

Market concentration: The influence of property developers on housing development

A comparative case study on the influence of property developers and their relative market share on housing development

Master Thesis Spatial Planning

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PREFACE

For my master's thesis, I sought a relevant topic in area development. After considering subjects such as grid congestion and the transformation of retail real estate into housing, I chose a topic from the list: market concentration in the land and housing market. Initially, this was a relatively unknown and complex topic for me. However, I found this challenge exciting as it offered an opportunity to learn more about how developers operate in the land and housing market.

While writing my thesis, I gained extensive knowledge about land and real estate development, largely thanks to my internship at Stadkwadraat. The knowledge sessions and the ability to directly ask colleagues questions about my topic greatly contributed to my understanding of the sector. This support was invaluable and positively impacted the final outcome.

I would like to thank the interviewees for their time and for answering my questions. Special thanks to my supervisor at Stadkwadraat, Edwin Quartel, and my supervisor from Utrecht University, Edwin Buitelaar. I greatly appreciated their guidance and pleasant conversations, which helped shape the direction of my thesis and achieve the final result. Writing this thesis has been a significant learning experience, and I look forward to continuing this journey.

I hope you enjoy reading my thesis!

ABSTRACT

While the role of property developers in the land and housing market has been extensively analyzed, little empirical work has been undertaken to analyze their effects on housing development outcomes. It is the intent of this study, therefore, to investigate the motives of property developers with their relative market share, and how they can steer housing development. The determinants of price, quality, composition, and speed will be investigated. Qualitative methods were applied in the form of interviews to gather explorative data. The data was collected from four new housing developments (Hoef en Haag, Broekgraaf, Merwede, and Haarzicht), located in two municipalities (Utrecht and Vijfheerenlanden).

This study found (1) that property developers with a large market share might delay housing development in the pre-planning phase due to their relatively large amount of land holdings. Meanwhile, developers with a smaller market share strategically delay housing development in the construction phase because they await favorable conditions, such as rising housing prices. It also found (2) that property developers exert influence on the composition of the housing program due to the high acquisition price paid for land. As a result, the development often cannot meet the municipality's requirements for social housing while remaining financially viable. Large developers often have more land holdings, thus leading the consortium in housing development and having more influence on the composition of the housing program. Moreover, they have more expertise and financial resources; therefore, the municipality is more likely to occur through them than developers with a smaller market share.

Results from this study underscore the need for greater transparency in the land and housing market. Insufficient transparency leads to asymmetric information between developers and municipalities regarding the financial feasibility of area developments. However, it is important to emphasize that market concentration among developers does not inherently pose a threat. The organic growth of developers can result in economies of scale and a more efficient construction process. The highly restrictive government policies ensure that large-scale area developments will continue to be the guiding principle for housing development, with only larger developers capable of undertaking these risk-bearing investments. In summary, the land and housing markets are dynamic and require increased transparency to prevent adverse effects on housing consumers.

Keywords: *market share, property developers, housing development, transparency*

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TRANSLATION DUTCH - ENGLISH

Actief gemeentelijk grondbeleid = Active land policy

Anterieure overeenkomst = Anterior Agreement

Beeldkwaliteitsplan= Visual-quality plan

Bijdrage Bovenwijkse Kosten = Supra-local contribution

Erfpacht = Ground leases

Exploitatieplan = Exploitation plan

Inbrengwaarde= Input value

Kostenverhaal = Cost recovery

Omgevingswet = Environmental Act

Ontwikkelvisie = Development Vision

Planeconoom = Planner

Programma van Eisen = Program of Requirements

Stedenbouwkundig plan= Urban design plan

Structuurvisie = Structural Vision

Volkshuisvesting = Housing

Wet Voorkeursrecht Gemeenten = Pre-emption right

Woondeals = Housing deals

Woningbouwimpuls = Housing incentive

1. Introduction

1.1 Background

Since Hugo de Jonge became the Minister for Housing, the Dutch government has reasserted its control over housing policy. De Jonge claims that "housing is back" and aims to make housing development more efficient and quicker by accelerating the speed of construction. The government is not only designating specific housing locations through Housing Deals but also providing funds through subsidies like Housing Incentives to achieve these goals. This reassertion of spatial control is driven by the escalating housing shortage and the necessity to build 900,000 homes, two-thirds of which must be affordable, by 2030 (Ministry of the Interior and Kingdom Relations [IKR], 2022). De Jonge argues this intervention is crucial because "leaving housing to market forces alone favors the strongest and leaves many in distress."

The government's reassertion of spatial control can be seen as an acknowledgment that the market has been insufficient. It can be argued that the housing market exhibits characteristics of an imperfect market (Buitelaar & van der Krabben, 2022), as supply lags behind demand and affordability is under pressure. The persistent housing production shortfall is undoubtedly influenced by the functioning of the land market, including the availability of housing development sites, delays in the supply of building land responding to demand changes, and the price of building land (van der Krabben, 2021). This is illustrated by the ample planning capacity of municipalities, including a significant share of so-called hard plans, which often remain unused or "on the shelf" for extended periods (Buitelaar & Van Schie, 2018). The land market's functioning is further influenced by legislation and regulations (van der Krabben, 2021), spatial planning (Segeren, Needham & Groen 2005), and municipal land policies (Buitelaar, 2021).

Not only do government-imposed supply restrictions shape the land market's functioning, but also the actions of property developers (hereinafter referred to as '**developers**') themselves (van der Krabben, 2021). Developers with significant land holdings in expansion areas hold strong negotiating positions (van Schie, Breedijk & Buitelaar, 2018). When municipalities seek to develop, they must first negotiate with developers. These negotiations can be lengthy. Developers have gained substantial power; whereas they were once dependent on a municipality's goodwill for development, as landowners, they can now negotiate and influence the terms under which they participate in development (Buitelaar & van der Krabben, 2022; Segeren, 2007). The question is to what extent this can be detrimental to housing consumers. Literature suggests that developers can influence the price (Bramley 1993; Bramley & Watkins, 1996), quality (Barker, 2004), composition (Stephens, Perry, Wilcox, Williams & Young, 2018), and speed (Adams, Leishman & Moore, 2009) of housing development. This can potentially be harmful, especially when developers, through market concentration, gain a larger market share and, thus, more power. This could manifest in higher housing prices, housing developments that inadequately meet demand due to low affordability percentages, and lower housing quality. This is particularly concerning in a market where demand surpasses supply (Buitelaar & Pouls, 2009), as is currently and will be the case in the coming years.

The issue of market concentration among housing providers will undoubtedly become an important topic in the coming years, especially with the government's designation of large-scale housing locations. Developers with a large market share (hereinafter referred to as '**larger developers**') already own land holdings in these areas, which will only increase the market concentration among developers (van der Krabben, 2021). It will be difficult for developers with a smaller market share

(hereinafter referred to as ‘**smaller developers**’) to join the housing development in large-scale expansion areas.

1.2 Research questions

The research aims to provide a comprehensive understanding of how the market share held by developers may influence housing development. The market share of a developer contributes to the level of market concentration within a municipality. In this manner, a large share held by one developer in a municipality leads to a more concentrated market. In a more concentrated market, developers may have the ability to influence housing development (Adams et al., 2009; Adams & Tiesdell, 2012; Barker, 2004). Similarly, developers have motives to enable them to maintain (future) production volumes. These motives serve as a means to gain greater control over housing development within municipalities. This may involve acquiring strategic land holdings to expedite development processes. To date, there remains a paucity of empirical research in this area. This research primarily seeks to bridge the gap between the market share of developers and their ability to influence housing development.

In this research, a comparison is drawn among different cases involving developers. Comparing the market shares of developers is deemed more appropriate than comparing market concentration among developers. While the level of market concentration can indicate the level of market consolidation, it does not provide insights into the relative market shares among developers. Therefore, the decision was made to include market share in the main research question, while elucidating market concentration, which can be inferred from the distribution of market shares, through the literature review.

The primary research question of this research is:


How does the relative market share of property developers influence the price, quality, composition, and speed of housing development?

To formulate a comprehensive answer to this research question, the following sub-questions have been formulated

1. *What are the motives of developers in housing development?*
2. *How can developers influence housing development in negotiations with the municipality?*

1.3 Scientific relevance

The scientific literature commonly assumes that land markets adhere to the ideal of a perfectly competitive market, characterized by a lack of concentration and numerous homogeneous firms engaging in vigorous competition (Zhao et al., 2024). However, this portrayal does not reflect reality (Buitelaar & van der Krabben, 2022; Ferr & Schmidt, 1999). A study by van der Krabben (2021) reveals that only a limited number of market parties are financially capable of acquiring large-scale and early-stage land, leading to a significant likelihood of market concentration and resulting market power for a few developers. This has been further researched by Buitelaar & van der Krabben (2022), which identified moderate to highly concentrated new construction markets in 51 to 54% of municipalities based on market determinants. The findings of the study by Buitelaar & van der Krabben (2022) provide intriguing insights that warrant further investigation into market concentration. Building upon the results of their research, this study examines how developers, with their relative market share, have an influence on housing development, as it may have consequences for housing consumers.



Within the arena of market concentration, there is a noticeable attention to market concentration on the land and housing market in the scientific literature (Bulan, Mayer & Somerville, 2009; Leishman, 2015; Wang & Li, 2021; Quintero, 2022; Ye, Shen & Tan, 2010; Zhao et al., 2024). While the literature extensively discusses market concentration, relatively little attention is given to the role of developers and their influence on housing development. Studies on the effects of market concentration conclude effects on price (Bramley, 1993; Bramley & Watkins, 1996), quality (Barker, 2004), composition (Stephens et al., 2018), and speed (Adams et al., 2009) of housing development. However, these effects remain largely unexplored empirically (Buitelaar & van der Krabben, 2022). There is a *research gap* on how developers, with their relative market share, have an influence on these effects. This study aims to address this gap, significantly contributing to our understanding of developers, their motives, and their influence on housing development outcomes. By doing so, this research has the potential to inspire future studies and emphasizes the importance of bringing transparency on this topic.

1.4 Societal relevance

The market share concentration among a few developers in the land and housing market raises critical concerns with profound implications for housing consumers. With a few developers holding considerable market dominance (van der Krabben, 2021), there emerges an increased risk of inflated housing prices, restricted housing choices, and delays in housing development (Adams et al., 2009; Adams & Tiesdell, 2012). Consumers may experience harm due to this situation, because developers can raise the prices of constructed houses without a corresponding decrease in sales, resulting in higher profits than selling at the old market price (Landes and Posner, 1981). These outcomes not only deepen the challenges of housing affordability but also perpetuate socioeconomic inequalities, given that low-income groups already face limited housing options. This situation is exacerbated by a housing shortage of approximately 400,000 homes, a challenge that has grown more acute in recent years (NOS, 2023). Moreover, forecasts predict a downturn in construction activity in 2024 compared to previous years (EIB, 2024). These factors compound the existing strains on housing availability and affordability, increasing prices and impeding timely access to suitable housing for numerous consumers.

Comprehending the dynamics of the market share held by developers and its implications for house prices, housing quality, composition, and the speed of housing development is paramount for policymakers, urban planners, and politicians. By addressing these challenges through evidence-based research and targeted policy interventions, there can be work towards fostering a more transparent housing market. Such efforts aim to meet the diverse housing needs of society while ensuring fair and affordable housing opportunities for all.

1.5 Reading guide

The research follows the following structure: After this introductory section, Chapter 2, the context of the Dutch land and housing market will be addressed. Chapter 3 details the Theoretical part, which introduces and details the key concepts addressed in the research and provides a Conceptual Framework. Chapter 4 then details the methodological approach to the empirical portion, referencing the strategy and data collection methods employed. Chapter 5 highlights the results of the interviews conducted as part of the empirical data research and the document analysis. Chapter 6 will be the discussion, where the results are discussed with literature. Finally, Chapter 7 will conclude this research.



2. Context: The Dutch land and housing market

The Dutch land market stands out for its unique features: the inherent characteristics of land, particularly its location-dependent nature, and the substantial role of the government in contrast to other markets (Segeren, Needham & Groen, 2005). The government's involvement is twofold: passive, through rule-setting to ensure market smoothness and participant certainty, and active, participating as a player in the market (Segeren et al., 2005). In this way, the government's involvement in the land market influences the outcome of the housing market. It can be said that markets influence (spatial) policy, which is influenced by markets (De Magalhães, 2001). Given the interconnectedness of the land and housing markets, they are often considered together (van der Krabben, 2021). This Chapter will explore the relationship between the land and housing markets.

2.1 Land market

A unique feature: land

To grasp the housing market more effectively, it is imperative to elucidate the dynamics of the land market, given its interconnected role with housing construction and, consequently, the housing market (Buitelaar & van der Krabben, 2022). The dynamics of the land market can significantly influence housing development, with the potential to have effects, such as the price, quality, composition, and speed of housing deliveries (Adams et al., 2009). The land market contributes to this, given the immobile nature of the land and the consequent control it affords over the production process (Alexander, 2014). Compared to other markets, a distinguishing feature of the land market is that each parcel of land has a unique location and quality. As a result, location significantly determines land prices (Atack & Margo, 1998). Consequently, land and buildings on it can be considered heterogeneous goods (Segeren, 2007). Van der Krabben (2021, p. 16) argues that "the connection of the land with what is built on it is particularly significant for land price formation: it is highly influenced by the value of the real estate built on that land, or by the (future) destination for which the land can be used."

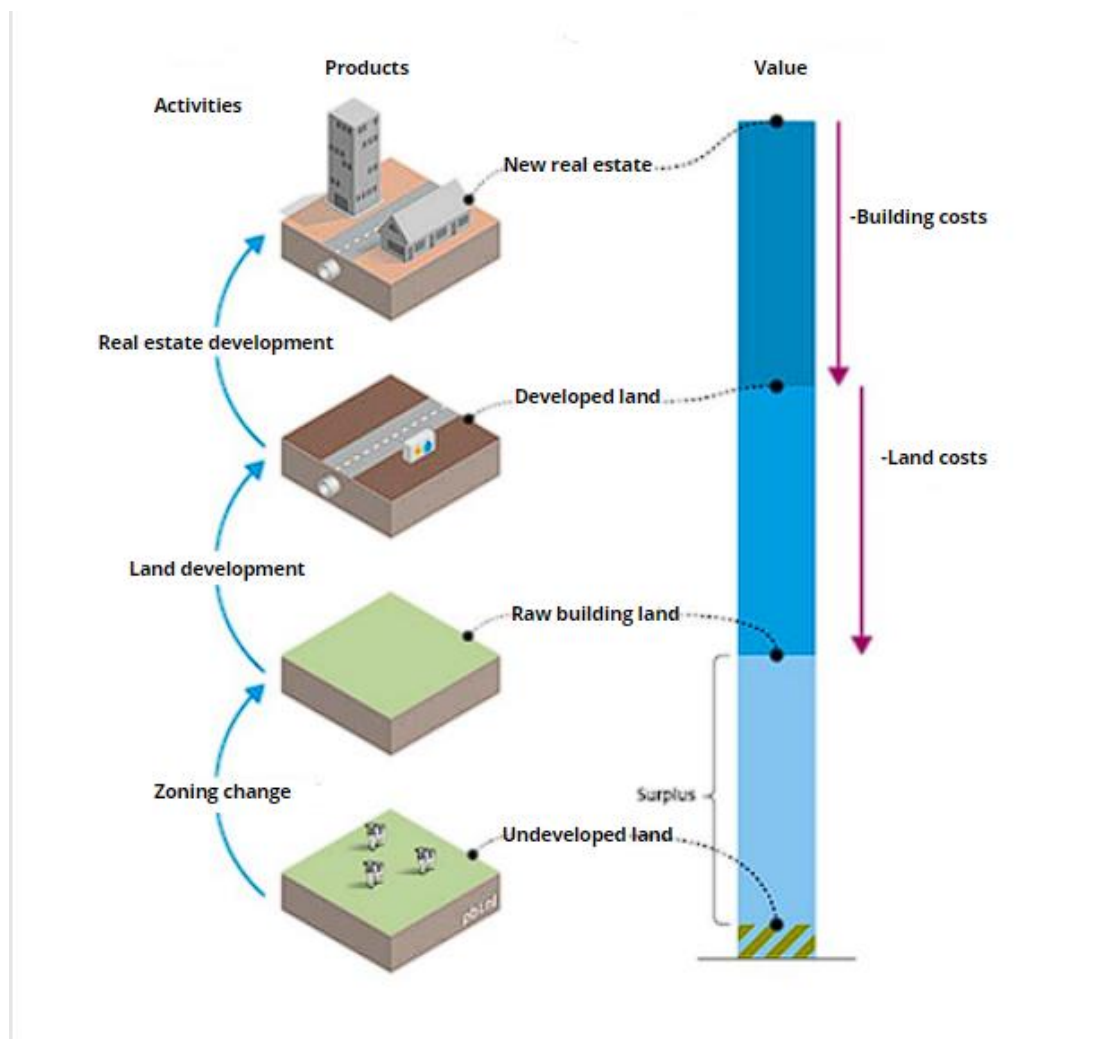
According to neoclassical urban economists, it is commonly stated that the value of building land for housing is determined residually (George, 1879; Ricardo, 1817). The residual land value method is the amount remaining after deducting all costs to realize the intended development. This method became well-known in the Netherlands in the 1990s and is used to determine the maximum amount a buyer can pay for a feasible plan. It can be applied at various stages of development, resulting in the residual value of building land when subtracting construction and ancillary costs from the property value. Further deduction of land (production) costs, including costs for preparing land for construction and preparation for housing, planning and procedural costs, research costs, and costs for supra-local amenities, yields the residual value of raw building land (Buitelaar & Witte, 2011).

A residual approach offers significant advantages over a fixed sum, enhancing transparency in land price determination and achieving a more equitable distribution of costs and benefits (Buitelaar, Deugd & Geuting, 2004). Unlike a fixed sum, the residual approach provides clarity regarding price formation and the allocation of costs and benefits. However, a strategic interplay unfolds at various moments, particularly during land transactions. The selling party seeks to minimize land and property development costs while maximizing returns, aiming to negotiate the highest possible land price. Conversely, the buying party does the opposite during negotiations, striving to maximize profit from

the construction process. This strategic contestation can lead to prolonged negotiations and substantial transaction costs (Buitelaar et al., 2004).

The prolonged negotiations and substantial transaction costs can diminish the 'surplus' that a developer has calculated. When developing new housing sites, a surplus often arises, representing the difference between the residual value of the raw land for housing and its current value. When the surplus arises, the landowner may proceed with changing the land use (van der Krabben, 2021), allowing them to sell the land at a higher price. Developers may pay a higher price for land than its residual value because of speculation on a change in land use (Adams & Tiesdell, 2012). If a piece of land is assigned a higher-value designation (from agricultural to residential), the value of the land increases accordingly (Freemark, 2020; Quigley & Rosenthal, 2005). The developer seeks to acquire as much of this surplus as possible during development, leading to a 'battle for the surplus' (Buitelaar, 2021) (see Figure 1). This battle for the surplus is characterized by intense competition (Adams & Tiesdell, 2012). In locations earmarked for development near cities in the Randstad and nearby areas, where there is high demand for housing, the surplus may be larger due to the limited availability of building land and the competition among various parties to access favorably located plots (Pelzer, Haasnoot & Buitelaar, 2023).

Figure 1: The battle for the surplus (Buitelaar, 2021)



The effects of the Dutch land policy on housing development


When discussing land policy, it encompasses the amalgamation of tools from land policy and spatial planning. This involves enabling new developments, the associated increase in value, and determining how to utilize that augmented value to cover necessary expenses (such as infrastructure, public spaces, etc.). However, land policy has been under strain since the 2008 crisis, primarily due to the financial risks involved (Buitelaar, 2015). Utilizing the residual value approach, land prices strongly correlate with housing prices (van der Krabben, 2021). Land values plummeted during and after the 2008 financial crisis, mirroring the steep decline in housing prices (CBS, 2010). Consequently, municipalities had to write down the value of their land holdings significantly. For instance, due to the active land policy of the municipality, Apeldoorn had to report a loss of €68 million, leading to a situation of financial distress under Article 12. This meant the municipality was technically bankrupt as it couldn't cover its deficits. Hence, municipalities have been cautious in land acquisitions since 2010 (Deloitte, 2018). From this, it can be inferred that municipalities have progressively shifted away from actively pursuing land policy.

A passive land policy seems odd today, given the need for regulation and pace in housing production (Ministry of IKR, 2023). However, it's crucial to critically evaluate the toolkit to address current challenges better (Stuttener, 2021). Active land policy hasn't been devoid of controversy. There are debates regarding the desirability of active municipal land policy (Buitelaar, 2015). Through active land policy, the government directly intervenes in the land market, serving as both a market player (buying and selling) and a regulatory democratically elected body (issuing permits and representing society). According to Buitelaar (2010; 2015), this can lead to undesirable side effects such as financial and political risks, information asymmetry within a municipality, and conflicts of interest.

Nevertheless, most experts agree that an active role for the government is necessary in urban redevelopment (Buitelaar, 2015). This is because municipalities have public-law instruments. When landowners in an area refuse to sell their land, a hold-out problem can arise (Buitelaar, 2015). The market lacks tools to resolve this hold-out, but the government (municipality) does through public law. The government can expropriate recalcitrant parties through public law or apply the pre-emption right. Although expropriation for urban development isn't common (from 1995 to 2021, only 11% of owners were expropriated) (Kadaster, 2022), there's a shadow effect on the expropriation value on the prices in the raw land market (van der Krabben, 2021). This shadow effect leads to amicable land acquisition at the current market value (van der Krabben, 2021).

When the government seeks to expropriate landowners for development, it must proceed carefully. The government must compensate owners at the current market value (appraisal) and pay compensation, considering any post-sale value increase (Stuttener, 2021). Thus, the expropriated landowner typically gains a portion of the value increase occurring after rezoning. This fuels land speculation. The price of land is now partly determined by the sale price of nearby plots. This comparative method leads to price escalation (van den Brand, 2024).

The fact that everyone involved in an area's development, from the land seller onward, seeks to profit, leads to price inflation. Nevertheless, municipalities can marginally reduce the speculative value by being clear and transparent about the housing program and the costs they intend to recover. From an affordability perspective, cost savings in land development are necessary since affordable homes generally have a lower land value than market-rate homes (Stuttener, 2021). Tightening policies regarding affordability can mitigate the price-driving effect of speculative value and curb speculation (though not eliminate it). Thus, a balanced land policy (facilitative where possible, active where necessary) with adequate risk consideration remains crucial (Stuttener, 2021). However, municipalities require the State to enhance instruments to effectively execute these policies. Hence,



since 2023, the State has introduced Housing Deals to bring more regulation and pace to housing production (Ministry of IKR, 2023).

Role of cost recovery and contribution value in land policy

Since 2008, there has been a requirement for (local) governments to recover costs for the establishment of public amenities and the modification of spatial plans (van der Krabben, 2021). Costs are only recovered when development occurs on lands not owned by the municipality. When a municipality opts for a facilitative land policy, it can still recover costs through cost recovery without actively acquiring and preparing land for construction. This way, the municipality bears less risk. However, cost recovery isn't a form of profit-taking; only costs can be recovered up to a certain cost ceiling (macro caps). Since the introduction of the Environmental Act in 2024, (local) governments have been granted more leeway to recover additional costs through enforceable financial contributions. These contributions could include compensations for social housing not realized in the planning area or for restoring flora and fauna.

Cost recovery is a significant issue during negotiations with market players (van der Krabben, 2021). The determination and allocation of costs and financial contributions can escalate considerably, which market players may disagree with. The desire of both the municipality and market players is to reach a pre-agreement together. Yet, there's a chance this won't happen. In that case, an agreement will be reached through public law frameworks (formerly an exploitation plan under the Wro). The public law frameworks are known to everyone, thereby casting a shadow over the negotiation of a pre-agreement because both parties know what it entails. Nevertheless, no agreement may be reached, leading to delays in the planning process.

An essential aspect of negotiating cost recovery concerns the input value (van der Krabben, 2021). However, there's often debate over the input value of land. Land and real estate valuation accuracy is hindered because land and real estate markets are thin markets, meaning reliable price indices, for example, do not or barely exist (Buitelaar, 2021). The input value can be based on the complex value of the development area and the utility value, as far as the transitional provisions of the new spatial plan permit. The input value is then the higher of the utility value and the complex value. In practice, there are cases where the costs of land development, for instance, a housing development, are higher than the revenues, resulting in a macro cap. At the same time, the complex value of the lands in the area exceeds the agricultural (utility) value. For instance, a developer is willing to pay more than the agricultural value for potential residential land to secure a building position or to obtain building volume (Adams & Tiesdell, 2012). It may come down to accepting a smaller margin on the building exploitation to secure the desired position. Alternatively, developers are awaiting favorable conditions such as rising land prices, regulatory changes, or increasing demand to develop the land (Adams et al., 2009).

2.2 Housing market

The inelasticity of the housing market

According to classical welfare economic theory, outcomes are optimal when a perfect market exists (van der Krabben, 2021). The housing market operates based on the classical principles of supply and demand, where increasing demand typically leads to price hikes due to scarcity, and oversupply causes prices to fall due to excess capacity (Segeren et al., 2005). However, in the case of the housing market, there exists a stock market with a high degree of inelasticity, meaning that supply responds slowly to demand (de Vries & Boelhouwer, 2005). The characteristic of a stock market is that the products have a long lifespan, and their quality is maintained for an extended period. The price of tradable products

is then determined by the stock because the share of new products is small compared to the existing stock (Buitelaar & Meijer, 2022). This is particularly the matter for the housing market, where annual new construction represents only a small fraction of the stock, averaging less than one percent. Therefore, new construction follows the price, rather than setting it (Buitelaar, 2021).

The fact that new construction does not constitute the vast majority of all housing transactions is expected to remain the case in the coming years. EIB (2024) predicts an unfavorable outlook for housing completions over the next two years. Total housing production is expected to shrink by 3.5% in 2024, with a decrease of 3 billion euros compared to 2023. Consequently, relatively few transactions involving new-build homes are expected to occur proportionately due to reduced supply. In the medium term, the outlook is more favorable (EIB, 2024), with total production projected to grow by an average of 2.5% annually between 2026 and 2028. However, Boelhouwer (2024) suggests that new construction is not the sole solution to addressing the housing shortage. Optimizing living space efficiency through housing splitting can also be beneficial. If we want to resolve the stagnant housing market, funds must be allocated, similar to when investments were made in VINEX locations.

Interventions in the housing market

Despite the Dutch Government's efforts to implement initiatives such as the 'Housing Incentives,' the housing shortage remains significant. Municipalities received a total of €1.084 billion for the construction of 184,367 homes (Ministry of IKR, 2024). With an annual target of 75,000 new homes, it aims to address the housing shortage, particularly emphasizing the construction of affordable housing. It can be stated in 2024 that the annual target of 75,000 new homes has not been met since the first tranche was distributed at the end of 2020. That was about four years ago, so around 300,000 new homes should have been built, which was not achieved with 184,367 homes.

Another recent attempt involves the 'Housing Deals' With 35 signed regional housing deals from 2022 and 2023. These deals will form the basis for the housing challenge in the 35 regions in the coming years. With the involvement of all stakeholders, the number of homes will grow steadily and at a faster pace. Two-thirds of the homes to be built must be affordable. Each municipality will take on a fair share of the regional challenge, aligning with the local task and the municipality's character. Through the Housing Deals, the government aims to reclaim control, which it had relinquished to the market in recent years. The effectiveness of the Housing Deals cannot yet be fully assessed, as they only came into effect in the first quarter of 2023. The initial results present a varied picture. In some municipalities, the objectives have been exceeded by a significant margin. For instance, Leeuwarden has built 915 homes, while 500 were planned. However, the objectives have not been met in 11 out of the 35 regions. Municipalities cite challenges such as rising construction costs and interest rates, issues with network congestion, delays due to Council of State procedures, and problems related to nitrogen emissions.

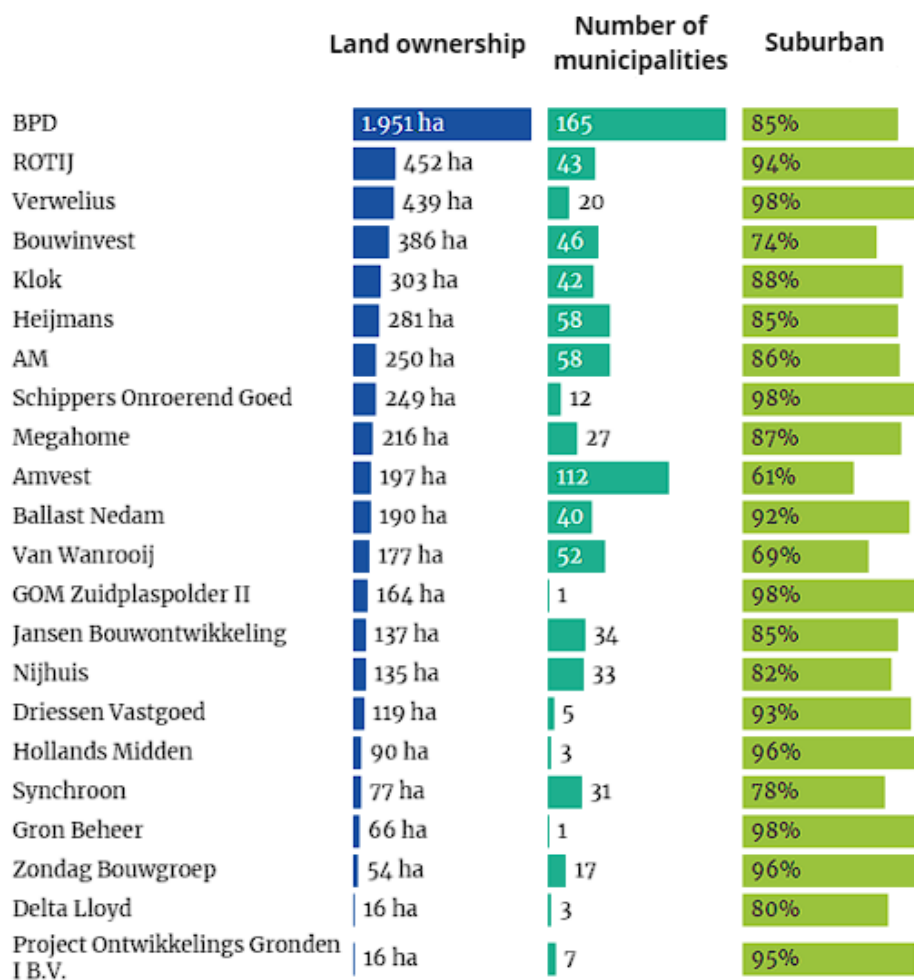
In this regard, the supply of newly built homes has not risen significantly and lags behind the ambitions of the National Housing Agenda (Stiemer & van Egmond-Smit, 2019). The imbalance between supply and demand results in a situation where the supply falls short of the demand, putting affordability under pressure (Buitelaar & Pouls, 2009). As a result, the housing market exhibits characteristics of an imperfect market (Buitelaar & van der Krabben, 2022). In a well-functioning market, a consumer has choices when searching for a suitable home. This occurs when there is a sufficient supply of comparable (homogeneous) products, and there are enough developers to offer those products in competition with each other (Buitelaar & van der Krabben, 2022).


The housing market as a sellers' market

This research will focus on the supply side of the housing market, particularly examining the level of competition among developers, as this is critical for a well-functioning market (Buitelaar & Pouls, 2009). In the housing market, supply dictates demand, operating predominantly as a sellers' market where demand must adjust to available supply. Developers, who build most homes, play a dominant role in this market structure (van der Krabben, 2021). This dominance allows developers to significantly influence the outcome of housing development. In regions like the Randstad, characterized by stringent regulations and a limited number of new building locations, a small group of developers may leverage their position to their advantage (Buitelaar & Pouls, 2009). This can harm housing consumers, such as higher list prices.

The influence of large developers on the housing market is steadily growing. In 2020, a quarter of all new homes were sold on land owned by one of the top twenty developers (Doodeman & du Saar, 2022). This percentage has increased from 22% in 2016, indicating that these developers are gaining more market share (Doodeman & du Saar, 2022). BPD, owned by Rabobank, has emerged as the largest landowner by far, with holdings in nearly half of all Dutch municipalities. Figure 2 shows a list of the 22 largest developers based on land ownership in 2020. Notably, almost all land holdings are located outside urban areas, in the suburbs. It is reasonable to assume that developers anticipate future construction on these sites. These sites are primarily characterized by large-scale development.

Figure 2: Land ownership 22 largest developers (Cobouw, 2020)





The increasing prevalence of large-scale area development has been evident since the VINEX era (Nozeman, 2008). While in the past, housing development primarily focused on individual buildings or small-scale areas, it now increasingly targets entire areas (van der Krabben, 2021). This evolution has given housing development a more integrated character, with a larger scale and longer durations. This raises questions about the implications of this scaling. Scalability can influence the financing and investment landscape, as developments may require capital investment (Chen, Wu, Zheng, Ma & Song, 2015).

As a result, larger developers, due to their financial resources, can take on more risk-bearing investments and thus attract more housing developments. This shift towards large-scale development is likely to impact the competitive dynamics within the housing development sector, potentially leading to increased market consolidation (Buitelaar & Pouls, 2009). This trend arises due to the dwindling number of developers capable of thriving in an environment characterized by the complexity of large-scale developments.



3. Theoretical framework

The theoretical framework takes into account a review of the existing literature on market concentration and involved actors in the housing market. In 3.1, market concentration will be explored. Thereafter, the concept of market power will be analyzed in 3.2. Following this, developers' strategies will be explained in 3.3. The existing theory is then used to form the conceptual framework in 3.4 and to be utilized throughout the empirical part of the research.

3.1 Market concentration in housing development

The concept of market concentration in the land and housing market has garnered considerable attention in the scientific literature (Bulan et al., 2009; Leishman, 2015; Wang & Li, 2021; Quintero, 2022; Ye et al., 2010; Zhao et al., 2024). Not only attention to scientific literature but also attention to the policy dimension is increasingly prevalent (Buitelaar & van der Krabben, 2022). This question that arises in the literature is the extent to which market concentration poses a problem and can be harmful to housing consumers. In markets where concentration occurs, a large developer can influence housing development, causing higher list prices of housing (Adams et al., 2009). This is particularly detrimental in a sellers' market, such as the housing market, where demand exceeds supply (Buitelaar & Pouls, 2009). Consumers may have few alternatives, which puts affordability and availability under pressure. Concentration in this research is used as an initial indication of the presence of market power, especially for homogeneous products, such as housing (Collyer, Mullan & Timan, 2018).

A history of market concentration

Market concentration within the land and housing markets has been discussed since the early 21st century (Buitelaar & van der Krabben, 2022). Initially, issues with concentrated markets arose due to the imperfect market functioning at VINEX locations, particularly because of the extensive land positions held by market parties in these areas (van der Krabben, 2021). Developers can utilize the *building claim model*, which involves acquiring construction claims on land holdings (Buitelaar & van der Krabben, 2022). This model allows developers to flexibly initiate development during favorable market conditions, optimizing their investment returns. Larger developers with substantial financial resources can accumulate more construction claims, providing them with a competitive advantage and potentially leading to a more concentrated market position. As these larger entities secure more claims, they can influence the timing and scale of new developments, which may result in reduced competition and increased market control (Segeren, 2007). Municipalities sometimes invited market parties to acquire land and participate in public-private joint venture development companies. This strategy aimed to reduce the municipalities' financial risks in housing developments. These arrangements could impact competition, as primarily larger parties could engage in such partnerships (Buitelaar & van der Krabben, 2022).

The emergence of more concentrated markets in the Netherlands was primarily due to municipalities withdrawing from active municipal land policies. Influenced by various factors, including regulatory pressures and criticism of their monopolistic practices, municipalities ceased their active land policies. They stopped acquiring and developing raw building land for (social) housing (Segeren, 2007). This approach had previously allowed municipalities to exert greater control over the speed of housing development. The absence of land holdings in the municipality gave developers stronger negotiating holdings than before. This not only provided developers with negotiating power but also to have more influence on the outcomes of housing development. Therefore, the question has been repeatedly

raised whether issues related to market concentration should prompt policy interventions or necessitate changes in laws and regulations (Buitelaar & van der Krabben, 2022).

Causes of market concentration on housing development


Several factors contribute to increased market concentration in the land and housing markets. In the realm of housing production, these markets require capital-intensive and high-risk investments, with developers heavily dependent on access to credit (Ambrose & Peek, 2008). Larger developers generally enjoy superior credit access compared to smaller counterparts. As a result, they can accumulate extensive land portfolios through strategies such as land banking, facilitating a more stable and continuous construction output (Alexander, 2014). With land banking as a strategic approach, developers aim to acquire land holdings for future development or resale at a profit (Ball, 2017; Ball, Shepherd & Wyatt, 2022). This strategy involves developers waiting for opportune conditions, such as increasing land prices, regulatory shifts, or rising demand, before initiating development (Adams et al., 2001). Ball (2008) contends that the increasing concentration of developers during the 2000s was primarily fueled by limited available land, which posed barriers to entry for new developers and favored larger developers (Ball, 2013).

Due to land banking practices, smaller developers face greater difficulty entering the land market and securing positions for future development. Furthermore, regulatory constraints have led to a growing trend towards large-scale housing development (Nozeman, 2008). This relates to the complexity and duration of area developments (Ball, 2013), where only a small number of developers qualify for these large-scale developments, potentially leading to a more concentrated market (Buitelaar, Segeren, & Broek, 2008). Along with the designation of large-scale housing development sites by the national government, as seen with VINEX neighborhoods in the past and currently with NOVEX areas, this enhances opportunities for larger developers to capture production volumes. This will likely contribute to increased market concentration (Coiacetto, 2009).

Literature examining the relationship between regulatory constraints and market concentration is limited, with tentative conclusions drawn (Coiacetto, 2009; Ball, 2013). It suggests that limited site availability may increase the likelihood of larger developers dominating developments and excluding smaller competitors (Coiacetto, 2009). Although direct research on this relationship is limited, several studies have linked supply constraints to a reduction in available land for potential housing developments (Segeren, 2007; Segeren et al., 2005; van der Krabben, 2021). These studies suggest that spatial planning policies impose regulation restrictions concerning the availability of new housing development sites.

The influence of spatial planning policies is also highlighted in the designation of large-scale developments in suburban areas near major cities, as exemplified by the VINEX neighborhoods. In the Netherlands, these locations are relatively close to each other, facilitating developers in spreading and diversifying their activities across nearby housing sites. This ease is particularly advantageous for larger developers operating across multiple land holdings. The benefits they derive are amplified by scale advantages achieved through broader geographic coverage (Ball, 2013).

While larger developers have the potential to diversify their activities through nearby developments, this opportunity is often constrained by the complexity of regulations. Regulation has become more complex in recent decades, making formal procedures for zoning changes and permitting complex, lengthy, and uncertain (Ball, 2013). This is because more issues, such as air quality, nitrogen, and environmental standards, must be considered when approving permits. The uncertainty surrounding development timelines and potential delays due to unforeseen circumstances are detrimental to smaller and larger developers. However, given the complexity of regulations, legal expertise can be



particularly advantageous in navigating these issues. This requires more knowledge and expertise within a firm, which larger developers with more financial resources can hire (Janus, 2016). In other words, firms with more financial resources have an advantage and can outcompete their rivals (Leishman, 2015).

Effects of market concentration on housing development

A concentrated market implies that relatively few developers influence housing production. This can lead to a form of forced patronage, where housing consumers have limited or no choice and thus become dependent on the housing provider (Buitelaar & van der Krabben, 2022). When this dependency becomes substantial in a market where new construction is price-setting rather than price-following, it can result in harm to housing consumers due to market concentration.

Several studies have been conducted on the effects of market concentration on housing development (Adams et al., 2009; Adams & Tiesdell, 2012; Bulan et al., 2009; Quintero, 2022). In addition to price, the determinants of quality (Barker, 2004), composition (Stephens et al., 2018), and speed (Adams et al., 2009) in housing development have been examined in relation to market concentration. The studies reveal a positive causal relationship, indicating that market concentration influences how developers can manage the outcomes of housing development. High market concentration can lead to homogenization in housing quality and composition, as larger developers might prioritize cost-efficiency over diversity and innovation (Barker, 2004). Furthermore, the speed of development may be strategically controlled to maximize profits, often leading to slower housing delivery in high-demand areas (Adams et al., 2009). These dynamics collectively disadvantage housing consumers, who face limited choices and potentially higher prices due to the reduced competitive pressure on developers. Consequently, this adversely affects housing consumers.

The effects of market concentration have garnered attention due to various studies from the UK (Adams et al., 2009; Adams & Tiesdell, 2012; Barker, 2004; Leishman, 2015). The discussion on market concentration was essentially initiated by the publication of Barker (2004). The review investigated market dynamics and developer behavior, including how market concentration and the dominance of large developers impact housing supply and quality. Barker pointed out that larger developers might prioritize profit margins over the quality and diversity of housing. The review culminated in several policy recommendations, including increasing land supply, reforming the planning system, and implementing measures to ensure that new housing developments meet high-quality standards.

The lower building quality of houses is frequently highlighted in studies in the United Kingdom. The Competition and Markets Authority (CMA), comparable to the ACM in the Netherlands, recently (2024) published a housebuilding market study. A key conclusion was that housebuilders are not strongly incentivized to compete on the quality of house construction. This is due to a housing shortage and a market where approximately 40% of homes are built by the larger national housebuilders (CMA, 2024). The CMA's (2024) research revealed reported problems with the quality of house construction, including collapsing stairs and ceilings.

The notion that housing quality can be compromised was also highlighted in other studies (Adams & Watkins, 2008; Adams et al., 2012; Segeren, 2007). An important reason cited for this trend is that speculative developers prioritize land acquisition (land-focused) over customer-centric approaches. Consequently, the fiercest competition occurs in accessing land rather than determining the built product's quality (Adams & Watkins, 2008). The problem with this approach is that it often leads to the payment of an excessively high price for the land, diminishing the surplus of the developer or even rendering it negative. In this scenario, either the developer finds the business case unfeasible or is dissatisfied with the profitability yielded by the development. In response, a developer may opt not to

proceed with development, deliberately delay it, or choose to lower the quality of the homes. Segeren (2007) investigated this phenomenon in the Netherlands and concluded that it is particularly evident in social housing.

Overpaying for land can have significant consequences not only for the quality of housing but also for the speed of housing development (Adams et al., 2009). Adams and Tiesdell (2012) argue that housing development is often delayed for economic reasons, particularly in anticipation of further increases in housing prices. This delay occurs because developers may have initially overpaid for land, expecting future price hikes to justify the high acquisition costs. This reasoning aligns with the findings of Adams et al. (2009), who suggest that developers aim to set higher estimated selling prices for new homes. As a result, larger developers can submit more competitive bids for land, thereby increasing their competitiveness in the land acquisition market. Overestimating land prices can lead to scenarios where developers opt to stagger or slow down supply, ultimately resulting in reduced production volumes and heightened volatility in housing prices (Bramley, 1993; Bramley & Watkins, 1996; Quintero, 2022). Such price volatility can have adverse implications for housing consumers.

In addition to intentionally delaying housing production in anticipation of higher home prices, developers also do so for technical reasons, such as the absorption rate of homes by the market (Calcutt, 2007). The capacity of local housing markets to absorb new supply is limited. In other words, even if developers construct homes rapidly, local markets may not be able to accommodate all the new housing units, which could impact both prices and the speed of housing development. This aspect of local market capacity is intricately linked to the discussion surrounding construction speeds (Adams et al., 2009).

There is also discussion about the extent of developers' influence on the composition or diversity of the housing program (Barker, 2004). This debate often revolves around developers paying too high a price for land, thereby rendering developments financially unfeasible under the municipality's program requirements (Stuttener & Boelman, 2021). In the UK, various studies indicate incomplete and skewed information regarding the financial viability of housing developments (Crosby & Wyatt, 2016; Lovell & Smith, 2010). Governments may not accurately estimate all costs, leading to developers attempting to maximize their profits by employing more experts who can better assess development costs. Developers may exploit this to reduce the proportion of social housing in a proposed development (Stephens et al., 2018). They propose a program with a higher proportion of market-rate housing instead of social rental and ownership housing, as these have a higher land value. The municipality does not readily agree to this, leading to intensive negotiations. This results in delays in the development process, which can indirectly cause housing market price increases if, due to these delays, fewer homes are built than there is demand for (van der Krabben, 2021).

The relation between market concentration and market share

Market concentration indicates how the various market shares are distributed across the market. The relationship between market share and market concentration arises from the fact that firms, or in the case of the housing market, developers can acquire a dominant position in the market. When multiple firms hold relatively high percentages of market shares, this can lead to concentrated markets (Rhoades, 1985). In concentrated markets, a few players influence the market dynamics, potentially exerting market power and restricting competition (Ma et al., 2019). Dominant developers may establish a strong position and have market power, leading to less competitive pricing and potentially less innovation and choice for consumers. This may give rise to competition concerns and the need for regulatory measures to promote competition and improve market functioning (Callcutt, 2007). Archer & Cole (2016) corroborate this assertion and highlight that the market share of the top ten United Kingdom developers has continued to escalate, reaching 47% in 2015. The authors observed a

considerable surge in revenues and profit levels among these leading developers, surpassing the growth rates of output levels by a significant margin. As a result, the developers increase their share of the total market size, thereby exerting greater influence on housing development.

3.2 Exerting market power in housing development

A high level of market concentration in the land market refers to a situation in which a small number of developers hold a significant portion of the land market (Buitelaar & van der Krabben, 2022). This can occur when a few larger developers (or multiple providers acting together) own or control a substantial amount of land. In such cases, prices of new homes may be increased and/or production limited (Adams et al., 2009). These developers then wield market power, allowing them to dictate terms without facing competitive pressure (Posner & Weyl, 2017).

One way for developers to exert market power is by capitalizing on the surplus or additional value generated by a productive factor, such as land in this case. This concept is commonly referred to as '*economic rent*' in the literature. Economic rent in the land market is determined by various factors, including location, demand for land for various purposes (such as housing, commercial development, and agriculture), and the scarcity of land in a particular area (Rebelo, 2009). Economic rent in the land market can lead to market power; larger developers have the financial means to buy land speculatively and hold onto it without immediate development (Adams et al., 2001). In this way, developers can influence the supply side of the land market, enabling them to increase land prices and discourage competitors (Leishman, 2015). Thus, economic rent may be seen as a means for developers to potentially exert regional market power. When developers manage to acquire land on a large scale, it leads to a more concentrated market, which may potentially result in market power.

Monopolistic competition

When there is only one developer, a monopoly exists, granting the developer full market power (Landes & Posner, 1997), it's essential to recognize that wielding market power isn't automatically unlawful. When a firm expands naturally and surpasses its competitors, it's not inherently problematic. However, issues arise when a company abuses its market power. This can occur, for example, when a monopolist exploits its position by leveraging its power over municipalities. In the study by Buitelaar & van der Krabben (2022), it was found that the municipality indicated that a larger developer appears to be aware of its monopolistic position and exploits it by taking a tougher stance in negotiations. Another example of full market power involves charging consumers unreasonably high prices. Thus, market power can be seen as an effect of a monopoly position wielded by a developer.

However, most land markets are not likely to resemble monopolies, where a single landowner controls all available land. Instead, the development of housing typically occupies a distinct site for which there are close but never perfect substitutes in other locations. The immobility and uniqueness of a parcel of land also imply that its owner possesses a unique product that cannot be fully reproduced by another. Hence, landowners have what is known as a *locational monopoly* (Needham, Buitelaar & Hartmann, 2018). Consequently, a model of localized or monopolistic competition may provide a more accurate representation of the land market (Alexander, 2014). Based on this fact, studies have acknowledged that the land market exhibits characteristics of spatial segmentation (Goodman & Thibodeau, 1998) or localization (Cheshire & Sheppard, 2017), wherein concentrated ownership enables landowners or developers to wield market power (Posner & Weyl, 2017).

When developers actively choose to exercise market power, they restrict the supply of the product at that location to drive up prices. The price differential resulting from this practice is also referred to as '*monopoly rent*' in economic literature (Evans, 2008). Monopoly rent refers therefore to the additional

profit that a monopolist can achieve by being the sole provider in the market. Monopoly rent arises when a player has a monopoly and thus can set the price higher than the marginal cost (van der Krabben, 2021). In this manner, monopoly rent can only occur when a developer has a monopoly and this differs from economic rent, where market power does not necessarily imply that there is only one dominant player.

A further delineation of monopoly rent, often used within the land and housing market, is class monopoly rent. According to Harvey (1974), class-monopoly rent refers to situations where the return on urban resources, such as housing, is determined by conflicts between providers and consumers. Anderson (2014, p. 14) describes the concept of class monopoly rent as follows:

The concept of class monopoly rent rests on the notion that landowners can be treated as a class of actors. While these actors – developers, landlords, homeowners, and financial institutions – may act individually, they are compelled, in aggregate, by the same competitive profit-maximizing imperatives under capitalism. It is this “coordinating” behavior that allows these agents to be treated as a class based on their collective position as individual landowners.


The coordinating behavior of these actors enables them to wield market power based on their collective position as individual landowners. In the context of this research, class monopoly rent therefore also refers to the additional profit gained by developers due to exclusive control over certain land holdings.

Harvey (1974, 2018) further delves into the intricate dynamics of land and housing markets, drawing from Marxian economic theory. Harvey (1982) emphasizes the speculative claim on future revenues of land owners generated by the rent of land. This rent arises from efforts among various stakeholders to manipulate land and housing supplies, fostering artificial scarcity and monopolist pricing (Anderson, 2014). Landowners wield significant control over land transformation, enabling them to extract monopoly rents (Anderson, 2019). However, Harvey's ideas challenge traditional neoclassical views, particularly Coase's theory on land monopoly. Coase (1972) argues that competition ensures land sells at fair prices, ruling out monopolistic control.

Conversely, Coase's theory is challenged in the literature (Lai & Chau, 2019). Critics suggest that land's unique spatial characteristics create natural monopolies, influencing housing markets (Anderson, 2019). Coase's assumption about monopolist pricing ignores factors such as land use regulations, which can drive up housing costs (Bramley, 1993; Bramley & Watkins, 1996). While Coase's theory (1972) accentuates competitive market dynamics, Harvey's framework (1974) underscores the pervasive influence of monopolistic tendencies.

3.3 Competitive strategy of developers

Developers play a pivotal role in developing houses and whole cities. They select and acquire land from rural landowners, subdivide it into parcel lots, construct buildings on these lands, and sell these to consumers (Parker et al., 2012). Developers are often perceived as a homogeneous group with a singular objective (Brown, 2015; Coiacetto, 2001). While there are similarities among developers, significant differences in their strategies and goals are also evident (Leishman, 2015). What stands out notably are the disparities in the scope of involvement of developers throughout the land development process. While some confine themselves solely to development activities, others integrate strategic land acquisition, construction, and long-term investment strategies (Meijer & Buitelaar, 2023).



The variances in strategies among different developers can result in the production of diverse commodities (Ball, 2013). As noted by Meijer & Buitelaar (2023), the production process, also known as the 'land development process,' shares similarities with commodities in terms of the sequential events leading to the completion of the end product. However, this contrast is notably evident in the varieties of goods manufactured. Leishman (2015) illustrates this by noting the existence of developers with a greater emphasis on higher-density development compared to those concentrating on lower-density housing development. Furthermore, distinctions also arise in the construction of housing types, as described by Ball (2013), who elucidates that multi-story apartment builders typically represent larger enterprises compared to single-family homebuilders.


To mitigate the level of abstraction among developers, a sequence in the land development process is employed, as delineated by Meijer & Buitelaar (2023). This sequence encompasses: 1) land acquisition, 2) development, 3) construction, 4) end ownership/long-term investment. Selecting this sequence for the study provides a framework whereby a distinction can be drawn between two phases in the land development process: land can be acquired strategically, long before it is clear that development is allowed at all (i.e. land banking), or closer to and with greater certainty about the development, either bilaterally or through a public tender (Meijer & Buitelaar, 2023). Hence, strategies employed by developers may entail strategically acquiring land for long-term purposes, anticipating rezoning, or procuring land, along with securing a tender, to commence immediate development.

However, developers may also opt to pursue both activities simultaneously. This is because holding land holdings entails uncertainty regarding the timing of development (Ball, 2013). In this regard, tenders can offer a solution, as development opportunities often arise in the near future, enabling production volumes to be achieved (Alexander, 2014). This is because if large developers solely concentrate on acquiring land without participating in public tenders, and no changes in zoning occur, development cannot proceed, and production volumes cannot be attained. Such circumstances could have adverse repercussions for the operational efficiency of these developers.

Meijer & Buitelaar (2023) define strategic land acquisition as the utilization of land holdings by developers as a significant factor of production or the continuous acquisition of new land for future developments. Specifically, developers are regarded as engaging in strategic land acquisition if at least one-third of their annual developments originate from existing land holdings.

When developers aim to acquire land, they might await future rezoning and subsequent development to safeguard their construction output (Ball, 2013). Ownership of land grants developers a pivotal role in the land development process—given that the right to build is typically inherent in ownership rights across many jurisdictions—thereby augmenting competition for these particular development sites (van der Krabben, 2021). This affords developers control over the supply of homes they can build, ensuring a consistent flow of construction (Alexander, 2014) and reducing dependence on external factors such as land availability and fluctuating prices thereof. However, maintaining control over the supply is contingent upon potential changes in zoning regulations and other required approvals, such as soil quality, nitrogen emissions, and noise. These processes of awaiting zoning change are intricate, uncertain, and prolonged (Ball, 2013).

To await these regulations and anticipate a change in zoning, financial capacity is required, as it has been invested in acquiring land holdings, necessitating interest payments. Larger developers possess relatively greater resources to acquire and retain land for future development compared to smaller developers (Chen et al., 2015). Larger developers are better equipped to navigate the uncertainty and complexity inherent in local planning application processes. Land speculation thus engenders a



somewhat unequal competition between larger and smaller developers, particularly since the right to build confers a strong position upon land developers regarding future housing development.

Developers may also focus on obtaining land for development soon, often through public tenders. A tender provides greater certainty regarding development in the near future and can therefore assist larger developers in securing production volumes. However, winning a tender does not necessarily guarantee immediate development, although this is the aspiration. There are instances where, following the successful bid in a tender, circumstances prevent the modification of zoning regulations to permit residential development. Consequently, developers may have already incurred costs and formulated plans for the intended development area.

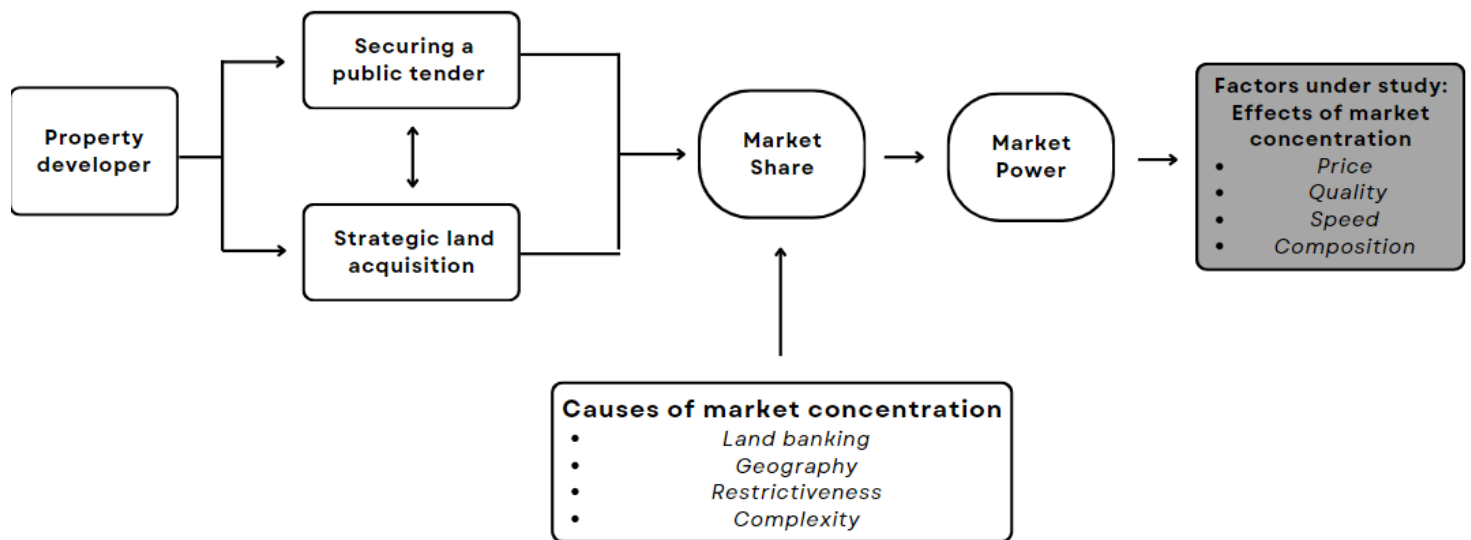
To win a public tender involves the application of specific strategies by developers. Among the tactics deployed in pursuit of these tenders, developers often prioritize cultivating sustainable development and robust community engagement initiatives (Brown, 2015; Coiacetto, 2000). By integrating sustainability and community engagement into their proposals, developers seek to align their developments with the broader goals of municipalities, thereby building trust and credibility, and ultimately enhancing the legitimacy of the planning process (Aslin & Brown, 2004).

While tenders and strategic land acquisitions are part of the direct strategies of developers, Public-Private Partnerships (PPPs) emerge as another avenue for developers to establish credibility and build trust with municipal authorities (Xu, Chan & Yeung, 2010). Through PPP arrangements, developers can collaborate with government entities in the form such as a *joint venture model*. This provides municipalities with greater certainty, as risks are shared, and market parties consequently also assume accountability in the process. In this manner, the municipality can mitigate its risk in land development, for instance, by reducing it by 50%. Successful partnerships in past endeavors can build a foundation of mutual trust and cooperation between developers and municipalities, predisposing decision-makers to favor future collaborations (Xu et al, 2010).

3.4 Conceptual Framework

A conceptual framework has been developed to investigate how developers influence housing development outcomes, as depicted in Figure 3. This is done through the mobilization of the concepts explored in the theoretical section. To briefly explain the core of the conceptual framework, the horizontal axis of the model pertains to the developers as individuals and their motives, thus focusing on their actions. The causes of market concentration can be viewed as external market effects that influence a developer's market share.

Figure 3: Conceptual Framework (own illustration)

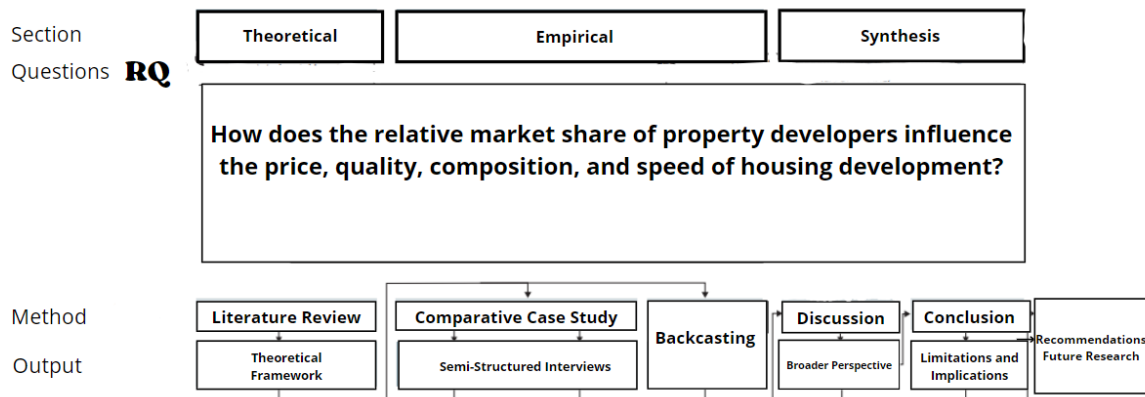




4. Methods

This section details the research strategy used in the data collection for the present research. Following the research method, details are provided about the methods and materials used, regarding their strengths and weaknesses, as well as their validity and reliability. Figure 4 shows the general research strategy.

Figure 4: Research Strategy (own illustration)



4.1 Case Study Research

The variation in market share among developers and their development motives is examined and illustrated through housing development outcomes. To investigate this, a case study research approach was employed to compare developers. Specifically, developers were selected to operate within a single institutional setting and regional context to minimize the influence of other potential factors that could explain differences. This research aims to gain deeper insights into developers' influence over housing development outcomes, such as price, quality, composition, and speed. This investigative approach scrutinizes the methodologies employed by developers.

By focusing on developers and using them as cases, comparisons can be made regarding their market shares. By zeroing in on individual developers as cases, analyzing and comparing their motives and potential steering effects on housing development becomes feasible. This not only provides insights into the market position of the developer but also sheds light on the various approaches they employ to maintain or enhance their market position. Such an approach contributes to a better understanding of the influence of developers within the housing market. By deliberately choosing cases that exhibit substantial differences from one another, this approach corresponds to the selection of extreme cases. These extreme cases, characterized by their pronounced dissimilarities, have the potential to yield valuable theoretical insights and implications (Flyvbjerg, 2006).

Case study research is suitable for comparing extreme cases because it allows for an in-depth, detailed analysis of specific situations, enabling the exploration of complex relationships and causal mechanisms (Swanborn, 2010). In contrast to quantitative methods, case study research provides flexibility and the opportunity to examine contextual factors and unique characteristics of each case, thereby allowing for a gradual refinement and sharpening of focus throughout the process of empirical data collection (Verschuren, Doorewaard & Mellion, 2010). This was particularly pertinent to

the current study, as after conducting the initial interviews, the questions could be further refined for subsequent interviews, thereby enhancing the data collection process.

4.2 Case Selection

This case study research examines four research areas within two municipalities. This was chosen because a more thorough and detailed analysis can be conducted by concentrating on two municipalities. This allows for a better examination of the specific characteristics of new housing developments and the influence of municipal policies. Municipal policies can differ significantly from one another. If there were chosen to compare more municipalities, the policy variation would play an important factor, potentially distorting the results. Therefore, comparing two municipalities enhances the accuracy and consistency of the analysis.

The research objective is to explore how developers operate within the context of low and high levels of market concentration. In this regard, consideration is given to how developers act and what their motives are based on their respective market shares. Such insights delve into the extent of influence developers can exert over housing development outcomes. The comparative case study aims to illuminate the influence of these outcomes and consider whether they might be detrimental to consumers in the housing market.

Nevertheless, the selection of developers based on their market share posed challenges due to the lack of transparency on publicly accessible sites. Yet to facilitate meaningful comparisons between cases, it was decided to base the selection criteria on the level of market concentration at the municipal level. Previous studies have recognized that the land market demonstrates characteristics of spatial segmentation (Goodman & Thibodeau, 1998) or localization (Cheshire & Sheppard, 2017), indicating that variations in land values and market dynamics occur on a localized scale within municipalities. This localized specificity argues for examining concentration levels at a subregional level, such as municipalities, which are practical and relevant to most movers, as almost 60 percent of domestic movers remain within their own municipality (PBL, 2023). Concentrating the analysis at the municipal level allows for a focused examination while aligning with administrative boundaries, potentially influencing spatial planning policies.

Hence, market concentration was examined across municipalities rather than at the level of housing market regions or provinces. To examine this, cadastral data was used on base of the *Herfindahl-Hirschman Index (HHI)*. The *HHI* is a measure of market concentration calculated by summing the squares of the market shares of all companies in the market (Rhoades, 1995). It is an important tool for assessing the level of competition within a market. A higher *HHI* value indicates a greater level of market concentration, which may indicate a lack of competition and potential abuse of power by dominant players (Rhoades, 1995).

The selection of municipalities was based on the following ranges:

HHI < 10: non-concentrated market

HHI 10 – 20: moderately concentrated market

HHI > 20: highly concentrated market

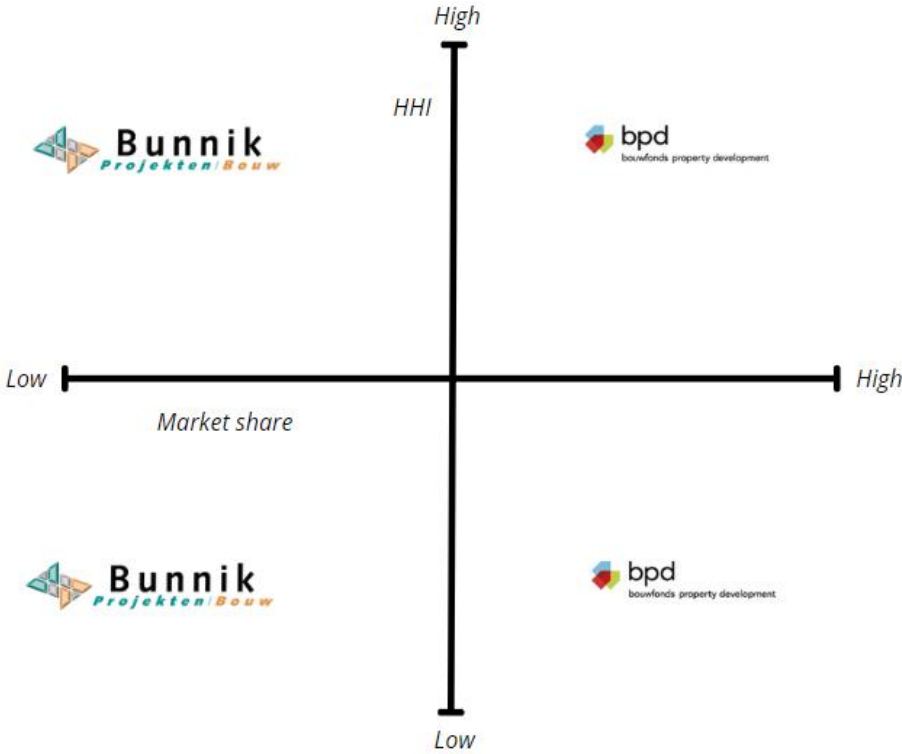
Based on the data, the municipalities of Utrecht and Vijfheerenlanden were selected, noting that Utrecht represents a non-concentrated market with an *HHI < 10*, while Vijfheerenlanden represents a highly concentrated market with an *HHI > 20*. These two municipalities are geographically close to each other and fall within the same housing market region. Consequently, the local market conditions

and dynamics in these areas can be compared. Opting for this approach aims to minimize the diversity among municipalities, given the multitude of factors that can influence outcomes.

Furthermore, in the selection process, municipalities were chosen based on having over 250 new construction transactions from 2016 to 2021, where developers acted as sellers of new-build homes. Transactions involving municipalities as sellers were excluded from consideration. This criterion was deliberately adopted to ensure a robust sampling framework. In smaller municipalities, the *HHI* can exhibit rapid escalation owing to the limited number of completed developments and the relatively restricted pool of active developers within the area. This is therefore not representative, as there are too few housing developments conducted and not enough developers active.

After selecting the municipalities, the cases were chosen. Precise determination of market shares requires data, which, however, was not able to obtain. For this reason, it was decided to derive the market shares through personal networks and municipal employees. Consequently, the market shares cannot be precisely determined, but it was possible to ascertain which developer holds a higher market share within the municipality and which holds a lower one. Ultimately, the decision is made to choose the following developers: BPD and Bunnik Bouw. BPD is a large developer with a relatively large market share, while Bunnik Bouw is a relatively smaller developer with a smaller market share. Comparing these two developers comprehensively represents the proportions among the developers and their market holdings. In Figure 5 this has been seen.

Figure 5: Developers with their market share based on HHI (own illustration)



Following the selection of the developers, the next step was to identify which new housing developments to analyze. First, focusing on developments with many new owner-occupied homes was crucial. This focus allows for a richer analysis of the effects of housing development, such as price settings by developers. It was also important that the developments included both private-sector rentals and social housing, enabling a comprehensive analysis of the composition of the housing program. Consequently, new housing developments consisting solely of rental units, whether private or social, did not meet the criteria.

Furthermore, the decision has been made to primarily analyze large-scale housing developments. This choice presents both advantages and disadvantages. Among the advantages is the relative ease of finding respondents. Additionally, it allows for a comprehensive analysis of the composition of the housing program, price-setting effects through time, and the speed of housing development. Those aspects cannot be integrated into a small-scale development with 50 units or fewer. One disadvantage is that large-scale developments are often complex, involving multiple landowners and market parties. It is challenging to meticulously map out all the intricacies and make meaningful comparisons between different developments.

This study will focus on four large-scale housing developments, two situated in each municipality. This provides a robust comparative framework, effectively highlighting differences in negotiations and the influence of various market parties. However, this approach has certain limitations. Large-scale developments, by their nature, cannot be executed solely by one developer. Consequently, each development has its own interplay of multiple developers, making it more difficult to conduct direct comparisons between the housing developments.


Backcasting was employed to describe the housing development process as accurately as possible. *Backcasting* begins with defining a desirable future state and works backward to identify steps needed to achieve that state. This method ensures that the research remains goal-oriented, helping to clarify the specific outcomes, such as the price, quality, composition, and speed of housing development. It was possible to reason backward to determine which events led to specific outcomes, revealing whether the results were due to negotiations or if they directly stemmed from agreements made between the parties. If the outcomes were influenced by negotiations, it was considered whether this was related to the developer's market share.

4.3 Data Collection

Semi-structured interviews

Interviews were used as primary data collection methods, where the motives of developers and their effects on housing development were examined. Interviews can significantly enhance data collection, offering a more comprehensive understanding compared to solely relying on secondary sources. This was particularly crucial in this study, as interviews provided insights into local market conditions, regulations, and other factors that may not have been initially anticipated. Thus, interviews are a valuable tool for conducting exploratory research (Jain, 2021).

A semi-structured interview technique was employed to ensure thorough insights during the interviews. This entailed using a predefined list of questions derived from the topic list. Before each interview, a list was compiled, encompassing key points from the topic list. The technique involved starting more broadly with general questions about the developers themselves. Respondents were then questioned about their role in housing development and their motives. The emphasis was on allowing the respondent to speak extensively during the initial part of the interview and asking open-ended questions to allow the respondent to talk about their firm, or in the case of the municipality,



about the regulations set by the municipality. This technique provides an opportunity to initiate a conversation and then gradually delve into more detailed questioning. The advantage of this approach is that it provides flexibility in exploring additional information during the discussions (Baarda et al., 2013). Consequently, the interviews were not monotonous, and each interview yielded unique insights. Throughout the interviews, detailed notes were taken, and discussions were recorded, with the interviewees' approval, for later transcription.

The content of the interview questions was primarily based on specific information from the housing developments themselves. Consequently, each interview guide was unique and had to be tailored for each interview. A document analysis was crucial in this process. Detailed information about the housing developments could be obtained through public and non-public documents. Documents such as the date of land purchases, visions, zoning plans, anterior agreements, and development plans were identified. This information was mainly accessible through online searches and allowed for setting a timeline for the housing development process.

However, a limitation was that not all documents were available online. For instance, in the development of Haarzicht, visions and municipal requirements regarding the housing program and initial project planning were specified in the Development Vision. In other developments, such as Broekgraaf, these documents were unavailable online, making it more challenging to ask respondents precise questions, especially in the first interview. After the first interview, there was greater clarity about the housing development process, allowing for sharper questions in subsequent interviews. Thus, the document analysis also served as desk research to enhance the interview questions. This approach enabled the formulation of questions that allowed developers to be queried rigorously about their influence on housing development.

This process is time-consuming, so the focus was not on obtaining as many interviews as possible. Conducting at minimum two interviews per development provided a clear framework for the housing development process. The initial goal was to interview municipal representatives first, followed by developers. However, this was not always possible, as scheduling meetings could not be planned on time.

Processing the interviews

The processing of interviews involved several steps to ensure a thorough analysis and interpretation of the data. Initially, the recorded interviews were transcribed verbatim and manually. Subsequently, the transcripts underwent scrutiny to identify recurring themes, patterns, and key insights. Manual coding was preferred over the use of software programs, given that semi-structured interviews yield a wide range of information. In addition, it offers greater flexibility and accuracy in analyzing complex data obtained from the interviews.

After analyzing and coding the interviews, quotes were selected to support the findings. The interviews were in Dutch, so the quotes were originally in Dutch. These quotes have been translated into English for use in this study. Several respondents requested that the quotes and their interpretations be sent to them for review to ensure they were accurately recorded. This has been done to check whether they were correctly quoted and interpreted.

Interviewees

The respondents were selected based on the chosen municipalities and the respective relative market share of the developers. For privacy reasons, the real names of the respondents will not be disclosed. Each respondent is assigned a code that corresponds to their position. This code will also be used when quoting them. A full list of interviews can be seen in Table 1

Table 1: Interview list with the respondents


Position	Date of interview	Medium	Length
BunnikBouw, project director	14-05-2024	Physical meeting	01:14:08
AM, project director	28-05-2024	Teams meeting	44:20
BPD, project director	03-05-2024	Physical meeting	01:07:37
Planner, consulting firm	05-06-2024	Physical meeting	26:20
Municipality of Vijfheerenlanden, project manager	29-05-2024	Teams meeting	31:12
Municipality of Vijfheerenlanden, planner	29-05-2024	Teams meeting	37:11
Municipality of Utrecht, planner	30-04-2024	Physical meeting	46:24
Municipality of Utrecht, Program Manager	18-06-2024	Teams meeting	30:53
Independent, Program Manager	19-06-2024	Teams meeting	28:49

4.4 Reliability & Validity

Reliability and validity are fundamental criteria for assessing the quality of research. Reliability concerns the repeatability of results, whereas validity pertains to the integrity of the conclusions drawn. In this research, steps have been taken to ensure both. Firstly, in selecting municipalities to determine the cases, cadastral data was utilized. This data, obtained from and collected by the *Kadaster*, is overseen by the Ministry of Interior and Kingdom Relations, which is responsible for the policies enacted by the *Kadaster* and its supervision. Consequently, the acquired data can be deemed valid. After selecting the cases, respondents were approached.

The outreach to the respondents was facilitated through internal contacts provided. Subsequently, interview requests were sent through these internal contacts. In contacting the respondents, an informed consent form was sent to each participant before the interview, aiming to provide comprehensive information regarding their participation in the research before obtaining their agreement. This included information about the purpose of the study, the expected duration of the interview, the types of questions that could be asked, and how the collected data would be used and anonymized. Given that this research topic, market share, and consequently, market concentration may be sensitive, some respondents preferred not to be identified by their full name. This concern was taken into account by carefully handling the privacy and anonymity of the respondents. Therefore, no personal information of the respondents is disclosed in this study.

Selected quotations from this research were sent to the respondents to verify their accuracy and obtain their permission for inclusion in the study. The inclusion of an informed consent form enhances the reliability of the study because it ensures that participants are fully aware of the research purpose,



procedures, risks, and benefits, and they voluntarily agree to participate, thereby providing ethical and transparent conduct of the research (Flory & Emanuel, 2004).

Furthermore, the interview questions were reviewed by employees from Stadkwadraat. With the expert knowledge of these employees, an attempt was made to achieve greater accuracy, consistency, and completeness. Additionally, the interview questions were formulated as neutrally as possible to avoid any bias. By asking questions neutrally, one can gather a diverse range of perspectives and insights from participants, leading to a richer understanding of the topic (Bogner & Menz, 2009). Also, this helps to ensure that the responses obtained are genuine and reflective of the respondent's true thoughts, rather than being influenced by the interviewer's biases. This research approach allows for a more objective exploration of the topic under investigation and enhances the credibility and validity of the research findings (Bogner & Menz, 2009). This aligns with the concept of confirmability, emphasizing the researcher's objectivity (Bryman, 2016).

Triangulation was employed to ensure both reliability and validity in this research. Triangulating data through multiple expert interviews minimizes bias and enhances reliability and validity (Bryman, 2016; Patton, 1999). Triangulation also involves employing diverse data collection methods. In this manner, the other data method, the document analysis, served as preparation for enhancing the interview questions. It served as a validation tool for the respondents' answers, where the matter of correctness could be verified in this manner. This methodological choice was made in anticipation of potential limitations in the information provided by developers during interviews; for example, developers might refrain from openly acknowledging practices such as intentionally delaying housing development. Through this empirical method, this study seeks to strengthen further the validity, which is crucial in preventing systematic errors during data collection (Scheepers, Tobi, & Boeije, 2016).



5. Results

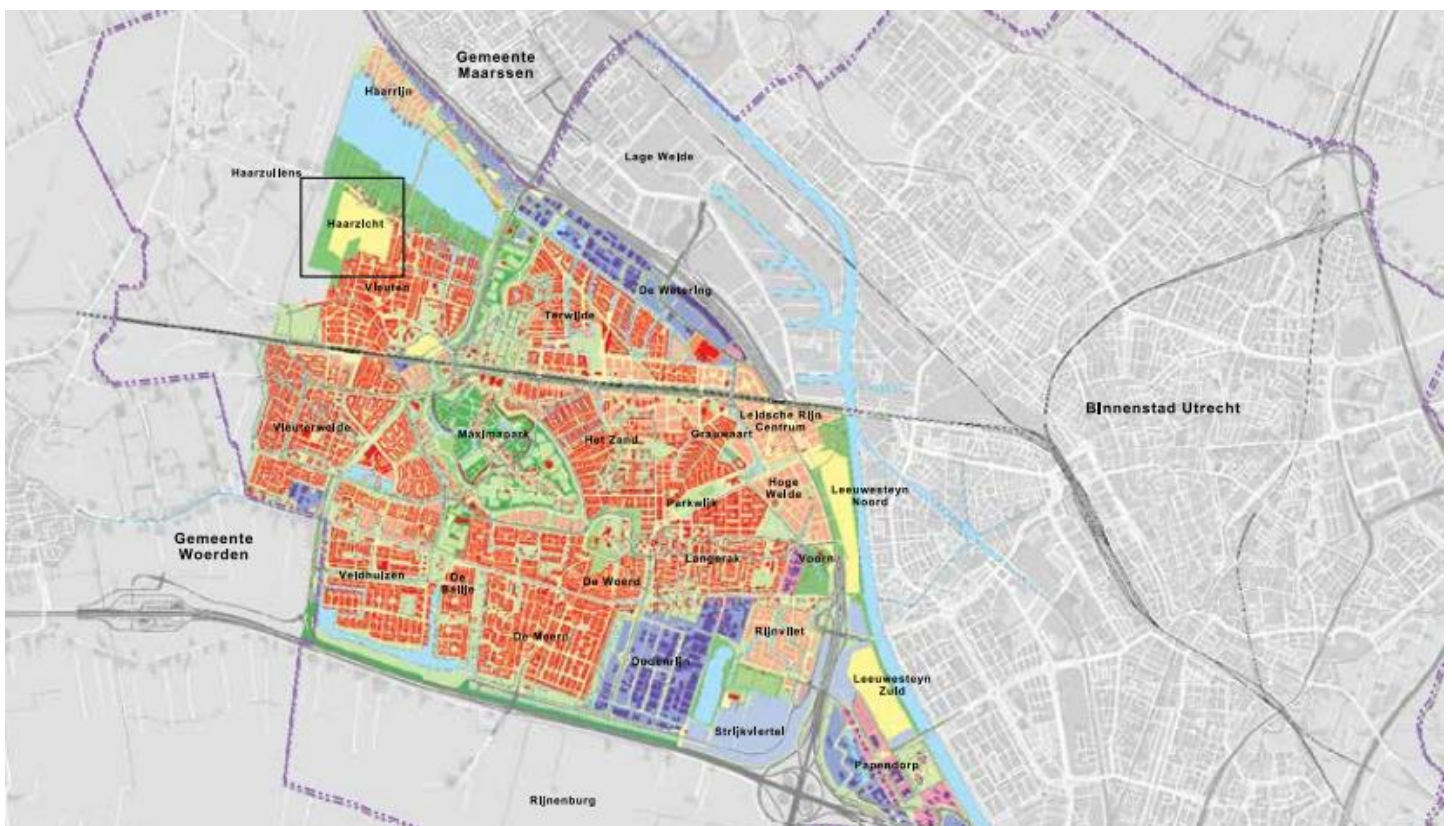
This Chapter will discuss and analyze the results of the document analysis and interviews. The discussion will follow a chronological approach for each housing development. First, a description of the planning area and other relevant features, such as the municipality's ambitions, involved parties, and the chosen collaboration model, will be provided for each development. Following this, a timeline will outline the events using *backcasting*.

5.1 Research area 1: Haarzicht, Vleuten

Haarzicht is part of the expansion area of Leidsche Rijn in the municipality of Utrecht, located northwest of Vleuten. Due to this proximity, Vleuten's amenities are easy to access. The foundation for the development of Haarzicht is based on three plans: the Vleuten-De Meern Structural Outline of May 1997, the Development Vision Update 2003 from January 2003, and the Utrecht Structural Vision 2015-2030 of July 2004. The structural outline is a detailed elaboration of the Leidsche Rijn Master Plan. The key principles for developing Vleuten Northwest are twofold: ensuring a strong spatial and functional connection with the surrounding landscape and ensuring that the existing development of the Vleuten core is logically concluded.

In the Development Vision, the municipality has outlined its ambitions for the area, aiming to optimize the potential of the surrounding landscape, create a pleasant living environment, integrate the area with Vleuten, and distribute traffic effectively. According to the municipality, these ambitions form the basis for the requirements in this Development Vision and its programmatic elaboration.

Figure 6: Map of Haarzicht within the region of Utrecht (municipality of Utrecht, 2012)



Application of Backcasting to the Development of Haarzicht

In this study, the *backcasting* method is employed to analyze the development of Haarzicht. This development, which saw the realization of 502 homes, serves as a case study to understand how various factors contributed to the final outcome. Instead of beginning with a future vision, the analysis works backward from the current situation to identify the steps and decisions that led to the realization of this housing development. The effects to be examined include price, quality, speed, and composition, all evaluated from the current situation.

Current Situation as the End Point

In the current situation, Haarzicht is a spaciouly laid-out neighborhood characterized by a lower density of development, a deliberate choice by the developers. This unique layout has resulted in a neighborhood with a significant number of private-sector homes, mainly semi-detached and detached houses. This has also had consequences for the composition of the housing program that has been realized. This can be broken down into the following percentages: 10% social rental, 1% social purchase, 25% private rental, 3% mid-purchase segment, and 62% private sector purchase. This distribution did not align with the initially drafted Development Vision 2012, indicating a deviation by the developers.

Moreover, Haarzicht's strategic location near urban amenities, good infrastructure, and an appealing living environment enhances its appeal. The location significantly shapes the demand for homes, as buyers are often willing to pay a premium for properties that are conveniently situated near workplaces, schools, and recreational facilities.

The quality of the homes is assessed as high by the respondents. Quality can be somewhat subjective, which is why indicators such as finishing of facades, roofs, windows, and the use of high-quality (sustainable) materials were requested. When evaluated for Haarzicht, the following quotes representing this:

"We really tried to achieve the highest possible quality in the urban plan, land use plan, architecture, appearance, and materials. Everything was done with baked materials, like the paving. We should have cut corners on these aspects. Compared to other projects, the quality is quite high. I can confidently say we did our best." (Project Director, AM)

"In Haarzicht, compared to our other projects, we built with extra quality, which is evident when you visit. We ensured that both the interior and exterior had the look of luxury villas." (Project Director, BunnikProjekten)

In summary, the development of Haarzicht is characterized by an uneven distribution of housing types, resulting in higher average home prices. This price increase is also influenced by the favorable location. Furthermore, the homes are of high quality, which was a deliberate choice by the developers for this development.

Identification of Key Events

Identifying the key events that contributed to Haarzicht's development is essential. By analyzing these events, we can understand the crucial decisions, occurrences, and influences that shaped the development trajectory. This helps us comprehend the dynamics and complexity of this development.

The signing of the Anterior Agreement (2017):

In 2017, the municipality and the involved developers signed the anterior agreement outlining mutual obligations and responsibilities. This agreement was essential for the financial and legal framework of the development, including the cost-sharing for public infrastructure and development planning. The

signing marked the beginning of a formal partnership between public and private parties, which contributed to the realization of the development.

Adoption of the Development Vision (2012):

In 2012, the municipal council formally adopted the development vision for the Haarzicht neighborhood. This vision outlined the neighborhood's future structure and objectives, focusing on sustainability, livability, and integration with the existing environment. Adopting this vision provided a clear guideline for the further planning and development of the area. It ensured that all stakeholders, including the municipality, developers, and future residents, had a shared understanding of the intended outcomes and quality of the neighborhood.

Retrospective Pathways

Having outlined the key events and the current situation in Haarzicht, it is crucial to backtrack and analyze how their effects on housing development emerged. First, the extent to which past events have influenced housing prices will be examined, and then the quality, composition, and speed of housing development will be analyzed.

Price of Housing:

To determine how past events or negotiations influenced housing prices in Haarzicht, it was essential to assess the developers' influence on housing pricing. Interviews revealed a consensus among respondents that developers do not wield significant direct influence over the price of a new home. The prevailing argument is that new housing merely follows market prices rather than setting them. This suggests a limitation in directly attributing price effects to the developers' potential market power. Developers can still have a minor influence on housing prices:

"I think a developer can partially determine the price of a home. However, this will only be around 10 or 20 percent, as market dynamics remain the primary factor." (Project Director, AM)

"As developers, we carefully balance the prices we ask for with the market's ability to bear them. This ensures that our homes sell and we can maintain our production. We often don't start building until 70% of the homes are sold, a requirement we must also meet." (Project Director, BunnikProjecten)

These empirical findings suggest developers are not entirely free to set prices at this housing development location. This is also attributable to the presence of multiple new construction transactions in the municipality of Utrecht. Consequently, prospective homebuyers have a broader array of choices beyond properties solely located in Haarzicht. Interestingly, developers believe they can influence prices, albeit slightly. They argue that in locations with high housing demand, they consciously add extra quality to homes to justify higher prices, thereby increasing their profit margins. This strategy was employed by the smaller developer in Haarzicht. A representative quote is:

"Adding slightly more attractive and sustainable materials to the facade, we can ask for €5,000 to €10,000 more per home. Adding this up results in higher prices for the homes." (Project Director, BunnikProjecten)

Developers' ability to add more quality and thus ask for higher prices depends on the market dynamic. This will happen less frequently in a declining market, while it will happen more often in a booming market. Additionally, no regulations prevent developers from adding extra quality and thus raising home prices. Regulations apply to regulated housing, but since Haarzicht has few social housing through negotiations, developers had more options to set the prices in the private sector relatively more freely.

Quality of Housing:

Respondents characterize the quality of homes in Haarzicht as being of high standard. To trace the housing quality back to specific events or documents, one can refer to the Development Vision established in 2012. This document outlines the municipality's general principle for housing development to ensure high quality, adaptability, and flexibility without specific guidelines. It also includes a program of requirements and a visual-quality plan outlining the area's demands and desires regarding quality.

A key observation is that the municipality only sets the boundary conditions for the area's design, acting as a regulatory framework for the development. This limited the municipality's influence on the final outcome and the quality of the homes,

The facilitative role was due to the chosen collaborative model, which significantly influenced the development process. Haarzicht was developed according to a self-realization model, unlike most other developments in Leidsche Rijn, which follow the build claim model. The land was predominantly owned by market parties. The self-realization model gave the municipality relatively little control over the development and associated quality standards. While the municipality served as an evaluative body, market parties were granted autonomy to implement the visual-quality and urban design plans.

This meant that developers had considerable freedom in determining the quality of homes. While the specifics of the boundary conditions remain unclear from the interviews, developers indicated they had a reasonable degree of autonomy. This allowed them to gauge market demand and decide whether to add quality enhancements to homes. The following quotes illustrate this:

"In Haarzicht, compared to our other projects, we built with extra quality, which is evident when you visit. We ensured that both the interior and exterior had the look of luxury villas." (Project Director, BunnikProjecten)

"In Haarzicht, we were able to build luxury homes because there was a demand for high-end move-up homes in Utrecht. For this reason, we also offered many options that buyers could choose from when purchasing the homes, such as an additional bathroom." (Project Director, BunnikProjecten)

Quality enhancements were added, for example, to the facade finishing and the use of sustainable materials. Interviews revealed that these enhancements were implemented in the homes in Haarzicht. Thus, the quality was not the result of negotiations between the municipality and market parties but rather the choice due to the self-realization model and the market dynamic. The municipality acted as a regulatory framework and allowed market parties to determine housing quality. The following quote represents this:

"Because the land was owned by market parties, the municipality had to choose this form of collaboration. As a result, the municipality had to accept that they would have less influence on the development compared to a tender process." (Project Director, AM)

Composition of Housing Program:

The composition of the housing program in Haarzicht was a crucial part of negotiations between the parties, influencing the developments' financial feasibility. When reasoning back to how the program in Figure 7 was proposed, it can be noted that there is a deviation. To explain this deviation, it is necessary to revisit the negotiations that led to the signing of the anterior agreement between 2013 and 2017. This period involved discussions on cost recovery, particularly regarding the supra-local contribution. The market parties found the municipality's contribution demands unrealistic, leading to situations where market parties walked away from the table:

"The negotiations were long and tough, with much talking past each other. We were open to negotiation, but the supra-local contribution had to be secured. They (market parties) struggled with that high contribution and sometimes walked away from the table." (Planner, Municipality of Utrecht)

Figure 7: Composition Housing Program of Haarzicht (own illustration, based on Watson+Holmes)

Composition	Proposed (%)	Realized (%)
Social rent	15 - 20	10
Social buy (< €225.000 VON*)	10 - 15	1
Private sector rental	0 - 20	25
Middle-segment' (<363.000 VON**)	15- 25	3
Private sector purchase 'expensive-segment' (including plots)	35 - 45	62

*VON-price 2018: < €225.000 VON

**VON-price free segment 2019-2022: < €363.000 VON

The prolonged negotiations culminated in the 2017 signing of the anterior agreement, resulting from negotiations where the municipality agreed to a lower percentage of social rental and socially purchased homes in exchange for full recovery of the supra-local contribution. The following quote illustrates this:

"In the context of the program's feasibility and the high supra-local contributions, we ultimately arrived at this program. The slight deviation is part of the negotiation process, but primarily, the bringing of the high supra-local contributions led to a social program of only 10%." (Project Director, AM)

It is evident that a low percentage of social housing was realized, but the proportion of private-sector housing also exceeded initial projections. This discrepancy arose because the municipality did not establish binding price agreements for mid-segment housing. Consequently, with rising property prices, developers were able to demand higher prices for the homes.

Empirical data also emerged that the larger developer in this development had more influence on the municipality than smaller developers, leading the Haarzicht Groep initiative and gaining the trust of other parties. The municipality attributed this to the larger developer's knowledge and financial resources, particularly regarding cost recovery. This resulted in the larger developer having the most influence on the final negotiation outcome and, thus, on the composition of the housing program. The following quote highlights this:

"The fact is that AM is simply larger. They have people with a background in the municipality and more understanding of cost recovery. Smaller developers lack this insight." (Planner, Municipality of Utrecht)

In summary, through negotiations with the municipality, the market parties agreed on a lower percentage of social housing. These negotiations were led by the larger developer, who, due to its size, possessed more knowledge and resources to assume the leadership role in the process.

Speed of Housing Development:

Empirical research revealed delays in the housing development process, initially occurring during construction. According to the municipality, this process was initially expected to last 18 months, as outlined in the Development Vision. However, construction took around six years, from 2018 to early 2024, significantly delaying the process.

External variables such as archaeological findings, objections, and soil contamination caused delays. Nonetheless, it can still be said that the process could have been completed more swiftly. The larger developer suggested that the smaller developer deliberately delayed construction, anticipating future housing value increases to gain a larger margin. The following quotes indicate this:

"In my view, we (AM) could have taken less time. It didn't need to take longer. That Bunnik took an extra year and a half is their issue. But Bunnik benefited from market developments by delaying." (Project Director, AM)

"For example, we (AM) sold free plots for €500,000 to €600,000. Those same plots now have houses built by Bunnik for €2.5 million. I think that's why Bunnik intentionally built more slowly." (Project Director, AM)

The larger developer stated that their business strategy does not involve waiting during construction. They focus more on achieving construction volumes and acquiring land holdings for future development. Additionally, delaying carries risks, as market downturns can result in losses. More importantly, the larger developer emphasized the importance of quickly functional neighborhoods without incomplete areas causing disruptions.

Besides construction delays, there were also delays in the planning process, primarily between 2013 and 2017. Although discussions about development began earlier, the focus is on the period from the time of the adoption of the Development Vision in 2012. Negotiations occurred between the Haarzicht Groep and the municipality of Utrecht during the planning process. As discussed earlier, these were prolonged negotiations, mainly about cost recovery, led primarily by the larger developer. This ultimately positively impacted the development speed, as other developers trusted the larger developer to reach an agreement with the municipality. The following quote illustrates this:

"In terms of housing production, I eventually told our colleague parties Bouwinvest and Bunnik that it would be worrying if we didn't reach an agreement. We need to proceed with development (...). The supra-local contribution was unprecedentedly high, and I argued that as market parties, we would have to agree to it. We could say no, but then when would it happen?" (Project Director, AM)

The final phase to be discussed is the period before the formal planning process (up to 2013). The question arises as to whether developers deliberately delayed or showed no urgency to develop. This question was difficult to answer, as developers would not admit this, and the municipality was unaware. Nevertheless, transactions show that land was purchased by various market parties as early as 1996. This land was bought speculatively, anticipating a zoning change and a consequent increase in value. One could argue that market parties were not particularly concerned that negotiations for the development of Haarzicht only began in 2013, as rising land prices meant the value increase was greater. However, the financial crisis of 2008 led to a drop in housing and land prices. Thus, developers' deliberate waiting also carried risks, impacting the speed of development in Haarzicht:

"You have to understand that the financial crisis meant very little was being built. Developers didn't want to start new projects and couldn't make the numbers work." (Planner, Municipality of Utrecht)

It is well-known that land was purchased for speculative purposes by market parties, but the difference between a large and small developer lies in the number of land holdings spread throughout the Netherlands. While a small developer might have a few land positions, a large developer can have hundreds. This can influence the attitude of a large developer in the pre-planning process:

"You'll notice that a large developer can spread its activities across multiple projects when the economy and housing market are thriving. This allows a developer to deliberately take a back seat, as seen in land exploitation strategies. However, this won't happen when fewer developments are taking place, as is the case now." (Planner, Advisory Firm)

5.2 Research area 2: Merwede sub-area 5, Utrecht

The redevelopment of Merwede (subarea 5 of the Merwedekanaalzone) has been designated as one of the four most significant urban developments in Utrecht (see Figure 8). Spanning 24 hectares, it is one of the largest inner-city redevelopments in the Netherlands. The project aims to construct 6,000 homes to accommodate over 12,000 residents alongside approximately 100,000 square meters of social and commercial facilities. Through extensive collaboration with the municipality, various landowners, experts, and stakeholders, an ambitious plan has been outlined for subarea 5. The plan emphasizes the innovative and climate-adaptive nature of the canal island's development while seamlessly integrating its existing industrial essence into the design of public spaces.

The development emphasizes green spaces, with public areas and courtyards adhering to a 'green unless' policy and incorporating green roofs. Merwedepark, part of the Riverside Park Rondje Stadseiland, will offer a 12-kilometer route along the Merwedekanaal and Amsterdam-Rijnkanaal. It will provide habitats for bats, swifts, songbirds, hedgehogs, and butterflies, including a water connection from the Merwedekanaal to Park Transwijk. Sustainability is a key focus, featuring a large underground thermal energy storage system for heating and cooling the buildings, ranking among the top three largest in the Netherlands.

The area will be car-free, with 250 shared cars and numerous shared bicycles available, 21,500 bicycle parking spots within the buildings, and two logistical hubs for parcel deliveries. Parking garages will be located at the perimeter, adhering to a low parking norm, and the development will be well-connected to high-quality public transportation.

Figure 8: Map of Merwede in Utrecht (BURA, 2021)



Application of backcasting to the development of Merwede

The *backcasting* method is utilized to analyze the development of Merwede. This ongoing development, which has not started until this moment of writing, serves as a case study to comprehend the various factors contributing to the final outcome. Instead of beginning with a future vision, the analysis works backward from the desired endpoint. The effects to be examined include price, quality, speed, and composition, all evaluated from the endpoint of 2035.

2035 as the End Point

The projected completion date for the Merwede development was initially set for around 2030-2032. However, the desired final outcome is now anticipated around 2035 due to delays in the process. There are no strict deadlines for the completion of Merwede, but construction is expected to begin in early 2025, with the development spanning approximately ten years. The project will be executed in two phases, with the second phase commencing upon successful completion of the first. The first phase will include 4,250 housing units, followed by 1,750 units in the second phase.

A significant proportion of the development must provide affordable housing. The housing mix will comprise 1,800 social rental units, 1,500 mid-market rental units (including at least 900 affordable ownership units covered by the national mortgage guarantee (NHG)), and 2,700 private sector rental and ownership units.

The quality and aesthetic level of the development will be evidenced by additional features beyond the standard Building Code requirements. These enhancements will focus more on public spaces, such as green areas, mobility, and amenities. Regarding the quality of the housing, the municipality aims to achieve the following, as outlined in the urban design plan: "To offer high-quality urban living, we combine buildings of various heights and sizes in the urban design. The intensive mix of taller and shorter buildings, along with the setback of higher facades, ensures that the human scale is maintained despite the high density."

Additionally, the built environment will predominantly use reusable materials, minimizing environmental impact. Merwede will be optimally designed to mitigate heat and drought and manage heavy rainfall. This will primarily be achieved through extensive greenery on the buildings, such as green roofs. Furthermore, 50% of the roofs will be equipped with solar panels, while the remaining 50% will be dedicated to green space and water retention, ensuring the buildings are nearly energy-neutral.

Identification of key events

Identifying the key events that contributed to Hoef en Haags' development is essential. By analyzing these events, we can understand the crucial decisions, occurrences, and influences that shaped the development trajectory. This helps to comprehend the dynamics and complexity of this development.

Objection Procedures (2022-2024):

The construction of Merwede has faced delays due to objection procedures currently under review by the Council of State. These legal challenges have slowed the development speed and affected housing price determinations.

Cooperation Agreement Signed (2021):

The signing of the cooperation agreement in 2021 was a pivotal moment for the Merwede project. This agreement formalized the collaborative framework, specifying the distribution of the housing program and the responsibilities of each party under the "Developing Apart Together" model. It

marked the culmination of extensive negotiations and set the foundation for coordinated development efforts.

Retrospective Pathways

Having outlined the key events and the end point of 2035 Merwede, it is crucial to backtrack and analyze how their effects on housing development emerged. Since Merwede has not yet begun construction, not all effects can be thoroughly assessed at this stage. However, it is possible to link certain events that have occurred to specific outcomes. For this reason, the analysis will not describe how each effect came about individually but will instead provide a comprehensive overview.

Influence of key events on housing development

While the construction of Merwede has yet to commence, significant developments have already occurred in determining prices, housing program, quality, and speed of housing development. Construction was initially scheduled to begin, but a delay has arisen due to an objection procedure currently pending with the Council of State. This has impacted the speed of housing development and the list prices of homes: firstly, in the regulated sector, prices in the mid-range are increasing as the NHG limit rises. In 2024, the limit was €435,000, up from €355,000 in 2022. Secondly, for free-market homes, prices are also rising, reflecting market expectations:

"It simply has to do with market demand. When Rabobank states that prices will increase between three and six percent, I think, well, that's great, as it helps maintain the financial feasibility of the development." (Program Manager)

Developers will increase prices in line with the market due to rising costs, such as construction costs. If prices are not increased, the business case might no longer be viable, potentially causing further delays. It is deemed unlikely that developers could arbitrarily raise their prices in the free sector to exceed market value:

"I don't believe developers can just raise their prices. Merwede is a large development with a lot of competition. There are many references within the city, so people know how much a house should cost." (Planner, Advisory Firm)

Although it is unlikely that developers would deliberately raise list prices above market value, they may list higher housing prices by adding quality to the homes. Some developers in Merwede will likely build several penthouses, as there is demand for them:

"I think a few penthouses could be very nice in Merwede." (Program Manager)

Thus, the price of a home is determined by the quality built, which is based on market demand. In Merwede, no price agreements have been made for free-sector homes. The municipality has set ambitions through the urban design plan and visual quality plan, which developers must adhere to at a minimum. Developers can choose to build higher-quality homes if they wish. Opting for higher-quality homes entails risks, as the sale price must be increased, potentially making the homes less competitive in the market.

A developer's risk is linked to the chosen collaboration model, as outlined in the 2021 cooperation agreement. Merwede opted for a "Developing Apart Together" model, an ultra-light public-private partnership where development occurs within a shared integrated spatial framework. The details and realization are handled individually by the parties, who collaborate when necessary. Each party is responsible for developing and realizing their own plots. The housing program is equitably divided among market parties based on the land ratio. This collaboration allows developers to assess their risks better since they are responsible for their land without interference from other market parties:

"The choice for this collaboration model has also ensured relatively smooth planning. Since everyone can develop on their own land, the planning for such a large development as Merwede became clear relatively quickly."
(Program Manager, Municipality of Utrecht)

The exact start date of the formal planning process is unclear, but discussions among the parties began in 2014. In 2018 and 2019, negotiations started, culminating in the cooperation agreement in 2021. This agreement established the housing program. Intense negotiations took place over the program's composition, the percentage of affordable housing combined with the municipality's high ambitions caused friction:

"I can say that there were intense discussions and sometimes even disputes. Initially, the percentage of affordable housing was lower, which made the business case more favorable." (Planner, Advisory Firm)

Eventually, the parties agreed on a housing program distributed equitably based on land ratio. It can be said that discussions over the housing program caused delays, but given the scale of Merwede's housing development, the three respondents mentioned that the process proceeded relatively smoothly. Developing an urban housing location of 6,000 homes with multiple owners is always complex and lengthy. In this regard, it was noted that two main reasons contributed to the relatively smooth planning process. First, the municipality's presence with a land position played a crucial role. Although the municipality facilitated the development, its role in setting spatial frameworks and negotiating the housing program with market parties was important. Second, collaboration with large developers was cited as a reason for the smooth process:

"Having professional parties at the table with professional advisors absolutely helps. You just understand each other better" (Program Manager).

"It's not surprising that large developers are involved in this development, given the large and risky investment, with high acquisition prices due to Merwede's urban location. The way the parties collaborated was really focused on content" (Planner, Advisory Firm).

Looking back, the land purchase by market parties didn't occur at a single moment. Significant transactions began around 2014, with several more occurring in 2016 and later. Some parties had bought land intending to sell it after a zoning change, resulting in higher acquisition prices and a more challenging business case. According to the respondents, this had a negative effect on the development speed.

The late land acquisition by developing parties was partly due to purchases by non-developing parties aiming for profit. This was influenced by the municipality's 2002 announcement that large-scale housing would be built here. It is unusual for such an ambition to be set in 2002, with little movement in development until around 2014:

"Everyone could see that housing would be built here. It was just unknown exactly how much, under what conditions, etcetera." (Program Manager)

There was uncertainty about how the municipality would define spatial frameworks and the housing program's composition. When this became clear in 2014, developers, including new developers and those already holding positions, bought in. For this reason, it's difficult to determine to what extent developers deliberately delayed the planning process in anticipation of better conditions, such as higher housing prices.

5.3 Research area 3: Hoef en Haag, Vianen

The Utrecht region faces a significant housing shortage, as anticipated in the 2012 Provincial Structure Vision and Vianen Structure Vision. In response, Vianen has focused on both densification and expansion in recent years. Various plans within the existing core aimed to address the housing shortage and strengthen the identity, emphasizing green spaces, water, and historical elements.

The aim of the development of Hoef en Haag is to develop 1800 homes and create a rural and village-like residential environment. The location offers numerous advantages, such as the scenic qualities of the floodplains and the Lekdijk, the proximity of the Everstein recreational lake, and the historic center of Vianen. Hoef en Haag is a pilot project within the national Delta Program, 'New Construction and Restructuring of the Central Government,' with climate-resilient design at its core.

The village is built behind the Lekdijk (Figure 9) at one of the municipality's lowest points. Workshops with stakeholders explored risk management at various scales, resulting in a design incorporating the abandoned river arm, the Meander, for water storage, ecology, and recreation. This innovative design, featuring delayed water drainage, infiltration areas, and extensive open paving, has created a highly climate-adaptive residential area.

Figure 9: Map of Hoef en Haag (SVP, 2020)



Application of backcasting to the development of Hoef en Haag

The *backcasting* method is utilized to analyze the development of Hoef en Haag. This ongoing development, which completed 993 homes (as of January 1, 2024), serves as a case study to comprehend the various factors contributing to the final outcome. Instead of beginning with a future vision, the analysis works backward from the desired endpoint to identify the steps and decisions that led to the realization of this housing development. The effects to be examined include price, quality, speed, and composition, all evaluated from the endpoint 2025.

2025 as the End Point

1500 homes have been realized in the desired scenario in 2025. Because this development has not yet been concluded, there will be worked with the scenario of 1500 homes in 2025. This figure for 2025 is outlined in the zoning plan that has been in effect since 2015. For the additional 300 homes, a separate zoning plan must be developed with parameters that are not yet known. Therefore, *backcasting* is used from the desired scenario 2025 and examines how past steps have either realized or failed to achieve this.

The municipality's front-end agreement with Lekstede Wonen, AM, and BPD laid the foundational provisions for development and cost recovery from market parties, with a subsequent 2015 exploitation plan for uncooperative landowners. This collaboration allowed for a streamlined plan formation process, facilitated by the absence of complex ownership structures and active municipal cooperation.

The vision for Hoef en Haag in 2025 is best described by the visual-quality plan outlined in the 2012 Master Plan. This plan defines the atmosphere and look of the new village, encompassing both architectural aspects and public spaces. The goal is for the new village to become a sustainable residential area, offering various housing options tailored to the preferences of future residents. The urban design draws inspiration from the linear development and village character of fortified towns along the Lek. In this regard, the quality standards of the homes must be of a high standard, a consideration made in consultation with the architects from SVP. During the interview, it was emphasized that ensuring high quality is a priority:

"I think SVP also simply creates beautiful designs and concepts. So, they are not cutting corners on quality in this project. Yes, especially in collaboration with SVP, we have emphasized that Hoef en Haag should provide a high level of quality." (Project Director, BPD)

The zoning plan envisages a new village, bringing about great diversity in the residential function. This will be developed with various types of housing in different price ranges. This means that both private sector homes and social homes will be built. The homes to be built include terraced houses, apartments, semi-detached houses, and detached houses. The housing program to be realized in 2025 includes 15% social rental, 15% social purchase, 45% mid-market purchase, and 25% private sector purchase.

Identification of key events

Identifying the key events that contributed to Hoef en Haags' development is essential. By analyzing these events, we can understand the crucial decisions, occurrences, and influences that shaped the development trajectory. This helps to comprehend the dynamics and complexity of this development.

Anterior Agreement Signed (2013):

The anterior agreement of 2013 marked a significant milestone in the development of Hoef en Haag. This agreement solidified the financial and legal arrangements between the municipality and the developers, establishing a robust foundation for further progress in the development.

Master Plan Hoef en Haag Adoption (2012):

The Master Plan Hoef en Haag was adopted in 2012 and serves as a detailed blueprint for the development of the new village. This plan establishes spatial and visual quality standards and provides frameworks for layout and architecture, with a strong emphasis on village character and a sustainable living environment.

Downgrading of Lands due to the Financial Crisis (2008-2010):

The financial crisis of 2008-2010 had a significant impact on the real estate market, resulting in the downgrading of lands. This depreciation made it challenging for developers to achieve financial feasibility, thus delaying the progress of various housing projects, including Hoef en Haag.

Retrospective Pathways

Having outlined the key events and the end point of 2025 in Hoef en Haag, it is crucial to backtrack and analyze how their effects on housing development emerged. First, the extent to which past events have influenced housing prices will be examined, and then the quality, composition, and speed of housing development will be analyzed.

Price of Housing:

To retroactively determine how the price of a home in Hoef en Haag was established, the first step was to investigate the extent to which respondents themselves believe they have an influence on home prices. According to the developer BPD, the price of homes in the private sector is not determined by negotiations with the municipality but by market demand. But what is the buyer willing to pay for this house in this location?

"The buyer determines the selling price, so even if the cost price is higher, if the buyer is unwilling to pay more, they won't purchase the home. Therefore, we cannot simply set a home €50,000 higher in the market because it simply won't sell." (Project Director, BPD)

Other cases confirm that market demand is paramount. The developer can, however, opt for high-quality private sector homes in attractive locations, such as Hoef en Haag. This was achieved by choosing attractive facade finishes, architectural angles, and more sustainable materials. In this manner, a higher price could be justified for the homes. The developer thus had an influence on the price of a home in Hoef en Haag. However, the developer assured that this does not imply the market power of a developer:

"The fact that we can determine the price of homes does not mean that we can do so arbitrarily. We, as developers, are bound by what the buyer is willing to pay. The scenario of price determination by developers can only occur when there are hardly any housing transactions taking place, but this is not the case." (Project Director, BPD)

Yet, it is not excluded that in a market with high demand for housing, a developer can increase the price by a small margin. The municipality does not have much influence on price determination in private sector homes. The municipality can, however, make price agreements in the regulated sector.

Negotiations did occur between the municipality and the market parties regarding the maximum price of a socially purchased home. The document analysis revealed that social housing could be sold for up to €290.000, while the municipality of Vijfheerenlanden's Target Groups Regulation stipulates that it should cost a maximum of €250.000. This deviation from policy raises the question: why?

This can be attributed to negotiations between the municipality and the market parties regarding this. In light of current market conditions, the market parties expected the price for social housing to be higher than €290.000. As a result, an anti-speculation period of 5 years was also established, during which the property could not be resold. However, the municipality said the increase in the limit for social housing was not only applicable to Hoef en Haag but also to other developments, such as Broekgraaf.

In summary, the price for private sector homes does not result from negotiations with the municipality but market demand. Developers cannot increase prices by, for example, €50.000 and do so. Negotiations did take place regarding the price of social housing, but according to the developer, this was also related to market conformity. A direct interview with the municipality regarding the development of Hoef en Haag is missing, so the correctness of this could not be verified with the municipality.

Quality of Housing:

The Master Plan Hoef en Haag, established in 2012, can be used to trace the quality of housing. In the Masterplan, the visual-quality plan is incorporated. Also, the plan emphasizes Hoef en Haag's becoming a village character with a high-quality, compact, lively, and green environment. This is evident, among other things, in using brick pavers and quality greenery. Quality requirements for the homes are not explicitly outlined in the Master Plan. Instead, it is stated that the quality is based on a village character, albeit in relatively vague terms.

The greater focus on the quality of the public space can be attributed to the municipality's or the developers' absence of a Program of Requirements. The visual-quality plan and the urban design plan serve as a substitute for this. However, the municipality can typically influence the quality of the homes through a Program of Requirements. This may involve imposing additional requirements for quality or sustainability. The municipality relinquished control over this development aspect by not establishing this.

One explanation for the absence of the Program of Requirements may lie in the chosen collaborative model. In a joint venture, the municipality has less control over development compared to an active municipal land policy. According to the developer of BPD, this approach was chosen because the municipality had limited land holdings in the development, as depicted in Figure 10.

The municipality's reduced control over its development due to the chosen collaborative model is a possibility. However, a joint venture model also implies municipal participation in the development; hence, they should have a say in it. The absence of a direct interview with the municipality regarding the development in Hoef en Haag prevents the determination of the extent to which the municipality delegated control and decision-making to market parties.

Figure 10: Map of land ownership Hoef en Haag (SVP, 2011)



In retrospect, it can be concluded that there was a concerted effort to achieve high-quality standards in the homes in Hoef en Haag. Sustainability requirements, such as those outlined in the BENG standards, were taken into consideration. The homes were adorned with premium details, such as meticulously finished facades and the utilization of superior materials, including the stones used. The developer elaborated on this matter, stating:

"If you walk through the area, you can see for yourself that the homes are of high quality, the architecture, the materials, the image aligns with what we had in mind." (Project Director, BPD)

Composition of Housing Program:

The composition of the housing program was established and incorporated into the 2015 exploitation plan. In 2013, this was already determined in the anterior agreement, although it is not publicly available. The development of the program is the result of negotiations between the market parties and the municipality. However, due to the municipal participation in the joint venture, it is difficult to determine the extent to which the municipality itself influenced the outcome. The municipality played a dual role: on the one hand, as a facilitator and regulator, and on the other hand, with commercial

interests and profit motives. This complicates assessing the extent to which the influence of market parties affected the outcome of the negotiations with a 30% social housing percentage.

Furthermore, the housing corporation Lekstede also owned land in the area. They wished to build social rental housing on this land from the outset, which the other parties agreed to. However, Lekstede was not allowed to make risky investments on behalf of the government, resulting in the sale of their land to the other two developers. The agreement stipulated that after the land was prepared for construction, it would be transferred back to Lekstede, allowing them to realize the social housing:

"At the time, we made agreements with BPD where they took over 20 percent of our housing stock. This enabled us to immediately enter into an equal 50-50 partnership with AM, allowing AM and BPD to collaborate equally. Lekstede transferred its land on the condition that they could offer 20 percent of all homes in social housing."
(Project Director, BPD)

In 2013, a 30% social housing percentage was customary, but by 2024, this is considered low. This was influenced by policy changes, financial considerations, and market dynamics. Therefore, the social housing percentage can be seen as conforming to standards and not as a result of market power by developers in this development.

Speed of Housing Development:


The realization of Hoef en Haag, which aimed to build 1500 homes by 2025, was an ambitious goal. Especially considering that the first homes were delivered in 2017. This meant that nine years were allocated to construct 1500 homes. Absorbing these homes into the market was a significant factor at the time, particularly since the demand was not as high in 2013, when the anterior agreement was signed, as it is in 2024. According to the developer, it was uncertain whether the market could absorb these numbers of homes in this expansion area, posing a risk.

By early 2024, approximately 800-1000 homes had been completed, meaning that another 500-700 homes needed to be built in the next two years. During the interview, it became clear that around 400 homes were currently under construction. If everything proceeded according to plan, without unforeseen events, the 1500 homes would be completed by 2026. This relatively rapid construction speed was due to the decision by both market parties to engage one large building company, BAM Wonen. BAM Wonen is a large builder capable of handling substantial construction volumes, enabling large-scale and rapid construction.

Looking back on the planning process, it can be concluded that it proceeded smoothly. The signing of the letter of intent in 2010 to the conclusion of the anterior agreement in 2013 was a relatively fast process for a large-scale housing development site. This was due to the cooperation of the municipality and the agreement with the market parties with land holdings:

"After purchasing the land from Lekstede, AM and we held these lands as market parties. Together with AM, we could jointly move forward and conduct the negotiations. This proceeded smoothly, partly due to our previous pleasant cooperation with AM." (Project Director, BPD)

Further back in time, examining the intertwining price of the land, it can be established that the land was acquired by the developer at a high price. The land was acquired in the period from 2002-2007, before the financial crisis of 2008. However, the financial crisis caused the value of homes to decrease, which in turn reduced the value of the land. This had consequences for the development:



"During the crisis, we had to make significant write-downs (...) the selling prices of the homes and the value of the land dropped. As a result, the remaining land value, when recalculated, decreased sharply. It was necessary to revalue all our lands, and within BPD, we carried out these revaluations rigorously." (Project Director, BPD)

The development of Hoef en Haag experienced delays due to the financial crisis. The financial feasibility of the development was under pressure as a result. Therefore, it was decided to postpone the development until it became feasible again. The delay in starting development was due to the business case no longer being financially viable. As a result, the market parties wrote down the land and reintroduced it to make the development financially viable. It is unknown how long this delay lasted, but the intention was to avoid delays:

"In my nearly thirty years of work experience, I have never deliberately delayed a project. During a crisis, when no homes are being sold, there is little you can do. As a landowner, we have millions on the balance sheet, and each year without activity incurs interest. That interest cannot be invested in beautiful streets, houses, facades, or nature, which I find really unfortunate. Therefore, you want your plan to proceed." (Project Director, BPD)

It is challenging to definitively assess whether there were actual delays, especially since no direct interview with the municipality about this development has been conducted. However, reviewing the development period of Hoef en Haag, it can be concluded that the process generally proceeded smoothly without significant delays. This swift process can be attributed to the clarity between the involved parties and the municipality. Although some landowners were unwilling to cooperate, the major market parties had a clear agreement. A crucial factor in this process, which should not be underestimated, was the involvement of various stakeholders. All parties involved had to work together to ensure a smooth process. The role of the alderman was particularly important in this regard:

"Priority, urgency, the will, and knowledge of the matter are essential. Sometimes I also dealt with convincing aldermen who sometimes operated like bulls in a china shop within the council, which made the situation challenging (...) the alderman collaborated in the process and played an important role. It is crucial to know and tell your story well since many people focus primarily on the process. However, this also involves content and vision, which not everyone can provide." (Project Director, BPD)

5.4 Research area 4: Broekgraaf, Leerdam

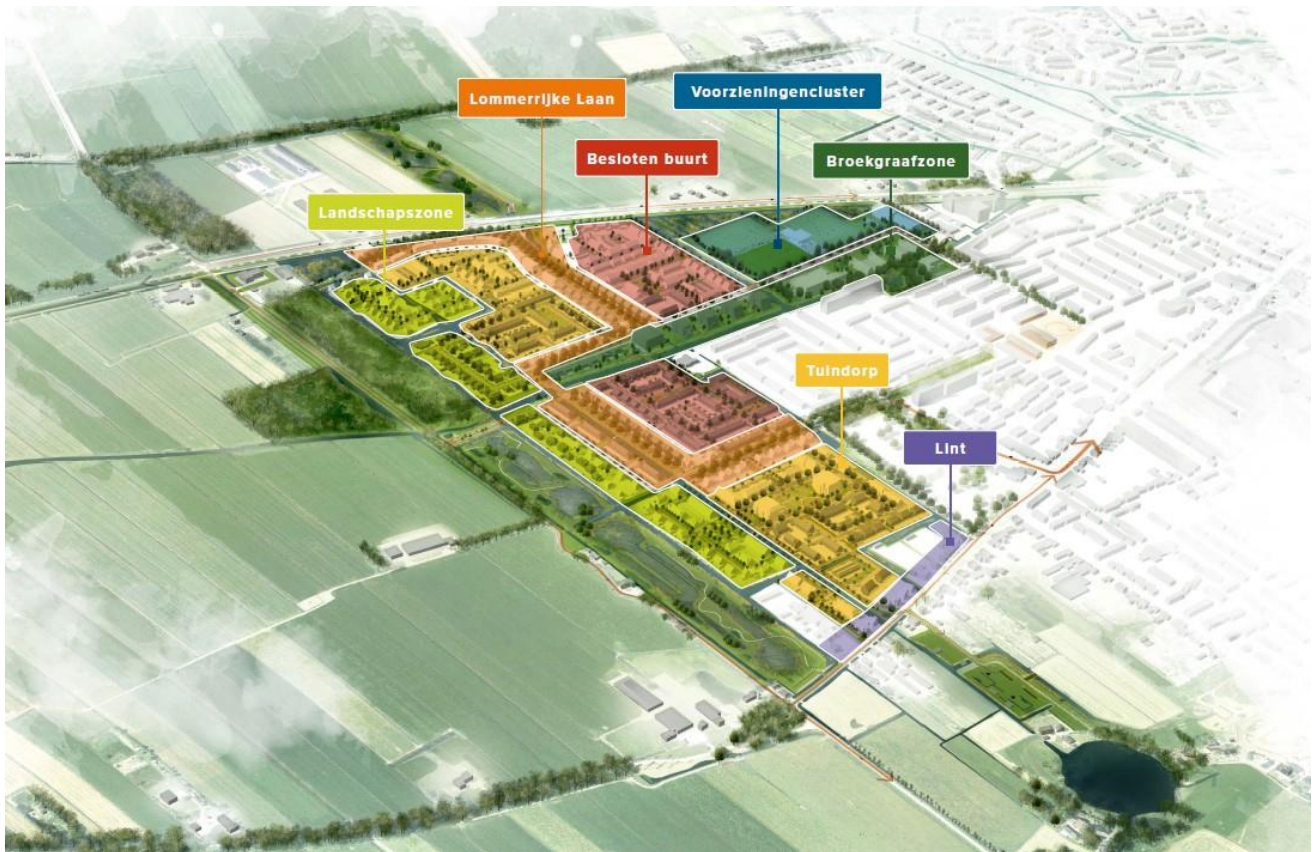
Broekgraaf is an emerging residential neighborhood near Leerdam designed to meet the growing demand for modern and sustainable living spaces (see Figure 11). The development of this district, which began in 2014 and will continue until 2025, comprises six phases during which approximately 1,250 homes will be built, with more than half already completed.

Broekgraaf combines urban conveniences with the tranquility of a rural environment, making it an attractive choice for a diverse range of residents, from young families to seniors. Its location between the city center of Leerdam and the Green Heart offers residents a unique blend of proximity to urban amenities and the beauty of nature.

The design of Broekgraaf focuses on sustainability and environmental friendliness. The development closely considers the meadow allotments in the surrounding area, reflected in the street layout. Charming canals, tree-lined avenues, evergreen hedges, and the sixteen-meter-wide Broekgraaf waterway, from which the district takes its name, contribute to the green and watery character of the neighborhood. An ecological zone has been specially created to provide a safe habitat for protected species in the area. The neighborhood is spaciouly designed with a leafy main route, waterways, bridges for quick crossings, and various play areas for children.

The infrastructure of Broekgraaf is designed with an eye toward the future. Extensive bike paths and walking routes promote sustainable transport, and there is ample space for electric charging stations to facilitate the transition to electric driving. The architecture and street plan are designed to encourage interaction among residents, with numerous communal spaces such as neighborhood centers and sports facilities.

Figure 11: Map of Broekgraaf (Planviewer, 2020)



Application of Backcasting to the Development of Broekgraaf

In this study, the *backcasting* method is employed to analyze the development of Broekgraaf. This development, which saw the realization of approximately 800 homes, serves as a case study to understand how various factors contributed to the final outcome. The development of Broekgraaf is not yet complete, as the zoning plan allows for a total of 1250 homes. No definitive end date has been established, but the municipality expects to finish the development by 2025. Therefore, 2025 will be considered the target completion date to realize a total of 1250 homes.

2025 as the End Point

The desired scenario is to have 1250 homes completed by 2025, with the entire Broekgraaf neighborhood fully developed. The construction of the neighborhood has been underway since 2014 and is progressing in six phases. Broekgraaf is embraced by nature and features green and water-rich landscapes. The architecture across its various sub-neighborhoods is diverse, yet the homes and apartment buildings are stylistically coordinated. This creates a highly varied housing supply, making the neighborhood a home for singles, couples, and families, catering to both first-time buyers and those further along in the housing market. Options range from ground-level family homes to accessible apartments. The planned housing program is diverse and tailored to meet both local and regional needs. The overall housing program includes approximately 24% affordable housing (with about 50% rental and 50% ownership) and at least 5% designated for private development (free plots and collective private commissioning projects).

The Program Manager of the municipality of Vijfheerenlanden noted about the desired end point of the development of Broekgraaf:

"With the development of Broekgraaf, we aim to bring a diverse range of housing options to the market, where families can settle in a beautiful green oasis within a spaciously designed neighborhood that offers many opportunities and future prospects." (Program Manager, Municipality of Vijfheerenlanden)

Identification of key events

Identifying the key events that contributed to Broekgraaf's development is essential. By analyzing these events, we can understand the crucial decisions, occurrences, and influences that shaped the development trajectory. This helps to comprehend the dynamics and complexity of this development.

Adoption of the Revised Zoning Plan (2021):

After extensive evaluation and potential reconsideration of the original plans, the municipality revised the zoning plan 2021 to better respond to new developments, market dynamics, and changes in laws and regulations, such as the nitrogen regulations.

First House Sold (2014):

The sale of the first house in 2014 marked a significant milestone in the actual start of the realization of the development. This event symbolized the transition from planning to implementation.

Adoption of the Zoning Plan (2010):

The zoning plan's adoption in 2010 laid the groundwork for the area's planned development. It resulted from extensive studies, public consultations, and collaboration among policymakers, urban planners, and local stakeholders. This document served as a guideline for further spatial planning and decision-making related to the development.

Retrospective Pathways

Having outlined the key events and the end point of 2025 in Broekgraaf, it is crucial to backtrack and analyze how their effects on housing development emerged. First, the extent to which past events have influenced housing prices and quality will be examined, and then the composition and speed of housing development will be analyzed.

Price and Quality of Housing:

Price and quality are discussed together in this section because, during the empirical part of this study, it was frequently noted that these two factors are closely interconnected. Therefore, it was clearer and more logical to address them together.

To understand the price and quality of the homes in Broekgraaf, it is essential to look back at the ownership structures in the area. Due to the ownership holdings and the associated right to build, developers could build on their own lands while retaining the land based on the building claim. This allowed them to develop within the framework of the municipal plan. As a result, the market parties that owned the land had relatively more freedom to determine the type and quality of housing and, consequently, the corresponding prices. This situation applied to 40% of the land. The remaining 60% of the land was owned by the municipality, which offered its lands to market parties through a tender process, imposing stricter conditions for development:

"It is beneficial to tender because it can be used as a reference. That is why I advocate for the tendering of homes. We as a municipality can impose more qualitative demands on the development." (Project Manager, Municipality of Vijfheerenlanden)

It became clear that through a tender process, the municipality could demand higher quality for development compared to when a party has a building claim. In a tender process, the municipality has the opportunity to set strict criteria and conditions that developers must adhere to. This allows the municipality to enforce specific quality standards, sustainability requirements, and architectural guidelines that would otherwise be more challenging to achieve:

"With a building claim, you just don't know exactly what will come out. As a municipality, you have set frameworks, but they are broadly formulated." (Project Manager, Municipality of Vijfheerenlanden)

However, the municipality did make price agreements with the market parties that held building claims, not only for regulated housing but also for free market housing, as stated by a developer. Yet, the developer felt that these price agreements were too high. This resulted in an imbalance between the set prices and the actual market value of the homes:

"We had to market the semi-detached houses for 427,500 euros. But we felt these prices were too high for the development here in Broekgraaf. For that reason, we chose to build a lower quality to achieve a feasible business case." (Project Director, BunnikProjekten)

Although price agreements were made, which the developer did not agree with, he was still able to choose lower quality for the homes within the established frameworks. There was evidently some freedom in this regard.

In summary, the municipality suggested that owning the land and using tender procedures resulted in a higher quality outcome. This was due to the ability to impose stricter development requirements. Although the municipality did not have a Program of Requirements for this development, urban planning and visual quality plans were available, which determined the quality standards. The absence of a Program of Requirements resulted in broader conditions, giving developers more freedom within

the established frameworks. This freedom manifested in lower quality homes for the building claim plots and presumably lower prices, although the latter cannot be stated with certainty.

Composition of Housing Program:

The composition of the housing program must be traced back to the establishment of the zoning plan in 2010. At that time, the municipal housing program included a goal for Broekgraaf to develop 1000 homes over a 10-year period, with 24% designated as social housing. This goal was based on the ambitions of Leerdam, as outlined in the Structure Vision Plus and the municipal housing vision. The municipality opted for a balanced growth scenario that aimed to provide housing for the local population while allowing for limited population and housing stock growth.

A revised zoning plan has been in effect since 2021, which provides for constructing 1250 homes in Broekgraaf. Despite this adjustment, the municipality still adheres to the same principles as those in the 2010 zoning plan. The choices regarding the housing program are based not only on these principles but also on market developments and the financial feasibility of the development.

The municipality considered future market developments (which were not anticipated at the time), allowing for flexibility in the housing program and the way they wanted to collaborate with external parties. The Project Manager of the municipality explained:

"Our ability to vary the housing program was partly due to our land ownership. This allowed us to assess what was needed in each sub-area to further grow the district." (Project Manager, municipality of Vijfheerenlanden)

When determining the composition of the entire housing program, the municipality also had to account for the land it did not possess. The Project Manager of the municipality noted:

"The total housing program should not be viewed per sub-area but as a whole. This way, we aim to create a cohesive district rather than a fragmented one." (Project Manager, municipality of Vijfheerenlanden)

The main goal of the municipality was to create a cohesive development without fragmentation. Additionally, achieving a certain percentage of social housing was a stringent requirement. The municipality's ability to direct the development was attributed to its land ownership and active municipal land policy. However, there were negotiations with market parties with land holdings regarding the program. The municipality could, however, compensate for lower percentages of social housing on the market parties' land with social housing on its own land due to its significant land holdings. A municipal planner emphasized this point:

"We try to focus on that, but the most important thing is that 25% of the homes must be social housing. That is the primary requirement that must be met. The rest of the program can be filled in freely." (Planner, Municipality of Vijfheerenlanden)

In essence, the housing program was established following the 2010 zoning plan. The municipality succeeded in realizing this plan through its active land policy, allowing for greater control over the development and the ability to compensate for any shortfall in social housing on market parties' land by developing social housing on its own land.

Speed of Housing Development:

The zoning plan for the development of Broekgraaf set a target of 1000 homes to be completed within ten years. Reflecting on this timeline, it becomes evident that this goal was not met, raising the question of why this target was not achieved.

According to the municipality, the delay was not due to intentional slowdowns by developers or objections from local residents. The primary cause was the economic crisis, which made it unfeasible to develop a viable business case under the set requirements for program and quality. As a result, construction began four years later, with the first home sold in 2014. Consequently, the original ambition to complete the district within ten years from 2010 became unattainable.

The financial crisis significantly impacted this development because financing options were more limited, and the demand for new homes decreased. Developers became more cautious about investing due to increased financial risks and market uncertainties. Moreover, the set requirements regarding program and quality were perceived as too strict during economic downturns. Strict adherence to high-quality standards can increase costs, which is not feasible when market prices fall and sales slow down.

Another reason for the slower development was the number of homes that could be sold annually in Broekgraaf. According to the municipality, Leerdam is not as centrally located as, for example, Hoef en Haag, resulting in a lower market absorption rate in Broekgraaf compared to Hoef en Haag.

“Hoef en Haag is closer to Utrecht. The market there is indeed different from Broekgraaf. You can see this as different housing markets,” (Planner, Municipality of Utrecht).

As a result of the delays in the development process, the zoning plan was amended, extending the total development period to 20 years. Extending this development period allowed for phased development and greater control over quality. This meant that the municipality took more time to ensure the careful completion of Broekgraaf without rushing. This approach contributed to more stable development, where quality and programmatic requirements did not need to be lowered but could be achieved over a more extended period. Nevertheless, due to rising housing prices in recent years and the urgency indicated by the central government to accelerate construction, the development is expected to be completed by 2025.

In essence, the municipality did not meet the target of 1,000 homes set in the 2010 zoning plan, mainly due to market conditions. Finding developers willing to build in a declining housing market was difficult. Additionally, the municipality's frameworks were strictly formulated with high-quality requirements. The delays related to the 2010 zoning plan amount to about five years. However, the revised plan now targets 1,250 homes, making a direct comparison somewhat inaccurate.

5.5 Results of housing development

While the effects of housing development have been demonstrated in the literature, the question arises as to what extent these findings apply to the selected research areas. More importantly, the influence of developers' market share in these regions is yet to be fully understood. Promoting transparency regarding how developers exert influence is crucial in preventing harm to housing consumers. This influence can manifest in higher prices or the construction of insufficient social rental and affordable housing, which may not meet demand.


Firstly, the analysis focused on how developers determine the housing prices in their developments. The empirical results indicated that developers do not have direct control over the prices of new homes. Interviews revealed a consensus among respondents that developers influence prices indirectly, as prices tend to follow market trends rather than being set by developers themselves. Market analyses and future projections provided by banks are considered by developers when determining the future price of housing. Thus, regardless of their market share, developers base prices on what buyers are willing to pay, determined through market research.

Nevertheless, interviews revealed that developers can influence housing prices by 10% to 20%, according to respondents from the municipality and planners, not the developers themselves. This is a substantial percentage. Especially in expansion areas, developers with large land portfolios might use their locational market power to set initial prices without many references. However, they noted that this assertion was based on intuition rather than substantiated evidence. Additionally, no data was found in the document analysis to support this claim within the research areas. This is an essential indication that further research is needed. Thus, based on this study, no significant differences can be argued regarding the extent of price setting by developers.

Secondly, quality is intrinsically linked to the pricing of new homes. Empirical results suggest that developers often have significant freedom to enhance housing quality according to market demands, opting for better finishes, sustainable materials, and superior architecture to justify higher prices. However, this freedom depends on the choice of collaboration model. This decision dictates varying degrees of autonomy for the developer to shape the quality, such as when the municipality imposes a set of requirements in the form of a Program of Requirements. This was observed in Broekgraaf, where the municipality, by owning land holdings, could impose stricter requirements on development. The municipality gained greater control over guiding the development process by tendering these lands. In Haarzicht, the municipality exerted little control over the quality of the housing. The self-realization model provided developers with considerable freedom in designing the visual quality plan and the urban design plan, with the municipality serving primarily as a regulatory framework.

It can be demonstrated that the developers had relative freedom in determining the quality, but this did not result in lower quality. Based on the interviews and comparisons with other research areas, Haarzicht stands out in terms of housing quality. Developers indicated that they built higher quality housing compared to other developments because there was a demand for it. This allowed them to set higher asking prices for the houses and achieve greater margins. This was a strategic motive because, due to the high acquisition costs of the land, the financial feasibility was under pressure.

While high land acquisition prices are prevalently mentioned in the literature, this study found no direct link to reduced housing quality. High land acquisition costs were more associated with negotiating housing program compositions. Empirical results show developers often negotiate with municipalities to reduce social housing percentages when high land costs make housing developments financially unfeasible. For instance, in Haarzicht, negotiations led to a reduction in social housing due to high land prices, reflecting concerns that developers might exploit such holdings to minimize social



housing commitments. Notably, the larger developer assumed the lead in negotiations with the municipality, with smaller developers consenting to this arrangement. The municipality noted that communication primarily centered on these larger developers. In this way, the larger developer had the most influence on the outcome of the composition of the housing program.

Finally, the study examined the influence of the market share of developers on the speed of housing development. Larger developers can afford to delay development in the pre-planning phase, diversifying their activities and waiting for a favorable market. Empirical evidence from this research suggests that this phenomenon could occur when there is an expectation of rising house prices. However, the extent to which this happened in the study areas remains uncertain. Both Hoef en Haag and Haarzicht were affected by the financial crisis of 2008, which led to decreased housing prices. Therefore, delaying until after 2007 had no advantage for the developers because this led to the devaluation of land holdings. It is difficult to determine whether there was a deliberate delay in this phase of both developments, as no municipal policy workers who were employed and involved in these developments at that time could be found.

Delays also occur during the planning phase due to developers and municipalities failing to reach agreements on planning requirements. Financial feasibility often poses a significant obstacle, leading to negotiations over the composition of the housing program and the price limits for affordable housing. Additionally, municipalities might have extensive ambitions for developments, such as in Merwede, which can further delay the planning process. A common argument mentioned during the interviews was that effective leadership and experience significantly reduce planning duration. Effective leadership can unite parties, preventing conflicts and fostering collaboration rather than creating opposition and hindering cooperation. Therefore, effective leadership was frequently highlighted during the interviews as a crucial yet often underestimated factor.

In the construction phase, there were also intentional delays in the analyzed developments. Comparing the construction phases of Haarzicht and Hoef en Haag highlights the influence of developers' share on development speed. Empirical results indicate that larger developers tend to favor large-scale and efficient construction methods, proceeding as market absorption of housing allows. This is because larger developers often have a more extensive construction entity behind them, accustomed to producing large building volumes. However, phased construction remains employed. The distinction lies in Hoef en Haag, where Bam Wonen, which AM is a subsidiary of, acted as the builder for both developers. In contrast, Haarzicht involved multiple smaller builders. Despite comparable housing demands between the two areas, substantial differences in construction speed were observed. The slower construction speed in Haarzicht was influenced by its multiple builders and deliberate delays from the smaller developer, who was awaiting more favorable market conditions. This does not imply that larger developers cannot delay during the construction phase; rather, it has not been observed in the cases studied.



6. Discussion & Conclusion


The nature of spatial competition among developers in concentrated and non-concentrated markets has received limited attention in the scientific literature. This study aims to fill the knowledge gap by empirically investigating the influence of developers and their market share on housing development. Drawing together the main results based on gathered qualitative data, it is found (1) that developers have an influence on the speed of housing development. There are differences in the influence the developers share during various phases of the housing development process. This study distinguishes three specific phases: the pre-planning period, the planning phase, and the construction phase.

Empirical analysis revealed that large developers, due to their relatively extensive land holdings, might influence the time they intend to develop in the pre-planning phase. They can strategically decide whether to accelerate or slow down the process. A more nuanced perspective is warranted here, as market conditions and the extent of ongoing developments play a significant role. During periods of high development activity, developers may have less urgency to initiate new developments compared to times with limited development. This rationale aligns with the literature, which posits that housing production is delayed for economic reasons in anticipation of further increases in housing prices (Adams et al., 2009; Adams & Tiesdell, 2012).

Moreover, the analysis showed that smaller developers can deliberately cause delays during the construction phase. They do this for strategic reasons, such as waiting for more favorable market conditions (Adams et al., 2009; Adams & Tiesdell, 2012). Given their limited number of developments, smaller developers are often focused on maximizing the returns from their developments. In contrast, larger developers are more concerned with achieving construction volumes and frequently partner with large builders. These larger building entities can construct more efficiently through economies of scale, unlike many smaller parties building independently.

Furthermore, this research found (2) that developers have an influence on the composition of the housing program. The influence developers can exert is indirectly tied to the (high) acquisition price they paid for the land (Crosby & Wyatt, 2016). As a result, the development often cannot meet the municipality's requirements for social housing while remaining financially viable. Thus, the percentage of social housing becomes a point of negotiation (Stephens et al., 2018). In the development of Haarzicht, the percentage of social housing was reduced due to these negotiations, with the lead taken by the developer, who had a larger share within the consortium of market parties. Thus, the larger developer had more influence on the outcome of the composition. The municipality reported that their primary interactions were with this larger developer, noting that the smaller developers had less expertise in areas such as cost recovery, which led to intense, prolonged discussions.

Given the findings, it can be stated that developers indeed influence housing development, as has been posited in the literature (Adams et al., 2009; Barker, 2004; Bulan et al., 2009). While it was already known that different strategies exist among developers (Meijer & Buitelaar, 2023), it has now been empirically established that a developer's market share influences the outcomes of housing development. However, it cannot be concluded that it is disadvantageous for housing consumers that large developers engage in more development, as smaller developers also participate in intentionally delaying housing development. The potential harm to housing consumers can be demonstrated based on the composition of the housing program and the speed of housing development. Negotiations about the financial feasibility of developments due to high land acquisition prices can lead to fewer social housing units, putting pressure on the affordable housing supply (Stuttener, 2021).



Additionally, these negotiations often result in delays, preventing an adequate housing supply from reaching the market and having social implications.

Besides the social implications, theoretical implications highlight the need to refine models of spatial competition among developers to ensure transparency. The land and housing markets are characterized by a significant lack of transparency (Buitelaar & van der Krabben, 2022), complicating the effective observation and analysis of these markets. Conducting systematic research is imperative to increase transparency, particularly regarding the corporate structures of parent, sister, and subsidiary companies (Buitelaar & van der Krabben, 2022). Enhanced clarity in these areas is crucial as it provides both governmental bodies and citizens with a comprehensive understanding of market dynamics and power relations, thereby facilitating better-informed decision-making and policy development.

Nevertheless, it remains unclear how the determinants of price and quality are connected with the relative market share of developers and their outcomes on housing development. However, through qualitative analysis, it has been established that developers do influence these determinants and thus can adjust the quality and, consequently, price according to market conditions and housing location. While this influence has been empirically proven, the extent and degree to which developers and with what market share can exert this influence has not been found. This constitutes a limitation of the research; the determinant of price is challenging to investigate through qualitative methods. Respondents often do not know or are unwilling to specify the extent or percentage of price adjustments made. Additionally, the determinant of quality could have been explored more thoroughly using detailed indicators. Although indicators were employed in this study, they were not sufficiently detailed. This was evident during the interviews, where these indicators were not adequately translated into results. Developers and municipalities only had a broad understanding of these factors, lacking detailed knowledge.

Future research should first focus on quantitatively investigating the determinants of price and quality. This can be achieved by compiling a large dataset of housing transactions within a housing market region and examining the extent to which developers might influence pricing. The regulated sector must be filtered out in this analysis, as it is subject to maximum limits. Second, research could explore the impact of different types of collaborative arrangements on housing development outcomes. It has been shown that various forms of collaboration yield different results. For instance, in a self-realization model, the municipality has less control over the development than a building claim and, thus, over the outcome of housing development. In a tender process, the municipality can impose even more stringent requirements on the development, potentially leading to higher qualitative outcomes as perceived by the municipality.

When the results are viewed more broadly, large-scale housing developments are expected to become increasingly common in the future. With the designation of the 17 large-scale NOVEX housing areas, the national government is partially reclaiming control, similar to the approach taken with the VINEX locations. Such large-scale developments involve risk-bearing investments that smaller developers find more challenging to manage. This raises the question of the future position of smaller developers, given that participation in these developments will become more difficult. Additionally, the ability to purchase land in anticipation of future development may be further complicated by the potential introduction of a land tax. Urban transformations are often complex and financially challenging to finalize. This development will be interesting to monitor, particularly to observe how developers will position themselves in the coming years.



7. Reflection

Writing this thesis was an intriguing yet challenging endeavor. Area development is a complex, practice-oriented process that is dynamic and heavily influenced by policy frameworks established by the national government, as well as by provinces and municipalities. The literature on Dutch land and property development is extensive and includes works relevant to this study, such as those on market concentration (Buitelaar & Pouls, 2009; Buitelaar & van der Krabben, 2022), the functioning of the land market (van der Krabben, 2021), developer strategies (Buitelaar & Meijer, 2023), and the role of spatial planning in land policy (Segeren, 2007). However, due to the dynamic nature of area development and the continuous evolution of regulations and innovations, finding appropriate literature specific to the topic was occasionally challenging.

This research aims to contribute to the transparency of the land and housing market by empirically demonstrating the influence of developers on housing development. Therefore, the primary research question focused on the market share of developers, as the differences in size among developers and their effects on housing development are significant issues concerning competition (van der Krabben, 2021). This study builds upon and extends previous research findings (Buitelaar & Pouls, 2009; Buitelaar, 2021; Buitelaar & van der Krabben, 2022). Consequently, the choice of topic and research question was highly relevant.

Including the relative market share of developers in the primary research question posed a risk regarding the validity and reliability of this study. The lack of precise data on this matter means that the selection of developers could not be substantiated with data. However, indications from municipalities suggest that the selection and characterization of developers were accurate.

Given the limited empirical evidence on the effects of housing development, the decision to use a qualitative method for this research was logical. Qualitative research is suitable for exploratory studies, which is what this research aimed to conduct. Nevertheless, this choice also brought limitations. The determinants of price and quality were difficult to investigate using this method. Respondents provided only general answers, as they often did not know the specifics. In hindsight, the quality determinant could have been explored further with more indicators presented during the interviews. However, a broader perspective was maintained because this study did not focus solely on quality. Quantitative research would have been more appropriate for investigating the determinants of price and quality. Therefore, it would be prudent to pursue further research on this topic, as suggested in the conclusion.

Moreover, in retrospect, the choice to analyze four research areas was somewhat ambitious. Fully understanding an entire area of development, which can span up to 20 years, is challenging. Developments are often complex and influenced by various events that lead to the final outcome. Each development is unique, with different collaboration models, market conditions, and municipality, province, or national government regulations over time. Understanding how these factors interact is difficult. Furthermore, due to the long duration of area developments, finding respondents who have been involved from the beginning or are still involved was challenging. Despite these challenges, the analysis of the developments largely succeeded in obtaining empirically sound results. Conducting four case studies provided a diverse perspective, illustrating how multiple factors interact and influence the final outcome.

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