tenant dwelling.

In the last decade, there has been increasing investment in the PBSA sector in Europe. With a record high of 11.7 billion euros in the first three quarters of 2022. Of this amount, more than 270 million was invested in the Netherlands (Savills, 2022). Despite continuous investments in the student housing market, the Dutch faced a student housing shortage of 26,500 in 2021. This shortage is expected to increase to between 58,300 and 66,700 units in 2029 (Hooft van Huijsduijnen et al., 2021). To prevent this, a plan is drawn up to add 60,000 additional student housing units in the period up to 2030. This “student housing action plan” is supported by the Dutch government, municipalities, universities, and representatives of commercial student housing providers (Landelijk Platform Studentenhuisvesting, 2022).

Thus, at the national level, plans are made to address the growing student housing shortage. However, local municipalities ultimately formulate their own student housing policy. Whether and in what form investment in student housing is allowed under these policies is therefore important for the composition of the student housing market. Different forms of student housing provide different student experiences. Specifically, students in self-contained housing (as in most PBSA) are found to have significantly lower mental well-being than students in shared housing, due to less social contact (Easterbrook and Vignoles, 2015; Dopmeijer et al., 2021). In addition, self-contained housing is generally more expensive than shared housing (Hubbard, 2009). If student housing policy leads to a larger share of a more expensive form of student housing, this negatively impacts the affordability of student housing. On average, students spend nearly half of their budget on rent. Therefore, an increase in students' largest expense is feared to have a negative effect on the accessibility of higher education in the Netherlands (Hooft van Huijsduijnen et al., 2021).

The shift in the student housing market from shared housing to a larger proportion of PBSA has drawn the attention of researchers in the real estate field. This has led to recent publications of studies on the emergence of PBSA in the context of the European property market (e.g., Livingstone and Sanderson, 2021; Sanderson and Ozogul, 2021), as well as outside Europe (e.g., Prada, 2019; Revington and August, 2020; Revington, 2021; Kenna and

Murphy, 2021). The focus of these studies can be divided into two categories. Firstly, researchers aimed at the relationship between the financialization of the student housing market and the growth of the PBSA sector. Secondly, the place of PBSA within the broader knowledge of studentification is studied.

Multiple studies on the growth of the PBSA sector in relation to the financialization of the student housing market present essentially corresponding results. Newell and Marzuki (2018) conclude that UK student accommodation, as an alternative property sector, provides superior risk-adjusted returns and portfolio diversification opportunities for institutionalized real estate investors. As the student housing market has become more institutionalized, the focus on PBSA has continued to increase. Although often still referred to as an "alternative" asset class, Livingstone and Sanderson (2021) claim that the PBSA sector of today should be considered "mainstream" and "mature". While investors with higher risk acceptance were of significant importance to the growth of the PBSA market, nowadays lower-risk operators (such as pension funds) are also widely invested in the PBSA sector. Research of a more exploratory nature on the PBSA phenomenon in the Waterloo (Canada) context showed similar results. Revington and August (2020) identified a shift from demand-driven to finance-driven new-build studentification. Therefore, the financialization of the student housing market is considered the main driver of PBSA growth in all three of the above studies.

Furthermore, the interrelationship between PBSA development and studentification has been researched. In one of the early studies on PBSA, Hubbard (2009) suggests that PBSA development, as a means to relocate studentification, could be a solution to the nuisance caused by students in specific areas. On the other hand, a later study by Sage, Smith, and Hubbard (2013) concludes that PBSA, as a form of high-density studentification, equally leads to a nuisance in the surrounding area. Foote (2017) showed that the clustering of studentification in United States college towns barely changed in the period 1980-2010. This indicates that PBSA development during that timeframe has not (yet) led to improved student distribution. Research on PBSA development and studentification has thus failed to substantiate that PBSA development is a solution to improving the spread of studentification and reducing the nuisance that comes with it.

Although student housing policy is frequently mentioned as a possible way to manage studentification and associated nuisance (Smith, 2008; Munro and Livingston, 2012), the effects of common student housing policy have not been sufficiently studied. A distinction is made between zoning policies and rental licensing. However, the specific effects of these two most common student housing policies remain unclear. The exploratory study of the PBSA

market in Waterloo (Canada) by Revington and August (2020) highlights the possible influence of governmental interventions, which resemble zoning policies, on the shift in the student housing market towards PBSA. With limited substantiation, it is stated that these interventions are only secondary and incidental, implying that they have limited impact. Nevertheless, in further research, Revington (2021) indicates that rental licensing, as another form of student housing policy, may have contributed to the shift of the student housing market toward a greater share of PBSA.

Thus, to summarize, the role of the financialization of the student housing market in the emergence of PBSA has been clarified in previous research (Newell and Marzuki, 2018; Livingstone and Sanderson, 2021; Revington and August, 2020). The extent to which student housing policies contribute to this shift has not yet been sufficiently studied. Further exploration of how student housing policies contribute to the shift in the student housing market from shared student housing to a larger proportion of PBSA is therefore needed. Thereby, Foote's (2017) call for qualitative research on student housing policy is answered. But more importantly, this research builds on the suggestions regarding the influence of rental licensing and zoning policies on the shift in the student housing market towards a larger proportion of PBSA in previous research by Revington (2021) and Revington and August (2020). To specify the focus of the study, the following research question is formulated:

> *RQ: How do common student housing policies like rental licensing and zoning policies influence the composition of the student housing supply (shared housing versus PBSA)?*

The aim of this study is to clarify the effects of common student housing policies on the shift of the student housing market towards a larger proportion of PBSA. In order to provide a better understanding, this study examines how investment decisions of private real estate investors in shared student housing and PBSA are influenced by rental licensing and zoning policies, as today's investment decisions determine the composition of the student housing supply in the future.

To gain a deeper understanding of how student housing policies influence investment decisions in shared student housing and PBSA, a qualitative case study design is applied. The research is conducted in the context of the cities of Groningen and Leeuwarden in the Netherlands. These cities were chosen primarily due to their difference in student housing policies. Although both cities have implemented rental licensing, only the municipality of Leeuwarden actively facilitates PBSA development through zoning policies. The selection of

these contrasting cases aims to provide a better understanding of the effects of both rental licensing and zoning policies, as participants are more likely to have experience with policy implications in both cities due to their relative proximity.

To understand the rationale behind the investment decisions of local student housing investors, in-depth interviews are conducted. The participants selected for these interviews are private real estate investors who possess extensive experience in both shared student housing and PBSA investment and development. Alongside the interviews, desk research is conducted on the reasoning behind student housing policies. These policy documents provide a detailed rationale and outline the intended effect of each student housing policy. By examining both the investors' perspective and the policymakers' perspective, this study aims to provide a better understanding of the intentions and effects of these policies.

This study employs a combination of deductive and inductive reasoning, following the Hutter-Hennink research cycle (Hennink, Hutter, & Bailey, 2011). Deductive reasoning is utilized to evaluate the relationship between student housing policies and investment decisions in student housing. Inductive reasoning is employed to identify concepts associated with the effects of student housing policy and/or the shift in the student housing market towards a larger proportion of PBSA. Given the limited existing research on the effects of student housing policies, the inclusion of inductive reasoning aims to generate new insights.

Ultimately, this study reveals two main findings. Firstly, student housing policies are observed to drive the student housing market towards a larger proportion of PBSA. The results of the in-depth interviews indicate that rental licensing reduces investment in shared housing due to the maximum number of rental licenses issued per area. Additionally, certain student housing policies have enabled investors to convert shared housing into multiple self-contained rental units, resulting in a net decrease in the supply of student housing. Conversely, zoning policies that permit PBSA development create new investment prospects. The increased investment in PBSA contributes to a rise in the share of PBSA within the overall student housing market.

The second finding emerged from the inductive reasoning applied during the analysis of the interview results. The discrepancy in the degree of fundability by lenders between shared housing and PBSA also exerts a significant influence on investment decisions, thereby contributing to the shift in the student housing market towards a higher proportion of PBSA. The higher fundability of PBSA in comparison to shared housing aligns with the findings of previous studies on the financialization of the student housing market as a driving force behind

the growth of PBSA (Newell and Marzuki, 2018; Livingstone and Sanderson, 2021; Revington and August, 2020).

The findings of this research may be of specific interest to policymakers responsible for student housing policy. Enhancing their comprehension of the effects of prevalent student housing policies, such as rental licensing and zoning policies that facilitate PBSA development, may assist policymakers in shaping future policies.

2. Theory

Why studentification leads to student housing policymaking will be clarified in this section. The subsequent section presents methods to understand the potential effects of rental licensing and student zoning policies. Following that, the characteristics of shared housing and PBSA are discussed, providing an explanation of the preferences of investors and students in student housing. Considering that these preferences significantly impact investment decisions in student housing. Lastly, returning to the present section, a summary of the relationships between these concepts is provided and schematically presented in a conceptual framework (see Figure 4).

2.1 The reason for student housing policy-making

In areas around colleges and universities, studentification takes place. Studentification is defined as the concentration of higher education students in residential areas and takes the form of shared housing and PBSA (Malet Calvo, 2018). In the process, the ownership of dwellings shifts from owner-occupier to investor-owned. This implies that in the studentification process, family dwellings are extracted from the owner-occupier market, which raises property prices and drives some social groups to other parts of town (Kinton et al., 2018).

Furthermore, studentification can cause severe neighborhood and communal disruption (e.g., Munro, Turok and Livingston, 2009). The studentification process thereby leads to social clashes between students and working-class/middle-class neighbors, given their distinctive lifestyles (Sage et al., 2012a). This is also referred to as the town-gown conflict. In locations where studentification increases, complaints from neighbors arise. Students are accused of nuisances in the form of littering, late-night noise and petty vandalism. In addition, the increase in students allegedly reduces parking space, lowers the viability of certain local amenities, makes the area more prone to crime, and creates seasonal unemployment. Ultimately, students

are blamed for the general degradation of the community (Hubbard, 2009). Duke-Williams (2009) even refers to the term "student ghetto", which stands for neighborhoods in which an extreme degree of studentification leads to the segregation of students. If a neighborhood becomes so highly dominated by students and other young people, it may even result in few complaints. As the low social control leads to the acceptance of a higher level of disturbance (Munro and Livingston, 2012). The research mentioned above focuses mainly on the effects of studentification in the form of shared housing. However, clashes between students and neighbors take place in the case of newly developed PBSA as well (Sage, Smith and Hubbard, 2013).

For nuance, it is important to note that studentification does also have positive external effects. These positive influences manifest themselves economically, culturally, and socially (Munro and Livingstone, 2012). The influx of international students due to the internationalization of higher education may have an additional positive influence in an area. Increased studentification because of these international students will typically lead to the formation of diverse and culturally rich urban identities and the creation of economic sectors oriented toward these international students (Malet Calvo, 2018). In short, students are found to add vibrancy to a community.

The increase in international students supplements the traditionally strong demand for student housing from domestic students, leading to increased studentification (Malet Calvo, 2018; Newell and Marzuki, 2018). Besides demographic drivers for studentification, accelerators of studentification are found in the financial sphere. The increased availability of buy-to-let mortgages has enabled investors to convert family homes into houses meant for room rental in the early decade of this century (Leyshon and French, 2009). And as explained in the introduction does the financialization of the student housing market boost studentification in the form of PBSA (Newell and Mazuki, 2018; Livingstone and Sanderson 2021; Revington and August, 2020).

As higher levels of studentification lead to more negative effects, the question is raised about how studentification can be effectively managed. As already indicated, student housing policy is often the response. It is seen as a means of controlling or improving the spread of studentification with the goal of reducing student nuisance in specific areas (e.g., Smith, 2008; Munro and Livingston, 2012). Revington (2021) indicates that policies with the intent to reduce the nuisance of studentification fall into two types. Firstly, there are policies designed to reduce the number of students (in shared housing) in a neighborhood. Secondly, there are policies intended to facilitate PBSA development. With the intention that students can be relocated to

these new PBSA locations. The purpose of implementing policies that allow higher density PBSA is to encourage intensification (and thus segregation), which should reduce town-gown conflict (Revington, 2018).

2.2 Student housing policy effects

After the previous paragraph explained the reason for student housing policy-making, this chapter will elaborate on the effectiveness of rental licensing and student zoning policies will be discussed. Additionally, in this chapter mechanisms are explained that help understand the possible market effects of these common student housing policies on the basis of Evans' (2008) theory on hierarchical planning systems.

Conclusions about the extent to which the effects of student housing policies match their intentions differ. Research in the Canadian context suggests that implementing policies that facilitate PBSA development causes students to relocate from shared housing to PBSA (Revington, 2018). This implies a decrease in nuisances in the formerly student-intense neighborhood. Unlike the situation in the UK, where nuisances in popular student neighborhoods are expected to remain to a large extent, despite the development of new PBSA. As a result of an increased supply of PBSA, the number of shared houses is expected to decrease in less popular neighborhoods first. The percentage of shared houses in these areas is often already low, so the nuisance was initially not troublesome. Hence facilitating PBSA is expected to barely lead to a decrease in nuisance in the most popular areas, where the degree of shared student housing remains high (Hubbard, 2009).

Rental licensing entails the controlled permitting of shared housing and is found to be a more effective way of managing studentification. This often involves setting a maximum percentage of shared housing per area. For instance, in the case of Belfast, where areas are designated in which a maximum of 30% of houses may be shared. Rental licensing with a maximum percentage of shared housing is considered the most effective method for controlling the spread of studentification in the form of shared housing (Smith, 2008; Munro and Livingston, 2012). Rental licensing with a cap on the maximum percentage of shared properties in an area is an intervention that limits the supply of student housing. The limitation on the supply of shared housing leads to a situation where the supply of shared housing is eventually fixed. This shift in supply is shown in Figure 1, in which the supply line changes from SS' to the fixed position of S1S1'. A situation then arises as described in the Ricardian Rent Theory. Namely, where the supply is fixed and prices are demand-determined (Evans, 2008).

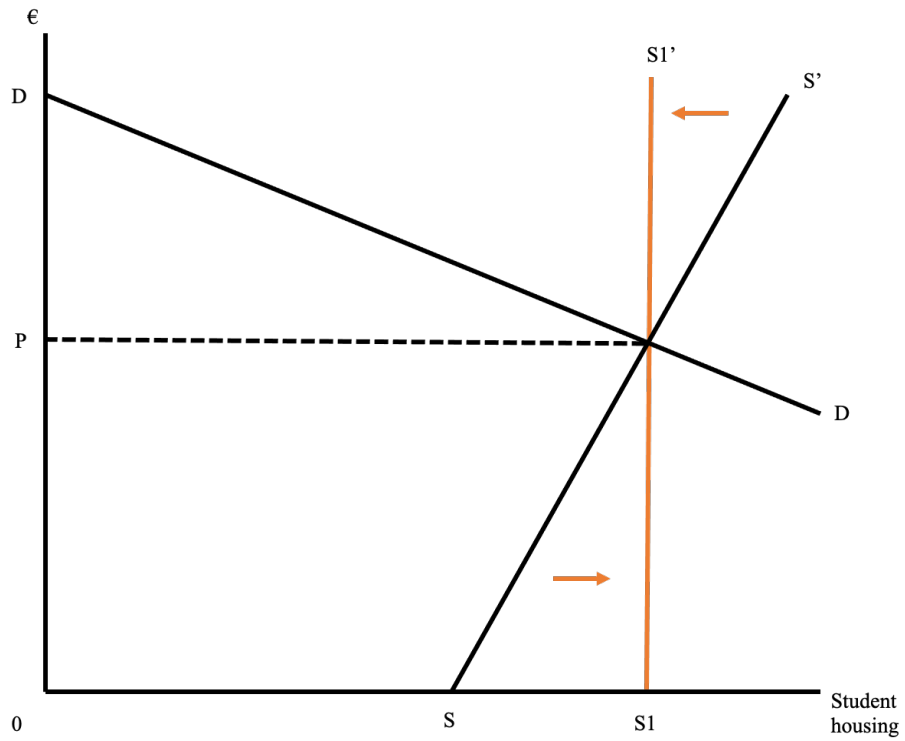

Figure 1 - A shift toward fixed student housing supply (based on Evans, 2008)

When prices are demand-determined due to the fixed supply of student housing, the impact of policies on the demand for student housing must be taken into account. By way of example: the internationalization strategies of higher education from governments mentioned in Revington et al. (2020) boost student housing demand. In this case, the increase in demand will result in an increase in the price of student housing relatively quickly. The change in demand and related impact on price is shown in Figure 2. The increase in demand for student housing from DD' to D1D1', will result in an increase in the price from P to P1.

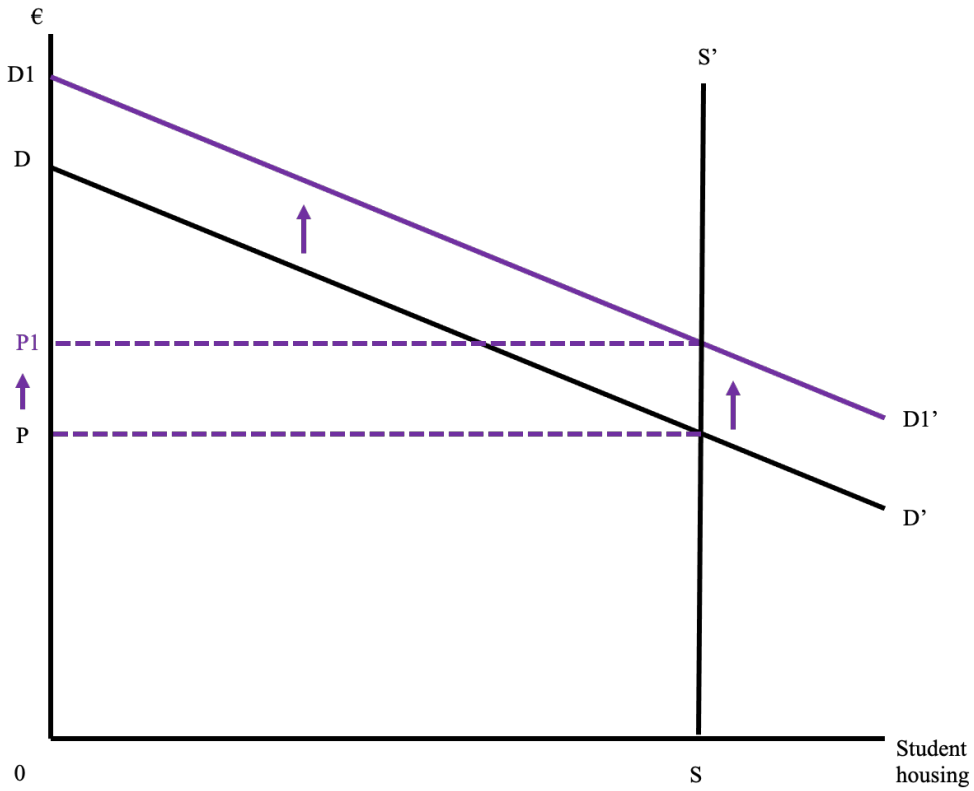

Figure 2 - An increase in demand resulting in an increase in price (based on Evans, 2008)

In the cases of Figures 1 and Figure 2, it is assumed that the supply of student housing is completely fixed. However, it is possible that interventions from the government may shift the supply of student housing to another fixed position. Therefore, a change in supply can be the cause of a change in price (Evans, 2008). If zoning policy allows for additional student housing (such as new PBSA) the shift in student housing supply is expected to lead to a decrease in price. This transformation is shown in Figure 3. As supply increases from X to the new fixed position X1, the price of student housing decreases from P to P1 if the demand line remains the same. However, it should be noted that it may take years before the allowing of additional student housing is reflected in the price. For example, the development of a new PBSA often requires obtaining obligatory permits first. Subsequently, the property must be built. The whole process can take years before the property is actually developed. The announcement that more student housing will be developed is not enough to immediately influence prices because the property market is an imperfect market. In order for the prices to decrease, new student housing must actually enter the market (Evans, 2008).

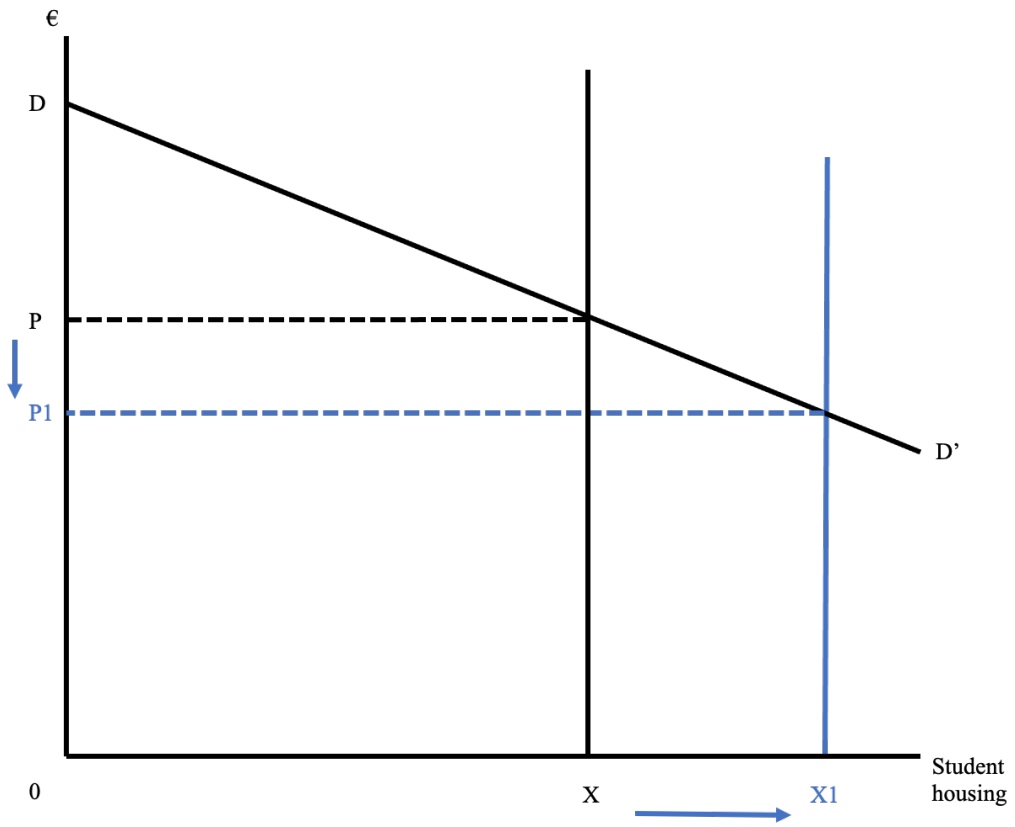

Figure 3 - Additional permitted student housing supply resulting in a decrease in price (based on Evans, 2008)

From the explanation and application of Evans' (2008) theory, three notes are important. Firstly, planning controls limiting the availability of student housing lead to a situation where the student housing supply is eventually fixed. Secondly, governmental interventions that lead to the increase in student housing demand result in an increase in price. And thirdly, policies facilitating the addition of student housing is expected to lead to lower prices for student housing.

2.3 Student housing characteristics and preferences

In this section, I elaborate on the typical characteristics of shared student housing and PBSA. In addition, the preferences of both students and investors toward student housing as identified in previous research are touched upon. As these preferences are expected to influence investment decisions in student housing.

As previously mentioned, studentification takes two forms. It is important to define these two forms to avoid confusion. First, there is shared housing, also referred to as houses of multiple occupations (or HMO). This term originates in the UK where it is also used as a legal

term to refer to shared housing. A shared student house generally is a former family house that has been converted into a dwelling suitable for occupying multiple tenants (Kinton et al., 2018). Typically, the amenities, such as the kitchen and bathroom are shared by residents.

A PBSA is a larger complex with units built specifically for student-tenants. Revington and August (2020) adopt a minimum of 20 units for PBSA designation. Although standard amenities such as kitchens and bathrooms in a PBSA can be either shared or private, PBSAs typically consist mainly of self-contained units. Also, PBSAs are generally built of a higher quality and more luxuriously equipped than shared student houses (Sage et al., 2012b; Smith and Hubbard, 2014). Kenna and Murphy (2021) describe PBSA even as hotel-like. In addition, it is common for PBSAs to have additional facilities such as a study room and gym. Due to the higher quality and because PBSA usually provides private facilities, this form of student housing is found to be significantly more expensive than shared housing (Hubbard, 2009).

In addition, Hubbard (2009) indicates that the housing preferences of students are generally not well understood. Contrast remains between later research on student preferences contrast also. For example, research on student housing preferences in the Dutch context indicates that students prefer individual housing (Nijenstein, Haans and Kemperman, 2014). Not a surprising conclusion, given the fact that the research highlights the negative aspects of shared housing only. In their research, the distinction made between individual and shared living is limited to whether or not facilities are shared. The positive aspects of shared living such as mutual social contact are ignored in this regard. Something that other researchers did prove to be of importance to students (e.g., Easterbrook and Vignoles, 2015; Williams, 2005). There are also students who value the specific lifestyle and experience offered by PBSA and therefore choose PBSA over shared housing (Kenna and Murphy, 2021). In any case, it is clear that student preferences differ and that there is therefore demand for both PBSA and shared housing.

Research on the preferred location of student housing leads to multiple results as well. The distance to the campus is found to be of significant importance to students in the Canadian context. The advantages of living in the city center are expected to draw only a small number of students to downtowns that are not within walking distance of the campus (Charbonneau, Johnson and Andrey, 2006). Research on student housing preferences in Norway on the other hand indicates that students prefer to live in an area that is strongly tied to leisure activities, which are often located downtown (Thomsen and Eikemo, 2010).

Investors' preferences regarding a specific form of student housing differ by type of investor. Leyshon and French (2009) conclude that local investors favor older housing made

suitable for rental (e.g., shared student housing), while new-build buy-to-let properties (e.g., PBSA) are generally owned by "at-a-distance" investors. This also fits within Livingstone and Sanderson's (2021) more recent finding that PBSA is an investment category increasingly occupied by institutional investors, investing in PBSA on a national and global scale.

Although investors are primarily looking for returns on their investments, this is not their only motivation. Investors frequently mention imperatives other than profit when arguing their decisions. For example, the moral responsibility for preserving historically valuable components of a building and making buildings more sustainable are motives for certain investment decisions (Anderson, 2019).

In summary, student preference within student housing is not well enough understood to draw a one-sided conclusion. This may also be because different types of students have different preferences. For investor preferences, it can generally be said that investments in shared student housing are mainly preferred by local investors. PBSAs are primarily owned by national and international operators in the student housing market. This may be due to the fact that the larger size of PBSA requires a more capital-strong investor.

2.4 Coherence of theory

Theory from the existing literature is synthesized and organized into a conceptual framework visualized in Figure 4. As described in the past chapter, the degree and distribution of studentification influence the extent to which the environment is negatively affected by students (Munro, Turok and Livingston, 2009; Sage et al., 2012a; Hubbard, 2009; Duke-Williams, 2009; Kinton et al., 2018) The negative external effects such as nuisance caused by students leads to the need for policy making (Smith, 2008; Munro and Livingston, 2012). The general goal of these policies is to improve the distribution of studentification so that its negative effects are limited (Hubbard, 2009). To achieve this goal, student housing policies aim to influence the investment possibilities in student housing (Revington, 2021; Revington et al., 2020). These student housing investment decisions are expected to be influenced in two other ways. First, by student preference regarding student housing characteristics, as this is the market demand that has to be taken into account. Second, by the preferences of investors themselves. Such as the difference in preference for a specific form of student housing policy between large and small investors (Sanderson, 2021). Investment decisions ultimately determine the composition of the student housing market. More specifically, the ratio of shared housing versus PBSA. Finally, a change in the composition or size of the student housing market leads to a different distribution of studentification (Sage, Smith and Hubbard, 2013).

With this, a cyclical process is formed (Blatter and Haverland, 2012). The change in the distribution of studentification will lead to different external effects which then form the feedback on the effectiveness of previous policies to policy makers.

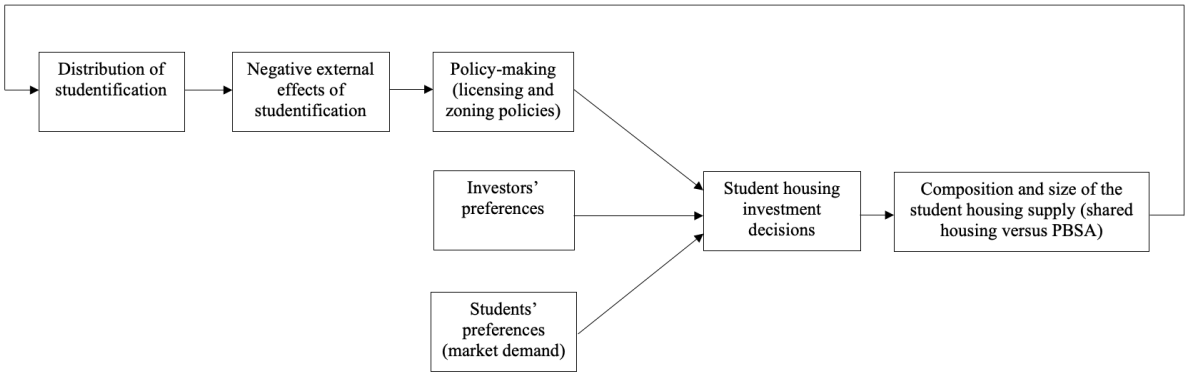

Figure 4 - The deductive conceptual framework

3 Methodology

3.1 Study design

The main consideration in the design of this study was determining which combination of methods for gathering and analyzing data would best lead to answering the main research question. Because the exploration of student housing policies in a changing student housing market is a complex phenomenon, a qualitative case study design is an appropriate choice (Rashid et al., 2019). In order to answer the main research question, insights from both policymakers' and student housing investors' perspectives are needed. To gain insight into the policymakers' perspective, desk research is conducted on the reasoning behind implemented student housing policies. These policy documents provide a clear description of why a particular policy is implemented and what the intended effect is. To obtain insights from the investors' perspective on the changing student housing market and the effects of student housing policies, in-depth interviews with local student housing investors are conducted. By using in-depth interviews, the underlying motivations for investment decisions can be discovered. As in-depth interviews are suitable for gathering information about individual, personal experiences (Hennink Hutter and Bailey, 2011). After all, the motivations of private investors are not likely to be accounted for in writing as those of policymakers, which therefore requires a different approach. Thematic analysis of the qualitative interview data is used to discover inductive concepts related to student housing policies and investment decisions in the changing student housing market.

Combining inductive and deductive reasoning aims not only to examine the relationship between student housing policy and investment decisions but also to be open to a better understanding of other forces that influence investment decisions. A more complete picture of the influences on investment decisions in student housing thereby leads to a better explanation of the composition of the student housing market. For the study to allow for both inductive and deductive reasoning, the Hutter-Hennink qualitative research cycle is practiced (see Hennink, Hutter and Bailey, 2011). This framework adopted the inductive principles of the grounded theory approach but additionally allows for deductive reasoning. As a result, the process of induction and deduction are continuously alternated in the analysis of the qualitative data. This allows new theories to be developed while taking existing knowledge into account (Hennink, Hutter and Bailey, 2011).

An overview of the design of this qualitative research, based on Hennink, Hutter and Bailey (2011), is displayed in Figure 5. Knowledge from previous research forms the basis for the deductive conceptual framework. Following this, desk research is done on the student housing policies in the cases of Groningen and Leeuwarden. A first round of open interviews is held to get input on concepts important to the participants. The deductive conceptual framework, the knowledge gained from the policy documents and the open interviews formed the basis for the questions in the following in-depth interviews. The transcripts of these interviews are then analyzed thematically. By performing a thematic analysis, the extent to which the interview outcomes corresponded to the deductive relations in the conceptual framework is determined. This thematic analysis also led to the identification of related inductive concepts, resulting in the addition of these inductive concepts to the conceptual framework (see Chapter 4).

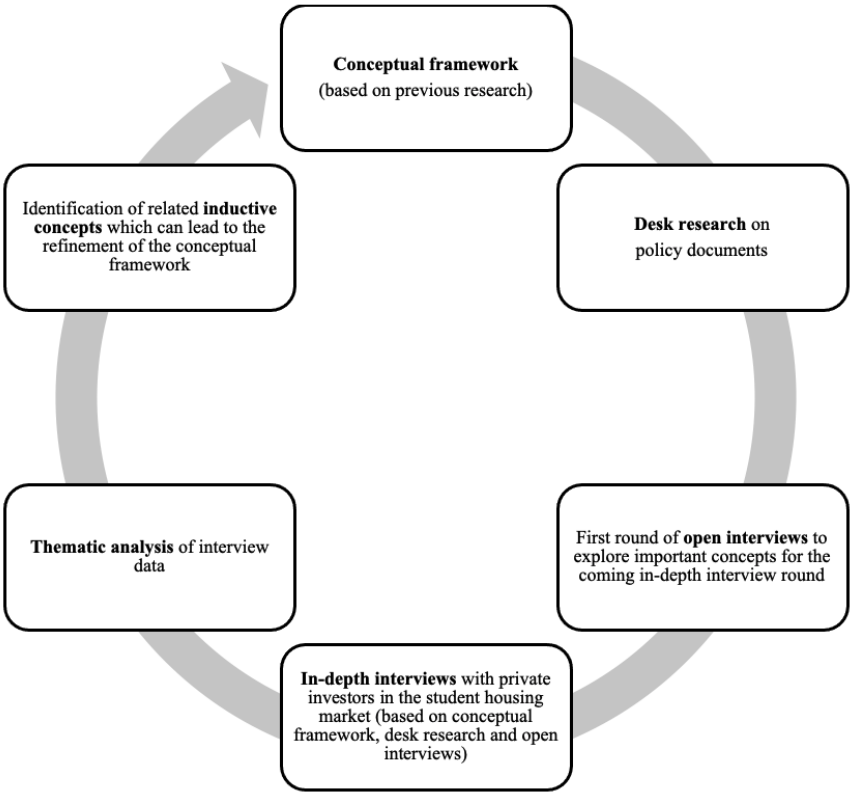

Figure 5 - Overview of the study design, based on Hennink, Hutter and Bailey (2011)

The qualitative case study design is applied as it is considered a suitable method for the in-depth exploration of a complex phenomenon in a specific context (Rashid et al., 2019). For the selection of two or more cases, Blatter and Haverland (2012) indicated that case selection required similar circumstances, but that the independent variable of interest had to differ. Therefore, the cases of Groningen and Leeuwarden are selected. The student housing policies in these two municipalities differ greatly from each other, while the other characteristics of the cities are largely similar (see section 3.5). Only two cases are selected, as the intensive study of a smaller number of cases increases validity (Blatter and Haverland, 2012). Although the choice of a case study design may limit the generalizability of the findings, results from this form of research provide a powerful example of the effects rental licensing and PBSA facilitating zoning policies can have. The choice of a case study thus fits within Flyvbjerg's (2006) statement that the "force of example" is a valuable source of scientific development.

3.2 Data collection methods

The research is conducted entirely using qualitative methods. For the literature review in the introduction, Ridley's (2008) techniques of noting, commenting and summarizing are used. The gathering of qualitative data for this study is done in a combination of the desk research method and the conduction of interviews in two rounds with the same three participants. An overview of the main methods used for researching each concept and their underlying connections is shown in Table 1. This also indicates the main source of information used for the examination of the concepts and their interrelationships.

Table 1 - Overview of the main method and information source used per relationship between concepts

The relationship between:	**Main research method:**	**Main information source:**
Studentification & its external effects	Desk research	Previous research
External effects of studentification & policy making	Desk research	Housing regulation documents
Policy-making & investment decisions	In-depth interviews	Real estate investors
Investors preferences & investment decisions	In-depth interviews	Real estate investors
Student preferences & investment decisions	In-depth interviews	Real estate investors
Investment decisions & student housing supply	Desk research	Previous research
Student housing supply & studentification	Desk research	Previous research
All related inductive concepts	In-depth interviews	Real estate investors

The deductive conceptual framework, desk research on the participants and notes on the unstructured first round of interviews are used as input for the formation of the interview guide (Appendix A). In doing so, the interview guide requirements defined by Hennink, Hutter and Bailey (2011) are followed. Eventually, pilot testing of the interview guide led to changes that intended to improve the comprehensibility of the questions.

The objective of the usage of semi-structured in-depth interviews in the second interview round was to provide a better understanding of the complex student housing situation. This involved the use of topical probes in the interview guide, as an instrument to go into greater detail. In doing so, open-ended questions were used and freedom was given to the interviewer and participant not to strictly adhere to the order of the questions. With the objective to give the participant the opportunity to provide new insights that could lead to the identification of relevant inductive concepts (Hennink, Hutter and Bailey, 2011).

3.3 Data collection process & participants

For desk research, online article databases Smartcat and Google Scholar were used for research on previous studies. The "cited by" function of Google Scholar enabled finding related articles to key studies on particular aspects of student housing. For the desk research on student housing policies in Groningen and Leeuwarden, the databases for legislation (Dutch: 'wettenbank') and zoning policies (ruitmelijkeplannen.nl) of the Dutch government are used.

For the collection of primary qualitative data, participant recruitment took place. Since the study participants had to have very specific characteristics and experiences, snowballing is chosen as the most appropriate recruitment method (Hennink, Hutter and Bailey, 2011). Eventually, eight potential respondents are approached. Of these, three did not meet the predetermined requirements and two were unwilling to participate in the study. This eventually resulted in the recruitment of three high-quality participants.

All three participants are real estate entrepreneurs with extensive experience in the investment and (re)development of student housing in Groningen and/or Leeuwarden. Summed up, they invested in approximately 1,000 rental units PBSA and well over 2,000 student rooms with shared facilities in Groningen and Leeuwarden. Most of which they managed the (re)development themselves. Due to this extensive experience with both (re)developing and investing in student housing, the participants also had substantial experience with the impact of policy on their investment decisions. On account of all these past experiences, they can be classified as experts on the Groningen and/or Leeuwarden student housing market. Which in turn makes them suitable participants in this study.

The relatively low number of participants was not a central issue, as the fact that quality of participants is of greater importance than quantity for the in-depth exploration of a phenomenon (Starr, 2014). Only a few private investors are engaged in student housing investments on a daily basis. For a large number of smaller investors, student housing investment management is outsourced. They have little to no experience with local student

housing policies and would therefore add little to the research. Two criteria were adopted to ensure the participants' experience with student housing policy. First; a minimum of 500 student rental units, and second; regular reinvestments in the student housing market. Small-N expert interviews allow for a more intensive study of context-specific cases (Blatter and Haverland, 2012). This substantiates the choice of interviewing three experts for this study. In qualitative research, sufficient information is gathered once repetition in the interview data is evident (Hay, 2016). The three participants differed in their preference for the form of student housing they invest in. Yet, the results of the effects of rental licensing and zoning policies on the participants' investment decisions were similar. This made it plausible that interviewing more real estate investors would not necessarily lead to thoroughly different results about the effects of student housing policy on the investment decisions of private real estate investors in the student housing market.

3.4 Data analysis

For the preparation of the primary qualitative data for analysis, the digitally recorded interviews are transcribed, after which they are translated from Dutch to English and thoroughly anonymized. For the thematic analysis of the data, ATLAS.ti 22 is used.

To analyze the interview data, the steps from the analytic cycle of the Hutter-Hennink qualitative research cycle are followed. The analysis started with open coding of every evident issue, topic, idea and opinion, as in the grounded theory approach. The purpose of coding was to identify the issues and motivations raised in the data that are related to student housing policies and investment decisions. Additionally, the coding formed a topical marker for the later processing of the results (Hennink, Hutter and Bailey, 2011). The number of open codes is reduced by merging similar codes. The open codes were then assigned to one or multiple superposed code families (8). Five of these code families are deductive in nature and are thus derived from the literature and theory in the design cycle of the Hutter-Hennink qualitative research cycle. In addition, inductive code families (3) emerged from the analysis of the qualitative data. For this purpose, interrelationships are sought between open codes which did not fit within the deductive codes (Hennink, Hutter and Bailey, 2011). An overview of new codes is presented in the codebook in Appendix B.

3.5 Study area

The research is conducted in the context of the Groningen and Leeuwarden student housing market. The cities possessed some familiar characteristics. To the extent that both cities are

located in the north of the Netherlands. Both cities are the capital of their region and the distance between the two is only 52 kilometers. In both cities, multiple universities of applied science are located. And lastly, the academic University of Groningen established a campus in Leeuwarden in 2019, although being primarily based in Groningen.

The cities differed in demographics and student housing policy. Approximately 38,000 resident students made up 16% of the population in Groningen[1]. The municipality of Groningen issued room rental licenses for 5,689 properties. This means that approximately 5% of houses in Groningen are a form of shared housing[2]. The local policy prohibited the addition of shared housing since 2015 if the percentage of shared housing on that street was above 15% (Gemeente Groningen, 2015). Finally, a policy had been in place in the municipality of Groningen for the past 5 years that allows owners to convert their room rental property to self-contained units, with less stringent requirements than usual (Gemeente Groningen, 2022).

Whilst in Leeuwarden circa 7,500 students accounted for about 6% of the total population[3]. In contrast to the high number in Groningen, a total of 539 room rental licenses are granted in Leeuwarden, this is less than 1% of all residential addresses in Leeuwarden[4]. Related, a cap on additional shared housing was in place for some time. The Leeuwarden municipality did not grant additional room rental permits from 2008 if it would lead to more than 10% shared housing in an area. In 2014 this cap was limited to 5% (Gemeente Leeuwarden, 2015). Moving forward, a new policy on student housing in Leeuwarden forbade the granting of additional room rental licenses since 2016. However, Leeuwarden's student housing policies designate areas where student housing development is allowed in the form of new construction or redevelopment of vacant office buildings (Gemeente Leeuwarden, 2017).

By comparison: In Groningen, there is one room rental license issued for every 7 students. The municipality of Leeuwarden issued one license per 14 students living in the city. There is no indication that an average shared house in Leeuwarden has twice the number of rooms of a student house in Groningen. The different ratio between the number of students and the number of room rental licenses between the two cities, therefore, implies a different student housing landscape with a different ratio of shared housing versus PBSA.

[1] CBS: Inwoners per gemeente. https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/regionaal/inwoners
[2] Kadastrale kaart: aantal geregistreerde woningen https://kadastralekaart.com/gemeenten/groningen-GM0014
[3] CBS: Inwoners per gemeente. https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/regionaal/inwoners
[4] Kadastrale kaart: aantal geregistreerde woningen Leeuwarden
https://kadastralekaart.com/gemeenten/leeuwarden-GM0080

3.6 Considerations and limitations

Since all participants are real estate entrepreneurs, they will have a biased view on the student housing policies they are dealing with. This should be taken into account when considering their preference for policies that, in their view, have a positive effect over policies that limit their position or opportunities. However, according to Mayan (2006), participant bias is precisely what one should be looking for in qualitative research, as it shows the participants' perspectives. The participation of real estate investors should therefore provide insight into their perspective on student housing policies and their effects.

The usage of the case study approach limits the generalizability of the results since the context varies by location. Because the number of cases studied is low, validity and generalization are challenging (Yin, 2013). Housing policy in particular can differ on an international, national and regional scale. Although rental licensing and PBSA zoning policies are also adopted in other cities around the world, the specific terms of these student housing policies can differ. Both the potentially different context and the specific preconditions of student housing policies should be considered when generalizing the results of this study.

4 Results and Discussion

This chapter will present and discuss the results from the in-depth interviews with real estate investors and desk research on student housing policy's argumentation and intentions. This will follow the order in which the concepts are presented in the deductive conceptual model (see Figure 4). First, to clarify the specific context, studentification and specific student housing policies in both cities are discussed. Then the perspective of investors on these student housing policies is highlighted. Next, the way how investment decisions are influenced by the student housing policies in Groningen and Leeuwarden is discussed. Followed by the relevant concepts that emerged through inductive reasoning. Finally, the results are synthesized and presented in a revised and expanded version of the conceptual framework from chapter two (see Figure 8).

4.1 Studentification

Studentification frontier

One of the participants recognizes that studentification in Groningen increases, as the studentification frontier (see Foote, 2017) shifts further from the center, where studentification

is traditionally highest in Groningen. This means that a growing number of neighborhoods further from the center are experiencing studentification.

> *P2: "Well, I do notice that the center is expanding. For example, I now have complexes in Paddepoel and de Wijert, which are apartments and studios, no (shared) student houses."*

This development is also recognized by the Municipality of Groningen. In one of their policy documents, they state that pressure for youth housing is increasing outside the city center and neighborhoods immediately adjacent to it (Gemeente Groningen, 2015).

Although Participant 2 indicates that his more recent student housing investments further from the center do not involve shared housing, it is still plausible that the rental licensing policy of no more than 15% shared housing per street contributes to the accelerated shifting of the studentification frontier. Once the maximum is reached in the - for students - popular area, additional shared houses will be added in the closely surrounding neighborhoods first.

In the case of Leeuwarden, no extra shared housing is allowed. Because of this, there will also be no gradual change in the studentification frontier. The fact that the municipality designates areas in which PBSA is allowed can, on the other hand, lead to abrupt changes in the degree of studentification in that area.

Effects of studentification

The interviews show that shared housing, particularly in Groningen, leads to complaints. However, it is argued that nuisance only forms a problem on an incidental basis. Cases in which students in shared housing cause excessive nuisance are normally limited to a few per year according to Participant 2.

> *P2: "Well we do not have so much nuisance if we look, yes during corona a bit more, but usually per year + / - 4 or 5 letters of nuisance report, which is also negligible (as Participant 2 owns hundreds of room rental properties)."*

An increase in nuisance complaints is blamed on the fact that the Covid-19 lockdown forced students and their neighbors to be home all day Participants 1 and 3 indicate that they receive few nuisance-related complaints regarding shared housing in Leeuwarden. In this respect, participant 1 indicates that the complaints he receives about his shared housing in

Leeuwarden relate mainly to the nuisance of waste. Thus, according to the investors, nuisances are sometimes related to one of their room rental investments but are rarely problematic.

The nuisance caused by students in PBSA in Groningen and Leeuwarden is also low, according to investors.

> *P1: "Well here (PBSA location) we only have complaints from other residents, because we have no neighbors here."*

> *P3: "In our individual studios (in a PBSA) I am never bothered with problems like this (nuisance)"*

This contrasts with Sage et al.'s (2013) assertion that clashes between students and neighborhood residents are as likely to occur in PBSA as in shared housing. The reason for this difference can be found in the fact that most of participant 1's PBSA properties are located far from residential neighborhoods. The high degree of student segregation, therefore, limits the experienced effects of studentification by neighbors. In addition, the question is whether there are students living in these "individual studios," described by participant 3 (see section 4.2 for further discussion). The possibility that there are actually no students living there may also be of great importance for a lower degree of nuisance.

The municipality of Leeuwarden specifically named the positive effects of increasing studentification, as the "positive contribution to the liveliness and economic strength of the city" (Gemeente Leeuwarden, 2015). This is in contrast to the municipality of Groningen, which indicates that further studentification leads to an imbalance in the community and a decline in housing quality (Gemeente Groningen, 2015). The reason for the difference in attitudes toward an increase in studentification likely lies in the difference in the extent to which studentification was present in both cities in 2015. As already indicated in section 3.6, the percentage of students in Groningen is two and a half times higher than in Leeuwarden.

That this high degree of studentification in Groningen leads to friction between students and neighbors is also evident in previous research by Rauws and Meelker (2019). They specifically explored the effects of studentification in Groningen and concluded that the interests of students and local residents in neighborhoods differ. They argue that contact between students and neighbors needs to improve. Interventions and organizing activities where students and their neighbors meet are mentioned as a means to increase the familiarity between the two groups and therefore ensure mutual understanding.

4.2 Student housing policy

Student housing policies and argumentation

After studying policy documents from both municipalities, three forms of student housing policy can be distinguished. First, policies in the form of rental licensing that limits the addition of shared housing. Second, planning policies that facilitate the decrease in shared housing. Finally, policies that facilitate PBSA development.

In Groningen, a policy facilitating the conversion of shared housing to self-contained studios used to be implemented. The purpose of this policy was to increase the quality of existing student houses. They did this by demanding private facilities and a minimum of 24 m2 of floor space (Gemeente Groningen, 2015). In addition, a rental license for the transformation of a (family) house to a room rental property will only be granted if the percentage of shared houses on that street stays below 15%. The purpose of this policy implementation is that it should ensure the control of the spread of studentification. This is consistent with statements in earlier research on the intentions of policymakers for rental licensing (e.g. Smith, 2008; Munro and Livingston, 2012). The municipality of Groningen does not include the facilitation of PBSA development in the form of zoning policies in their published housing policies. This does not mean that PBSA development is impossible in Groningen, it just does not actively push for such development.

In contrast, the municipality of Leeuwarden facilitates PBSA development by including designated areas for PBSA development in their policy documents. In these areas, both new construction of PBSA and the redevelopment of office buildings into PBSA is allowed. On the other hand, the municipality has not issued shared housing permits for several years. Prior to that, they had a cap on the number of room rental properties within the same zip code, somewhat similar to the rental licensing policy that is currently active in Groningen. The licensing policy was used to manage the high impact of studentification. The rationale for completely forbidding additional shared housing is that PBSA development is expected to sufficiently meet the demand for student housing. Finally, the municipality of Leeuwarden does not have an active policy that ensures the decline of shared housing. They do however express the hope that the development of PBSA will cause the number of room rentals to decline in other parts and lead to conversion from shared housing, back to regular housing (Gemeente Leeuwarden, 2017).

Investors' view on student housing policies

Although the participants indicated that the nuisance of studentification is limited in both cities (see section 4.1), they generally understand the need for rental licensing in both municipalities given the disturbance that excessive studentification causes in the surrounding area.

> *P1: "I think that it is a good thing that they regulated student housing in Leeuwarden early on and did a zip code policy. If you take a look in Groningen, you sometimes see streets full of student bikes. It does get a bit messy. Students obviously have a different pace of life with parties etcetera."*

> *P3: "(When asked about his opinion on room rental licensing) I lived in a house … (in a Groningen neighborhood with a high level of studentification) for 1.5 years, with a lot of student houses next door. I do understand that there was a lot of nuisances there.*

In addition, participant 2 indicates that he also sees benefits in rental licensing. Because limiting the supply of shared housing creates scarcity, the large number of room rental properties he owns are practically always rented out.

> *P2: "The only thing is, that for me it is positive that it stays scarce. And with scarcity… that is good for rents"*

His observation is in line with Evans' (2008) theory on hierarchical planning systems. As rental licensing leads the shared housing supply to shift towards a fixed number of shared houses. This ultimately leads to a situation in which the level of demand becomes the sole influencer of the price of shared student housing.

Effect of student housing policies on investment decisions

It is obvious that prohibiting additional shared housing in Leeuwarden makes it impossible for investors to invest in new shared housing there. Besides the scarcity of shared housing from the perspective of tenants, as just discussed, it also creates scarcity in shared housing as an investment asset, which should lead to higher property prices. This might have contributed to the fact that participant 1 decided to sell a part of his shared housing investment portfolio in the past years.

P1: "Because in the last two years. We've sold about 12… Ideally, we'd like to sell them all, but the market is down a little bit because the interest rates are high.

Participant 3 indicates that he expects that also in Groningen rental licensing has severely limited investment in shared housing.

P3: "But I do think that the 15% rule (in Groningen) certainly meant that a lot of student houses were not added."

A strong preference for adopting the "conversion policy" over the retention of shared housing is noted by participants when dealing with the municipality of Groningen. This makes it tempting for investors to choose the conversion to self-contained units over the option of refurbishing whilst keeping the property in the existing shared function. Since the municipality appears to be less of a hardship in granting a conversion permit to self-contained units than in granting a permit to refurbish a room rental property.

P3: "I have never had permits for all the converted houses (converted from shared to self-contained) so quickly. I received them stamped and all within a month."

P2: "If I renovate a student house, they are very tough about how many students lived in it. … If you can explain how many were in it, they still try to downsize it, so that fewer students can live in the same building. … At a certain point, I got a bit tired of fighting with the municipality, and I thought I will build studios there. Because that is made a lot easier by the municipality. Then there was no hassle."

Participant 3 describes a situation in which he was strongly pushed to convert a student house, for which the rental license was not in order (but the situation had been tolerated for many years), into luxury apartments.

P3: "Well long story short I think they just failed as a municipality to deal with this (the municipality of Groningen ignored illegal student houses in the past). So they did not want to work with me to find a solution to legalize that student house. And then I said and what if I apply for a permit to convert it into two very luxurious apartments? Yes,

that was fine. So that is what I did… It wasn't even my goal to do this. I wanted to keep it as a shared student house and you just get pushed towards it at a time like that."

The last example goes against the Groningen municipality's goal of wanting to provide affordable and high-quality student housing (Gemeente Groningen, 2015). In truth, a "very luxurious" apartment is most likely beyond the reach of students. This raises the question if the municipality's goal is only to increase quality, or if the actual goal is also to decrease the number of shared houses.

Finally, one of the experiences of participant three shows that in practice the municipality of Leeuwarden is actually actively pushing for the development of PBSA. This participant had purchased an office building and entered into discussions with the municipality about whether and in what form a residential function could be provided for the building.

P3: "We went to the municipality and asked: 'What is your view on this? Because it doesn't have much reason to exist as an office anymore … (the municipality allowed for transformation to PBSA) … they would prefer it to be self-contained units in order to be able to offer more quality to students."

This shows that the municipality of Leeuwarden directed Participant 3 into deciding to choose PBSA consisting of self-contained units for the redevelopment of an office to a residential building.

Additional effects of student housing policies

The potential effects of the policies on the basis of Evans' theory (2008, see section 2.2) differ considerably by municipality. In Groningen, the limitation on the supply of shared housing and the limited facilitation of PBSA development creates a situation in which the supply of student housing may be considered close to fixed. The municipality of Groningen indicates that the demand for student housing is high and expects it to remain at least that way (Gemeente Groningen, 2015). The fixed supply and continued demand outline a situation that fits within the Ricardian rent theory, where demand determines price (Evans, 2008).

If we consider each form of student housing equal, the conversion from shared housing to self-contained units should not influence the student housing supply. Were it not that this conversion leads to fewer housing units in the same building since the area per studio has to be larger (24m2 minimum) than a student room usually was before transformation. In addition,

the policy states that the building after conversion must have fewer units than the shared house had bedrooms (hence the nickname "-1 rule"). These two conditions have the effect of reducing the supply of student housing in Groningen with the introduction of a policy that facilitates the conversion of shared housing to self-contained studios.

Analysis of the interview transcripts, however, revealed a surprising discovery. The studios in this former shared house are usually occupied by non-students.

> *P2: "Well they (the municipality) want all those studios and those are only suitable for people over 23 because of the rent allowance. If you are 18, and you are dealing with those high energy prices nowadays, you are paying 950 euros including utilities per month. Often 760 euros without utilities, to be on that subsidy threshold. That is just not affordable for someone like that."*

> *P3: "Yes, I think we have created a market. Or created? the market was that we have created a product for the end of study/ beginning to work, where previously there was little housing."*

> *P3; "And what I see now is that quite a lot of people who have just started working come to live in the studios. So, the question is whether those studios are only for students. ... and in Groningen, we see that a lot of young people are either at the end of their studies or have just started working and they love it. Because it is an in-between option, which is new."*

Also, newly developed PBSA is sometimes found in practice not to be rented by students, as they are simply too luxurious and consequently too expensive for students.

> *P3: "Well, that (recently developed "PBSA") is actually a bit too luxurious for students. I think that were 31/32 apartments of 36 m2 net or so. But yes, that is more for the group starters than for students."*

So, it seems that many of these former shared houses and some of the new PBSA have been completely priced out of the student housing market. If you argue that student housing is only that in which students actually live, then it means that the student housing supply has declined due to the implementation of this "conversion policy".

The effect of this decrease in student housing supply is shown in Figure 6. A decrease in the supply of student housing from X to X1 will lead to an increase in rent from R to R'. Assuming that the demand line remains the same.

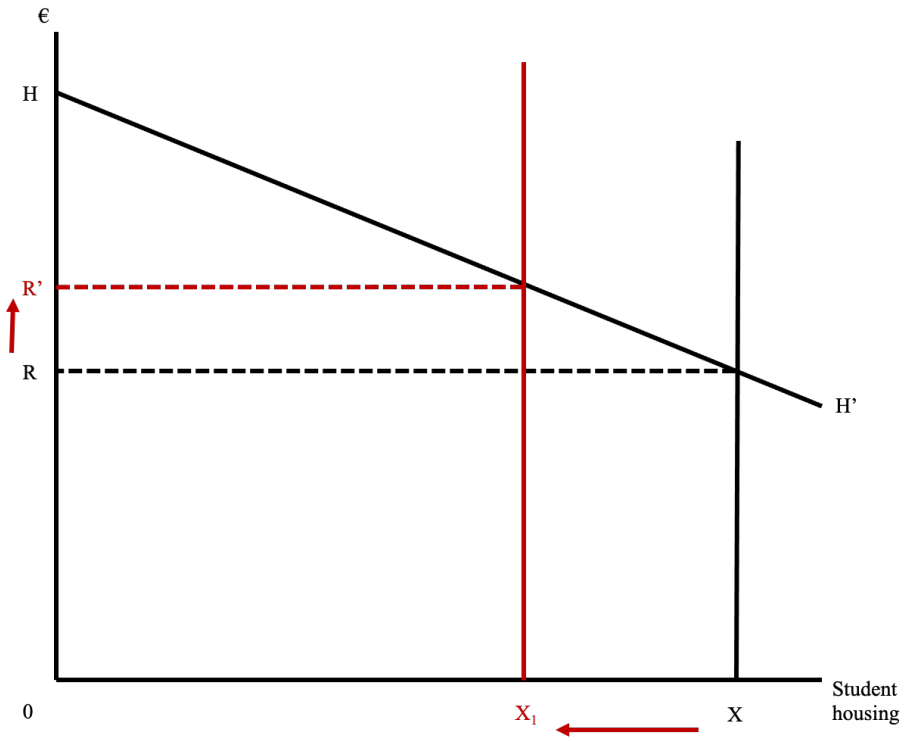

Figure 6 - The theoretical effect of policies on the cost of student housing in Groningen (based on Evans, 2008)

In theory this "-1" policy contributes to the rising costs of student housing in two ways. First, the decrease in supply causes the price to increase as described above. Second, the rent of an individual unit is inherently higher than that of a room with shared facilities. Thus, a policy that decreases shared units and increases individual units also indirectly leads to higher average student housing costs.

The fact that the "-1" policy leads to (too) high costs for student housing has not escaped the attention of the municipality of Groningen either. They now want to abolish the conversion policy. The reason given by the municipality is that they have seen that the number of rooms is decreasing due to the introduction of their conversion policy and that the rents of studios are many times higher than those of rooms in shared housing. While they want housing to remain affordable (Gemeente Groningen, 2021).

In Leeuwarden, shared housing can also be converted to a self-contained form of housing within the regulations, even though the municipality does not have an active policy for

this. According to participant 3, the difference between self-contained student housing in Leeuwarden compared to Groningen is that in Leeuwarden these studios are actually rented by students.

> *P3: "So the question is whether those studios are only for students, at least in Groningen. In Leeuwarden, we see mainly students."*

The complete ban on additional shared housing in the municipality of Leeuwarden leads to a fixed student housing supply. However, the fact that the municipality actively designates areas where PBSA development is allowed leads to an increase in the student housing supply. Figure 7 shows this with the shift of the fixed student housing line from X to X1. The addition of student housing supply, if the demand line remains the same, should theoretically lead to a decrease in the price of student housing in the long run. In the example of Figure 7, the price decreases from R to R' as a result of the increase in supply from X to X1.

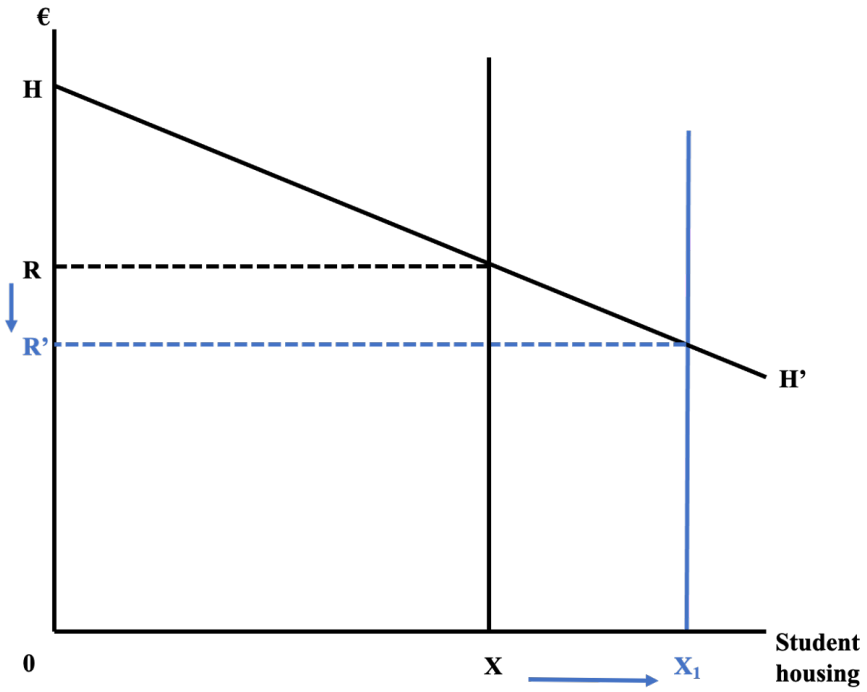

Figure 7 - The theoretical effect of policies on the cost of student housing in Leeuwarden (based on Evans, 2008)

So, to summarize the result of the effects of the different student housing policies, four theoretical effects can be distinguished. Firstly, policies that forbid additional shared housing will lead to a fixed shared housing supply. In that situation, changes in demand are the only

influence on the price of shared housing (Evans, 2008). Secondly, policies that limit shared housing at a maximum percentage per area, will also eventually lead to a fixed shared housing supply once the maximum is reached in each area. Thirdly, policies that actively facilitate the decrease in shared housing will lead to a lower student housing supply, which comes with a higher price for student housing (see Figure 6). Fourthly, policies that actively facilitate the development of PBSA will lead to a higher supply of student housing, which in theory results in lower prices for student housing (see Figure 7).

4.3 Student housing characteristics and preferences

Characteristics

All three respondents own room rental properties with shared facilities and properties that have been converted to individual units. As indicated in 4.2, these individual units in Leeuwarden are primarily rented by students. In Groningen, they are not and therefore no longer fall under student housing. These room rental properties are usually centrally located in and around the city center.

Most investors indicate that the room rental properties are often outdated. Participants 1 and 3, therefore, indicate that when renovating these shared houses, they will often convert from shared to individual housing, both in Groningen and Leeuwarden. Participant 2 would prefer to keep the Groningen room rental properties in their shared function, even after renovation. However, this does not always succeed given the aforementioned negative attitude of the municipality of Groningen toward shared housing, which is experienced by the respondent.

One of participant 1's PBSA developments in Leeuwarden has units with private facilities and units with shared facilities. In addition, the buildings include additional shared facilities for all tenants.

> *P1: "In those buildings on the corners there are still shared rooms, where they share kitchen, shower and toilet. And everything in between has become studios. In this building, of the 300 rooms, there are 200 studios and the others are rooms with shared facilities."*

The other PBSA owned by participant 1 consists only of private units. Similarly, participant 2's PBSAs in Groningen, have only individual studios with private facilities.

Additionally, participant 3 indicates that his PBSAs in both Groningen and Leeuwarden also consist only of individual units.

Respondents' PBSAs in Groningen are mainly located somewhat further away from the city center. This is also the case in Leeuwarden. This stems from the active policy of the municipality of Leeuwarden, which specifically indicates in which locations PBSA is allowed. New construction PBSA is allowed around the college campus. The redevelopment of office buildings to PBSA is allowed in a business park with relatively high vacancy rates and in some cases in the town center of Leeuwarden.

Students' preferences

The results show that students' preferences for a particular form of student housing vary. This is in line with the differing findings in previous research on student housing preferences (e.g., Nijenstein, Haans and Kemperman, 2014; Easterbrook and Vignoles, 2015; Kenna and Murphy, 2021) In Groningen, the participants find that tenants are satisfied with individual units. But as indicated earlier, it is therefore usually not students who rent those studios. According to the participants, the need for shared student housing remains. Both in Groningen and Leeuwarden.

> *P1: "I think there will always be a target group that wants to pay a bit less per month. So that will remain."*

> *P3: "I have temporary year contracts with the tenants in that house (shared student house), and my daughter will be 18 in 3 years and then she will move in that house. I think it's just great for her to fight with each other about who cleans the toilet, the garden, the room and the kitchen. ... and let it be a mess and a rundown shack. And that's also the life you have to have in your dorm. And what I've had myself. So that's more like my personal opinion and it's a bit less businesslike."*

> *P3: "I think first-year students still have a terrible need for a (shared) student house"*

Thus, according to participants 1 and 3, the demand for shared housing remains due to their lower price and the fact that living in shared housing is seen as an important part of the student experience. Furthermore, the analysis of the interview data shows that the demand for shared housing in Groningen exceeds the supply. Based on the long waiting list of students that

apply for shared housing at Participant 2's company, it can be argued that the demand for this form of student housing is high.

> *P2: "We just have hundreds of those 'houses' (students who lived together in a house) in the queue. Who are being chucked out of their houses, so the owner can turn them into apartments and studios everywhere."*

Additionally, the interview data show that PBSA is especially popular among international students.

> *P1: "It's 100% international students, we have no Dutch students living here at the moment. Maybe 1 or 2."*

However, this is also influenced by the contracts the investor has with the higher education institutions. As agreed in these contracts, the participant keeps rental units vacant during the summer for students who are referred by local higher education institutions. These may be largely international students since their knowledge about alternative ways to obtain housing is probably limited.

Investors' preferences

Finally, it is important to note that investors are not only profit-driven in their investment decisions. In line with previous findings by Anderson (2019), investors' decisions are also influenced by the moral responsibility they feel.

> *P2: "(The reason that I make shared houses more sustainable is…) partly because of the appraisal value and making it future-proof. But it is also part of doing business in today's society. That you are also a bit more sustainable and push the property towards an A label. And yes, I would always prefer a property to be completely refurbished so you can ask for a bit more rent. Then you can also be proud when you drive by the property. Better than a dilapidated property."*

This shows that the interests of students, the municipality and investors can align, as all three want the quality of student housing to be improved.

4.4 Fundability

The final, inductive concept that emerged from the analysis of the qualitative data is fundability. Fundability in this case involves the fundability of real estate. The degree of fundability varies by the form of student housing, according to the interviews. The participants name the preference of buy-to-let mortgage providers for PBSA and individual units over HMO.

> *P1: "And this (PBSA) is exactly what they want. ING and ABN Amro were lining up to finance this because it is label A (sustainable building) and because it has a good location and because it is studios for students"*

> *P3: "It also has a positive effect on the financing side, because they (banks) find independent housing more interesting than (shared) student houses."*

The reasons given for this preference of banks are that room rental properties are often outdated and thus have lower energy labels. This does not fit with the strategy of the major banks to implement sustainability throughout their operations, so they do not want to finance buildings with low energy labels in the future.

> *P1: "These properties are financed by ABN Amro, among others, and ABN is of the opinion that by 2030 they should be at least label C, but I think even label A. And a week ago I was at ING and they even want to move towards A++, not just for the rental properties, but for everything. They do not want to finance real estate unless it is A++. And that is very progressive"*

In addition, the general negative sentiment about room rentals plays a role; this is associated with faulty landlords, who exploit tenants. For this reason as well, banks will be less eager to finance shared housing than PBSA, which are assumed to be owned by more professional investors.

> *P2: "Room rentals are just considered a dirty word with the banks. ... Yes, you really have to make a name for yourself to the banks in order to get funding for room rental. Because, you know, you show them that you are doing it in a professional way, that you are working on sustainability, that you are contributing to society."*

The difference in fundability between PBSA and shared housing, in this case, fits within the view that the financialization of the student housing market has led to shifts toward a greater share of PBSA (Newell and Marzuki, 2018; Livingstone and Sanderson, 2021; Revington and August, 2020). But in this case, it is not the institutional real estate investors who show a preference for PBSA, but the real estate financiers who, through their preference for PBSA over shared housing, seem to contribute to a shift in the student housing market.

4.5 Summary and synthesis of results

This paragraph synthesizes the results of this study and compares these results to outcomes of previous research. The coherence of the deductive and inductive concepts is presented in Figure 8. This conceptual framework is an elaboration of the conceptual framework in chapter 2 (see Figure 4).

Results on the relationship between studentification and policy making are consistent with previous studies (e.g., Munro, Turok and Livingston, 2009; Hubbard, 2009; Smith, 2008; Munro and Livingston, 2012). Desk research on policy documents show that rental licensing is instituted to manage the negative effects and spread of studentification. Observed need for higher quality student housing is found to be another motive for zoning policies facilitating PBSA (Leeuwarden) and planning policies that allow the conversion of shared housing to self-contained units (Groningen).

Furthermore, this study shows that participants hardly receive complaints of nuisance caused by students in PBSA. This contrasts the conclusion of Sage, Smith and Hubbard (2013), that studentification in the form of PBSA still causes nuisance.

Rental licensing is found to limit (Groningen) or completely prohibit (Leeuwarden) the choice of investor to invest in additional shared housing. Zoning policies that facilitate PBSA development and the positive attitude of the municipality of Leeuwarden towards PBSA development have a positive effect on the investment decisions of real estate investors for PBSA. This is best demonstrated by the aforementioned quote from participant 3:

> *P3: "We went to the municipality and asked: 'What is your view on this? Because it doesn't have much reason to exist as an office anymore … (the municipality allowed for transformation to PBSA) … they would prefer it to be self-contained units in order to be able to offer more quality to students."*

In addition, investors' choice for PBSA development also appears to be influenced by banks' preference for PBSA over shared housing. As the results show that mortgages for PBSA are easier obtained than mortgages for shared housing. The higher degree of fundability of PBSA thus fits within findings in previous research that the financialization of the student housing market leads to increased investment in PBSA (Newell and Marzuki, 2018; Livingstone and Sanderson, 2021; Revington and August, 2020). The difference in fundability between shared housing and self-contained units also influences the choice of investors to convert their room rental properties into studios with private facilities.

In this regard, the choice to convert shared housing to self-contained units is facilitated by the active policy of the municipality of Groningen allowing these conversions. Additionally, their positive attitude towards the conversion of shared housing is mentioned in cases where the granting of a permit for the conversion of shared housing goes more smoothly than the application for renovation permits for the same room rental property.

How both the student housing policies of the municipality of Groningen and the difference in fundability between shared housing and PBSA influence investment decisions is well summarized by participant 3.

> *P3: "You are pushed towards that (conversion to self-contained units) both from a policy point of view and from the point of view from financial viability."*

Limiting the investment opportunities in shared housing through rental licensing ultimately leads to stagnation of the addition of shared housing to the total student housing supply. The facilitation of PBSA development in student housing policies and the higher degree of fundability ensures that investors are more likely to choose to invest in PBSA. This may further increase the share of PBSA in the overall composition of the student housing market.

The results show that the "conversion" policy leads to the choice of investors to convert shared student housing into multiple self-contained studios. However, these studios in Groningen (and to a lesser extent in Leeuwarden) command a significantly higher rent than a room in a shared house, making them too expensive for students. As a result, the conversion of shared housing leads to a decrease in the availability of shared housing and overall student housing.

Ultimately, it can be argued that real estate investors' investment decisions based on student housing policies and the difference in fundability lead to an increase in PBSA and a decrease in shared housing in the overall composition of the student housing supply. A

changing ratio between shared housing and PBSA, thus means a change in the distribution of studentification (Sage, Smith and Hubbard, 2013). With this last step, the cyclical process of the conceptual framework in Figure 8 is formed.

Both investor preferences and student preferences were left out of the conceptual framework. The results of this study show that students' preferences for a particular form of student housing differ. Participants' preferences for a particular form of student housing also differ. Due to the difference in preference of both students and investors, there is no unambiguous influence on the choice of PBSA or shared housing.

Furthermore, changes in rent due to the introduction of student housing policies based on Evans' (2008) theory on hierarchical planning systems were also left out of the conceptual framework. Although this mechanism helped clarify the theoretical effects of student housing policy, the real effect on rents and supply can only be determined through quantitative research using relevant longitudinal data.

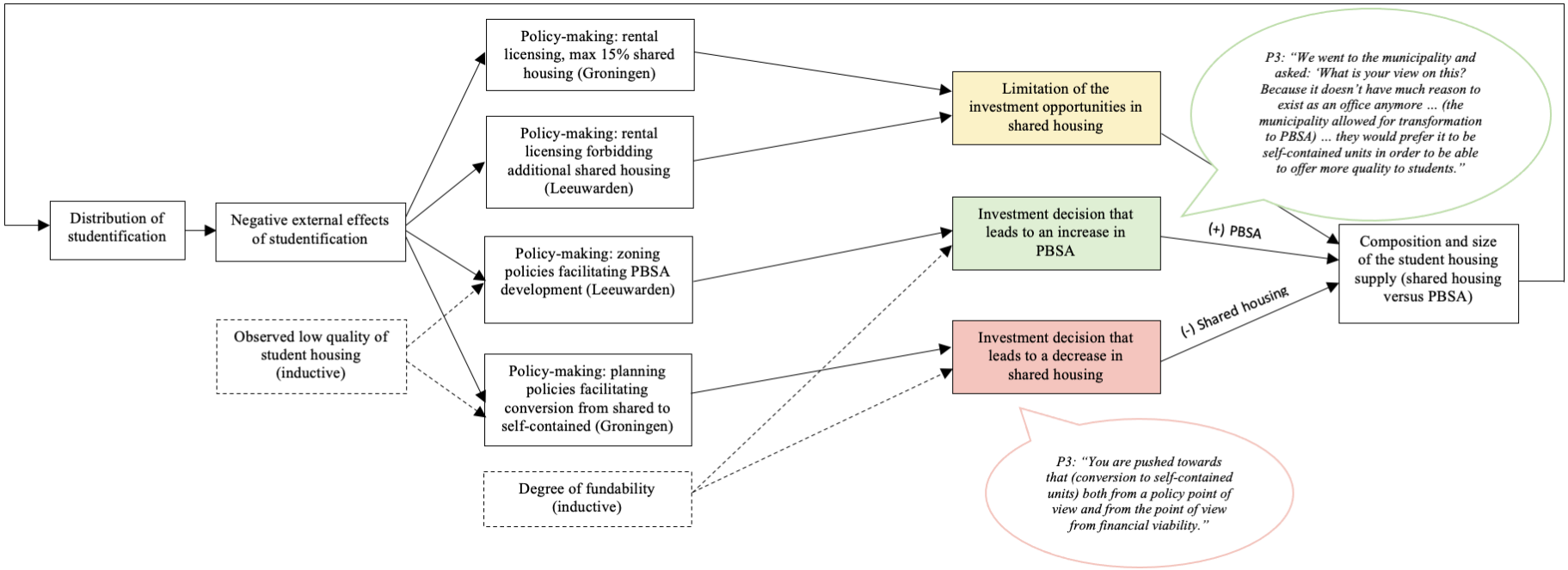

Figure 8 - Conceptual framework that explains the relation between specific student housing policies, the investment decisions in shared housing and PBSA and the composition and size of the student housing supply. Including relevant inductive concepts (shown in boxes with dashed lines) and quotations from real estate investors that substantiate how student housing policies lead to investment decisions that will reduce the number of shared houses (in red) or increases the number of PBSA (in green).

5. Conclusion

This paper focused on the influence of student housing policies on investment decisions in the student housing market. On that basis the extent to which these student housing policies contribute to the shift in the student housing market from shared student housing to a larger proportion of PBSA could be explored.

The results provided three key insights regarding the influence of student housing policies on investment decisions. First, rental licensing limits the investment possibilities in shared housing. Second, zoning policies facilitating PBSA development steer investors in the direction of their investment choice. Third, the perceived preference of the municipality towards self-contained housing instead of shared housing and active policies that allow for these conversions led investors to choose to redevelop shared housing to private studios.

The finding that student housing policies play a role in the shift toward PBSA complements, rather than contradicts previous research that distinguished the financialization of the student housing market as a major driver of this shift (Newell and Marzuki, 2018; Livingstone and Sanderson, 2021; Revington and August, 2020). Interestingly, this study found that the difference in fundability between PBSA and shared housing had a notable impact on investment decisions as well. This therefore fits within the wider concept of the financialization of the student housing market as driver of PBSA growth.

The results from this study are of particular interest to policy makers responsible for student housing policy. Typically, there is a significant time lag between the implementation of policies and the observable effects in the market due to the lengthy processes involved in obtaining permits and carrying out (re)development projects (Evans, 2008). However, by offering insights into the immediate impacts of student housing policies on investment decisions, policymakers can expedite the timeframe required to gain initial understanding of the actual effects of their policies.

To determine the actual effects of these student housing policies on the supply and prices of student housing, research will need to be done by means of longitudinal quantitative data analysis. This could then consider the effect of student housing policies such as the ban on additional shared housing in Leeuwarden combined with the active facilitation of PBSA development from 2017 on student housing supply and rents over a longer period of time.

Also, further research on the student housing market could focus on the effects of other policies that relate to the student housing market. Such as the effects of the intention of the

Dutch government to restrain the influx of international students nationwide, as (student) housing demand exceeds supply (Hooft van Huijsduijnen, 2021).

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Appendix A: In-depth interview guide

Instruction for the interviewer:

It is essential that you start with the opening questions and end with the closing questions. The sequence of questions on studentification, policies and property characteristics are of lesser importance However, it is important that all questions are answered. To keep track of which

questions have been answered you can cross them off during the interview. Furthermore, it is vital that you use the probes listed per question. Note that also specific probes per participant are given. In addition, make sure you pay close attention and ask further in-depth questions that are not indicated as a probe but might be relevant to the research. For interviewer clarity, the terms PBSA and HMO were used in the question-wording. Make sure the interviewee also understands these terms or use other easy-to-understand wording of these two forms of housing. Finally, please double-check if the audio recording equipment is working.

Introduction (based on Hennink, Hutter and Bailey, 2011)

This research is being conducted to get to know the views of private real estate investors on the student housing market in Groningen and Leeuwarden. I am conducting this research for my master's thesis in Real Estate Studies at the University of Groningen. I am especially interested in the topics of; studentification, policies concerning student housing and the property characteristics of student housing. The questions I would like to ask you relate to these three topics and have been specifically designed based on our prior conversation. However, feel free to bring up topics that you feel are related to the aforementioned topics. Everything you tell me will only be used for this research project. Also, your name will not be used, to make sure that no one can identify you with any answers. Finally, I ask for your permission to record this interview, do you consent to this?

Do you have any questions before we begin?

Background information

No. of interview:
City investor is located:
Cities active:
Real estate focus on investing vs. developing:
Real estate focus on which submarket(s):
The number of units (PBSA vs HMO):

Opening questions:

1. Can you tell me what you and your company do?
   Probe: link to next questions (2&3)

2. Which market location(s) do you focus on?
   Probe: why (not) Leeuwarden? why (not) Groningen?

3. On which form of student housing do you focus?
   Probe: multiple? HMO vs PBSA? why?

4. To what extent do you have experience with the (re)development of student housing?
   Probe: experience PBSA? experience HMO?
   Probe P1: *left out because of anonymization*
   Probe P2: *left out because of anonymization*
   Probe P3: *left out because of anonymization*

Questions about studentification:

5. How would you describe the target population of the forms of housing you offer?
   Probe: students only? Dutch students/international students? first year - last year students? different per HMO/PBSA?

6. Influence of studentification on surroundings:

a. If you invest in PBSA/HMO only, in what quantity do you receive complaints of nuisance?
   Probe: what are the complaints about?
b. If you invest in both PBSA and HMO, do you notice any difference in the degree of nuisance that is caused by the students?
   Probe: different kinds of complaints?

7. How do you see the student housing supply/demand ratio in Groningen/Leeuwarden?
   Probe: good or bad thing?

Questions about policies:

8. What is your opinion on the policies regarding student housing in Groningen?
   Probe: negative aspects? positive aspects? cap on HMO

9. What is your opinion on the policies regarding student housing in Leeuwarden?
   Probe: negative aspects? positive aspects? cap on HMO

10. What is the influence of policies on your investment and development decisions?
    Probe: HMO invest. decisions? PBSA invest. decisions? Difference Lwd & Gro?
    Probe P3: To what degree was the municipality involved in (re)development of the *name left out* and *name left out* project?
    Note: Answers on this question are of considerable importance to the research. Keep the conversation going and open. Let the participant speak freely, but pay attention to motivations for investment decisions.

Questions about property characteristics:

11. Can you describe typical characteristics of your PBSA investments/(re)developments
    Probe: state of property, facilities

12. Can you describe typical characteristics of your HMO investments/(re)developments
    Probe: state of property, facilities
    Probe P2: What stands out in your strategy is that you are one of the few in the market that still renovates student houses instead of neglecting them, without changing the function (HMO), what is the reason you make this decision? / here more suitable: your HMOs are known to be relatively luxurious/modernized, why?

13. What are your preferences as an investor towards the form of student housing?
    Probe: PBSA/HMO? individual/shared facilities? difference in rent/yield?

14. What are your preferences as an investor regarding the location of student housing?
    Probe: close to campus or city center? difference PBSA/HMO? difference in rent/yield?

15. Do you recognize a preference from students towards the form of student housing?
    Probe: PBSA/HMO? why?

16. Do you recognize a preference from students toward the location of student housing?
    Probe: close to campus or city center?

Closing questions:

17. Are there things that come to mind that I didn't specifically ask about, but could still be relevant to this research?

18. In closing, do you have any questions for me?

I want to thank you for participating in this study. Once the thesis is finished and reviewed, I will make sure you get a copy.

Appendix B: Codebook

Code family	Open codes
Studentification (deductive)	• description of neighborhood with high level of studentification • difference in student housing markets nationally • effect of studentification on surroundings (merged) • HMO as part of Dutch culture • location of studentification (merged) • opinion on positive effects of segregating students • zoning policy (location) regarding student housing Leeuwarden
Policies (deductive)	• influence Groningen policy on supply HMO • influence policy Groningen on the transformation from HMO to individual • opinion on student housing policy in Groningen (merged) • preference Groningen municipality PBSA/individual over HMO (merged) • room rental redeveloped into individual student housing • negative effects of strictness municipality policies on HMO • PBSA/individual property requirements policy Leeuwarden (merged) • influence Groningen policy on supply HMO (merged) • reason behind Leeuwarden policy • redevelopment office into PBSA in agreement with municipality Leeuwarden • influence policy Leeuwarden on PBSA development • perceived actual reason of strict student housing policy in Groningen • policy and preference of municipalities regarding PBSA developers/investors • preference municipality Leeuwarden PBSA/individual over HMO (merged) • opinion on student housing policy in Leeuwarden (merged)
Investment decisions (deductive)	• redevelopment office into PBSA in agreement with municipality Leeuwarden • zoning policy (location) regarding student housing Leeuwarden • preference Groningen municipality PBSA/individual over HMO (merged)

	• influence policy Leeuwarden on PBSA development • influence policy Groningen on the transformation from HMO to individual • influence of identified market demand on form of new PBSA • influence Groningen policy on supply HMO • reason to redevelop HMO into individual units • reason to invest in the renovation of HMO • reason to choose partially individual, partially shared housing for PBSA • redevelopment of HMO into individual housing Leeuwarden • room rental redeveloped into individual housing • commercial reason to invest in HMO (with single tenant contracts) vs fundability • demand for PBSA investment opportunities in commercial real estate market • consideration invest in HMO or PBSA / individual or shared (merged)
Property characteristics (deductive)	• influence policy Groningen on the transformation from HMO to individual • influence of identified market demand on form of new PBSA • zoning policy (location) regarding student housing Leeuwarden • reason to redevelop HMO into individual units • location of studentification (merged) • redevelopment of RE (part HMO) into PBSA/individual housing • HMO property characteristics Groningen • redevelopment office into PBSA in agreement with municipality Leeuwarden • reason to invest in the renovation of HMO • redevelopment of HMO into individual housing Leeuwarden • reason to choose partially individual, partially shared housing for PBSA • HMO property characteristics Leeuwarden • description of PBSA property (merged) • PBSA/individual property requirements policy Leeuwarden (merged)
Property preferences (deductive)	• commercial reason to invest in HMO (with single tenant contracts) versus fundability • tenants description PBSA Leeuwarden • market demand/student prefer individual over shared • tenant description individual housing (studios) Groningen • Influence of identified market demand on form of new PBSA • collaboration with educational institutes in Leeuwarden • supply shortage HMO • tenant description HMO Groningen • demand for PBSA investment opportunities in commercial real estate market • redevelopment office into PBSA in agreement with municipality Leeuwarden • market demand for HMO (merged) • tenants description HMO Leeuwarden

	• reason to choose partially individual, partially shared housing for PBSA • consideration invest in HMO or PBSA / individual or shared (merged) • investors location preference Leeuwarden vs Groningen (merged)
Rent (inductive)	• difference in student housing markets nationally • collaboration with educational institutes in Leeuwarden • related to the bid rent theory (merged) • rent PBSA/individual (merged)
Fundability (inductive)	• commercial reason to invest in HMO (with single tenant contracts) vs fundability • fundability of individual student housing • fundability of PBSA (merged) • fundability of HMO (merged)
Supply-demand (Inductive)	• position of landlords in market • market demand/ student prefers individual over shared • supply shortage HMO • influence Groningen policy on supply HMO (merged) • demand for PBSA investment opportunities in commercial real estate market • market demand for HMO (merged) • consideration invest in HMO or PBSA / individual or shared (merged) • compensation HMO supply shortage with PBSA development • influence of identified market demand on form of new PBSA