

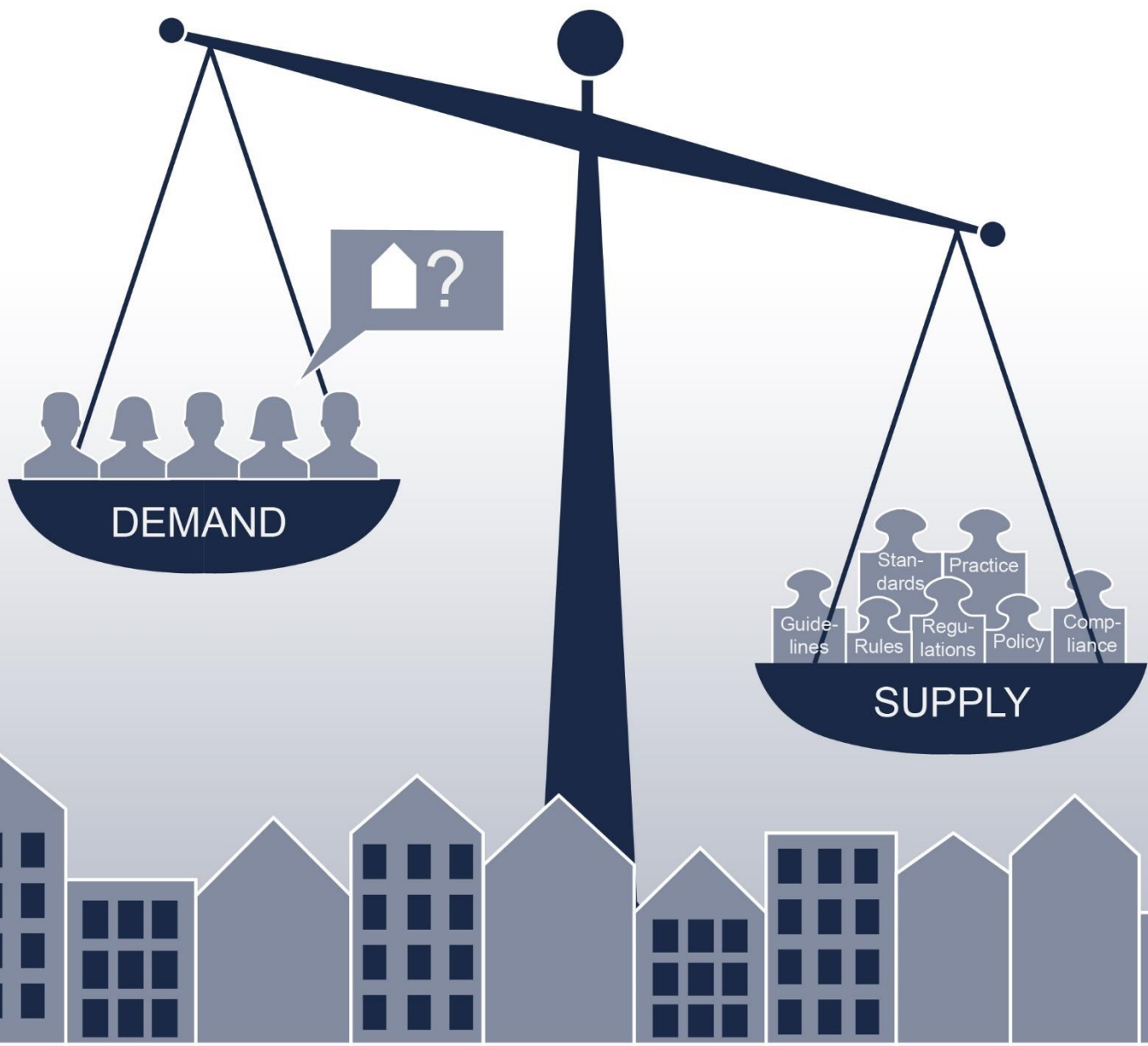
# The Market for Owner-Occupied Dwellings After the Crisis

Institutional Change and Shortages of Owner-Occupied Dwellings in the Netherlands

Master Thesis

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# **The Market for Owner-Occupied Dwellings After the Crisis**

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### Summary

The Dutch housing market has been getting much attention in the media for some years. There is a shortage of owner-occupied dwellings and the production of new dwellings is not high enough to supplement the existing stock. This situation causes a significant rise in housing prices. The leading problem statement in this thesis is: It is problematic that the construction of new dwellings is poorly aligned to the demand for dwellings, which results in shortages of owner-occupied dwellings and pressure on the housing market. The neo-classical economic theories are too simplistic to describe the complex real estate development supply chain and fail to explain the situation at the moment. The reason for the lack of production can be found in the changed institutional settings of the last decade. The Dutch housing market for owner-occupied dwellings is analysed with the four-layer model of Williamson to get more insights in the institutional change. One important driver of the institutional change was the real estate crisis which started in 2008. Despite the crisis being over for years, it has clearly left a lasting mark.

The main research question that will be answered in this thesis is: How can improvements of the governance structures enable a better-functioning market for newly built owner-occupied dwellings? This question is answered by a comparative statistical analysis with the four-layer model of Williamson. The institutions before, during and after the real estate crisis are mapped. This information is analysed, which resulted in interesting observations about institutional trends and an explanation as to why alliances are not coming into being in the Governance layer.

The Embeddedness layer is generally relatively stable, and this is also visible in the development chain of real estate. The Institutional Environment layer is also quite stable and follows on one hand, the trend of a more market-oriented economy out of the Embeddedness layer and is, on the other hand, also influenced by more volatile institutions of the market development and the emerged governance structures. An important change is the stricter policies for mortgages, but investors are also bound to stricter rules in investing.

In general, the governance structure with the lowest amount of transaction costs will emerge, but changes are experienced in the Governance layer. The risks of real estate development which were experienced during the crisis, have not been forgotten by the parties involved yet. Risk aversion, together with the pro-cyclical policy of the national government, results in wait-and-see behaviour and makes it harder to find the right governance structures to enable new development. Without sufficient alliances there is a lack of production capacity to fulfil the market demand for new owner-occupied dwellings. These shortages in capacities are visible in the land development market, but capacity problems are also experienced in the real estate development phase.

The governance structure in the construction sector did change, too. Many people lost their jobs during the crisis and building material factories closed (partly). This influenced firstly, the maximum capacity in the Resource Allocation and Employment layer, but it also had an impact on the governance structures. More and smaller companies were involved in the process, which resulted in more transactions and a need for more contracts, in order to maintain the structure and to reduce the risks.

The Resource Allocation and Employment layer is changing constantly. The crisis decreased the available workforce and the overall production capacity. The decisions made by the involved actors are in this area. For example, projects for which they allocate their available workforce, their financial means, and equipment. This layer is strongly dependent on the actual available resources and the demand for new housing.

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The general findings are also verified by means of a case study in Lansingerland. Institutional changes and bottlenecks that are described at national level seem to be the case at the local level too. Post-crisis, both are dealing with the involvement of more and smaller companies and self-employed workers in the governance structures. Also, the bottlenecks in the capacities of building materials which is experienced at the national level is also present in the local context.

The fact that all the institutions out of the different layers are changing with different speeds causes frictions between the different layers. This is also clearly visible in the case in Lansingerland where the new Land Development Plan was placed on the side, due to the fact that it was not realistic in the actual market circumstances.

It turned out that the main characteristics of the institutions, described by Williamson, are also valid in the sector of residential real estate development. This accounts not only for the stability of the institutions in the different layers, but also for the notion that the different institutional layers are fully interconnected with each other. Changes in all the different layers caused a shift in the governance structures, which reduces the building output.

The transaction costs in the process are increased compared to the situation before the crisis, due to risks which became visible during the crisis and the change of the governance structures. The increased transaction costs are caused by the increased risk awareness, the number of involved actors and the flexibility of parties. It is important that parties are finding solutions together to see how new efficient governance structures can be improved and optimized. Market parties are demanding clearer guidelines about which locations can be developed, but the crisis also showed the need for flexible plans. The municipality should find efficient ways to give incentives to market parties to find alliances to enable development without a high transaction cost in the initial phase of the project. Furthermore, the municipalities should find ways to reduce the amount of transaction costs and to recover their planning and other costs to enable a larger number of development projects.

Development alliances did break during the crisis and have had more difficulties in emerging since, due to the increased risk awareness, the stricter rules in the financial sector as well as the attitude of the municipalities; it's now more facilitating, rather than being active in the land market. The Relations in the governance structures should be reinvented. This can be done by increasing the efficiency of the process by reducing the amount of transaction costs in the complex residential real estate development sector. Municipalities can also come up with other incentives for market parties to develop initiatives and form the alliances with other market parties, which are needed for development projects. Changes are needed to increase the number of feasible alliances and to give market parties incentives to make transaction costs early in the process. New ways of financing the costs in the initial phases of the projects, such as a revolving fund for market parties to finance the initial phase. Municipalities can also help by reducing the risks for market parties and facilitate development by clearly indicating which locations are desired to develop and what kind of development is preferred.

**Keywords:** Housing Production, Housing Systems, Mismatch, Netherlands, Newly built Dwellings, New Institutional Economics, Owner-Occupied Dwellings, Real Estate Crisis, Transaction Cost Economics, Williamson's Four-layer Model

### Preface

This thesis is my final work of the master's programme 'Complex Systems Engineering and Management' of the Technology, Policy and Management faculty of Delft University of Technology. In the many different courses integrated in the master programme, I gained significant knowledge about complex socio-technical systems with the involvement of a wide range of different actors. This knowledge greatly aided me in writing this thesis.

I have always been interested in the building sector; this made the choice for the track 'Built Environment & Spatial Development' during the bachelor's and master's an easy decision for me. In the courses offered in this track, I gained a more specific knowledge of the complexity of the building industry and of urban development, which allowed me to write this thesis and apply this knowledge in a scientific way.

I found it very interesting how the financial crisis influenced the building industry and how it had wide ranging consequences for many people and companies. Many development projects were cancelled, due to the stagnation in the market. This stagnation of the market and the decreasing real estate values had also a very significant impact for many individual households.

The crisis is over, and the economic situation is favourable again, but the development of new owner-occupied dwellings is not even close to the level it was prior to the crisis. The supply of owner-occupied dwellings seems to be too low for the current high demand for them. This piqued my interest very much, resulting in my decision to write my master's thesis on this topic.

This thesis would not be from the same quality as it is right now without the help of several people. They all gave a very important contribution by means of feedback, ideas and/or advice. The acknowledgements are listed in the chronological order in which the people contributed and supported me during the process of writing the thesis.

First of all, I would like to express my gratitude to Sjoerd Meeuwsen. He heard about the interesting graduation topic of this thesis during his own graduation. My interest was directly triggered when he told me about it. That interest was deepened after the first meeting with Harry van der Heijden. It became immediately clear for me that I wanted to continue with this subject.

This brings me directly to Harry van der Heijden. He was my first supervisor for this thesis. He was always ready to give feedback and able to give me directions when I was stuck during the process. I learned a lot from him about Housing Systems and the development of the sector. Furthermore, he also gave me useful tips to improve my research approach.

Aad Correljé helped me a lot with the theoretical framework. His knowledge about Institutional Economics was of great importance. He helped by suggesting some useful literature to find a way through the theory. His advice about how the theory can be applied to the construction sector of real estate was eye-opening.

Marja Elsinga was very important as the chair of the graduation committee. She ensured the process and the final quality of this thesis. Furthermore, she also came to the meetings with very useful suggestions to improve the thesis. Finally, I would like to thank the entire graduation committee for their endless patience. I know that I was not always the easiest and fastest student during the graduation process, but the committee was always there for me when I needed feedback.

This thesis is based largely on information that was gathered during the interviews. This means that the information and knowledge that was shared with me by the interviewees was of key importance. Without this information and these insights, I would not have been able to complete this thesis. All

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the interviewees are mentioned directly below the references at the end of this thesis. I would like to thank them all for their time and openness.

The last people I would like to thank for directly contributing to my thesis are Éva Posta, Eva Führer and Christopher Mahady. They spend a lot of time proofreading this thesis and came up with a lot of suggestions for improvement; ranging from small grammar mistakes to major changes. Eva Führer also helped a great deal with the design of the cover of this thesis.

Last but not least, I would like to thank my family. They always supported me in every decision I have made. This includes not only the decisions regarding my studies, but also those in my spare time and life outside of academics. This support has opened many doors for me, for which I am very grateful

I hope that you find the topic as interesting as I do and wish you a lot of pleasure reading this thesis.

Cor Bollemeijer  
Delft, March 2018



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### 1. Introduction

The housing market has a lot of attention in the Dutch media for many years, and it seems like the crisis has been over for some time. There is a huge demand for new owner-occupied dwellings. The demand is so high that the construction of new owner-occupied dwellings cannot keep up with it (De Telegraaf, 2016). The amount of new constructed dwellings is 35,000 per annum, lacking behind the desired demand since 2010, resulting in a shortage of 200,000 dwellings at the moment (Drissen, 2016; le Clercq, 2016). Historical tendencies tell us that the construction of real estate follows the economic trends. A delay of two to three years is common between the general economic trend and the development of dwellings (de Wildt, Keers et al., 2005), but this common and expectable delay term has already been exceeded some years ago.

The problem of the low output of new owner-occupied dwellings is not expected to be solved automatically in the short-term. The amount of households continues to grow and the number of building permits issued is too low to compensate for this growth (Obbink, 2016). In the future, the gap between the desired amount of dwellings in the Dutch stock and the actual amount will rise by about 30,000 per year, given the current number of building permits granted per year (Obbink, 2016).

The leading problem statement in this thesis is: It is problematic that the construction of new dwellings is poorly aligned to the demand for dwellings, which results in shortages of owner-occupied dwellings and pressure on the housing market. The goal of this thesis is to identify the institutional change that happened over time and explain why the production of new owner-occupied dwellings does not run at a faster pace, as could be expected according to the existing models and theories. Furthermore, policy advice to improve the existing institutional settings and cooperation in the sector to bring the demand and supply of dwellings more into balance and relieve the pressure on the regional growing markets is given, based on the knowledge developed during this research project.

#### 1.1. Changes in the Dutch owner-occupied housing market in recent decades

Much has changed in the housing market since the end of the Second World War. Most of this change was caused by legislative changes, new governmental policies and demographic development. Remarkable turning points for the residential real estate market were the 1990s and the more recent real estate crisis. The real estate crisis in particular had a large impact on the functioning of the housing market in the last decade.

#### Second World War – Real estate Crisis

After the Second World War, the Netherlands had a massive housing shortage which resulted in a lot of governmental regulation and support for the production of new dwellings (Boelhouwer, Boumeester et al., 2006). The governmental regulation was quite successful in terms of the quantity of the output. The amount of completed dwellings reached levels above 125,000 units per year, but it was mainly focused on the rental sector (Boelhouwer, Boumeester et al., 2006; de Vries, 2009). In 1977, newly constructed dwellings for the owner-occupied market took the dominant position over of the rental market in terms of the output rate of new constructed dwellings (de Vries, 2009). However, a short time later the demand for owner-occupied dwellings decreased due to the crisis of the 1980ies (See Figure 1). The anti-cyclical governmental building policy resulted in a significant increase of the building output of rental dwellings during that time (Boelhouwer, Boumeester et al., 2006).

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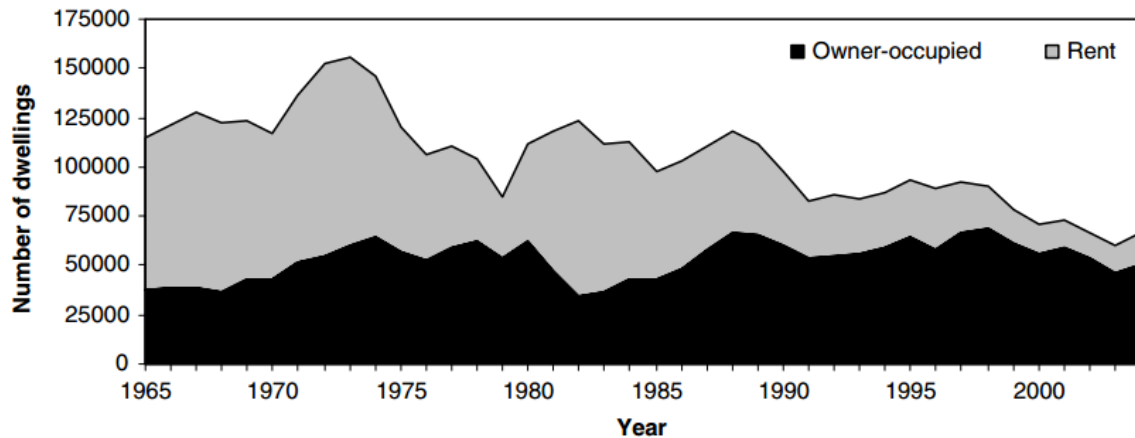


Figure 1: Production of new dwellings distributed by ownership (Boelhouwer, Boumeester et al., 2006)

The start of 1990 can be seen as a turning point in the Dutch housing policy (Boelhouwer, 2002; Boelhouwer, 2005; Ronald & Dol, 2011; de Vries & Boelhouwer, 2010). The market parties and local governments had to take the lead over from the central government. This resulted in a housing construction market which reacted pro-cyclically on economic development, instead of the previous anti-cyclical reaction. The number of national object subsidies for the production of dwellings decreased (Boelhouwer, Boumeester et al., 2006). There were still subsidies available for the construction within the Vinex areas (See page 38). An important subsidy which remained and still exists is the mortgage interest tax deduction. This change in policy of the national government resulted in a decrease in the output of rental dwellings, but the output of dwellings for the owner-occupied market stayed relatively stable till 2001 (Boelhouwer, Boumeester et al., 2006; de Wildt, Keers et al., 2005). The decreasing building output which was experienced back then was also a reason for research and policy intervention (Boelhouwer, Boumeester et al., 2006). Bottlenecks in the production were monitored in 2003, 2005, 2007 and 2009 (Knelpuntenmonitor woningproductie) by means of a survey conducted by market parties and municipalities (Dol & van der Heijden, 2009a; Dol & van der Heijden, 2009b; Dol & van der Heijden, 2009c). Several bottlenecks, which might have caused the output rates which were lower than desired, are discussed in the reports of the bottleneck monitors. The bottlenecks mentioned range from bottlenecks experienced due to regulations, to shortages of building materials.

### During the real estate crisis

The relative stability of the output and the significant increase of the real estate prices changed around 2008, when first the amount of building permits granted dropped, followed by the building output for owner-occupied dwellings (see Figure 2). Since the nineties, there is a clear correlation visible between the amount of granted building permits and finalized buildings with a delay of about one year (Manshanden, Koops et al., 2008). This correlation is also clearly visible in Figure 2, which specifically shows the granted building permits of the new owner-occupied dwellings. This close correlation makes the number of granted building permits a strong indicator for the building output in the near future. An even larger mismatch between demand and supply can be expected given the amount of granted building permits in recent years.

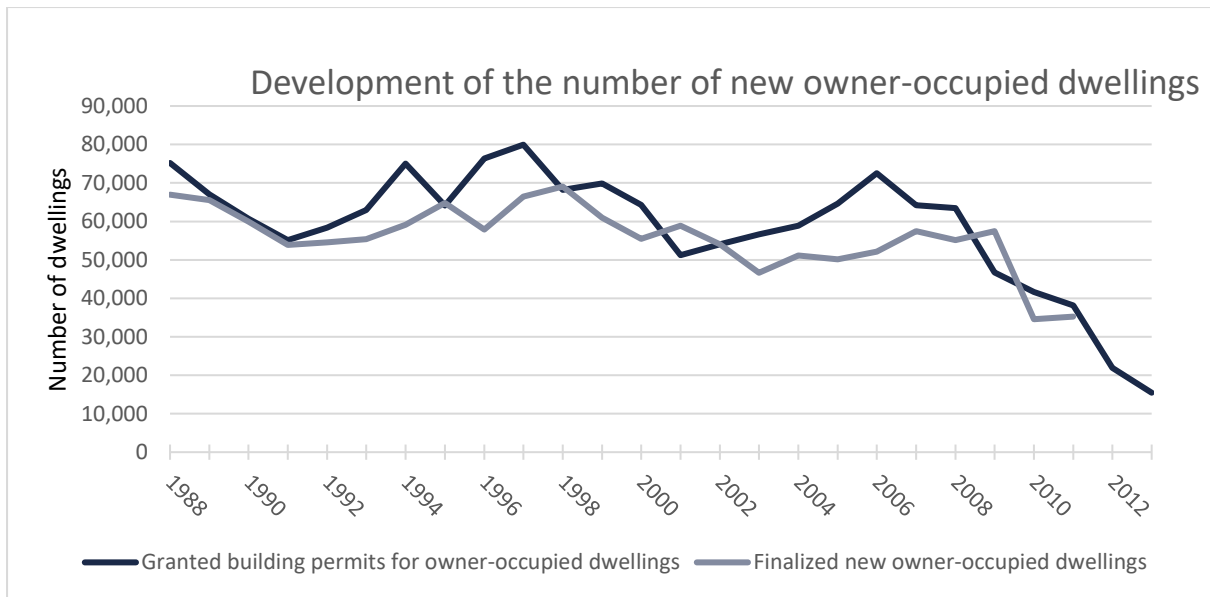


Figure 2: Development of the number of new owner-occupied dwellings (Statistics Netherlands [CBS], 2016)

The crisis had a large impact on the building industry. The demand for (new) owner-occupied dwellings decreased rapidly and property prices declined too (van der Heijden, Dol et al., 2011; Ronald & Dol, 2011). This was caused by a lack of confidence in positive economic development, and a large group of homeowners could not financially afford to move to another dwelling, since their mortgage was higher than the value of their property. This was caused by a decreased property value compared to the situation before the crisis, when they bought their property and took the mortgage (Schilder & Conijn, 2013).

This lack of interest in new dwellings caused some financial challenges for parties involved in the production process. Municipalities and developers who bought relatively expensive land with the intention to develop it had to postpone or cancel the development plans and depreciate the value of the land (van der Krabben & Jacobs, 2013). Construction firms had to cut in their workforce and other companies became bankrupt (Priemus, 2010). This resulted in an awareness that decreases in the market are possible too, and that not just increases should be taken into account. This made the parties more careful. Also, actors from the financial sector became more careful in dealing with investments in the real estate sector. However, the decline of the large projects, with a higher risk, made space for other opportunities; mainly the smaller scale and more organic developments which were still going on during the crisis (de Zeeuw, 2011).

### After the real estate crisis

The housing market seems to have recovered since the real estate crisis. The number of transactions per quarter is higher than the level of before the start of the crisis in 2008 (Boumeester, 2016). It is not only an increase in the number of transactions, but prices in the housing market are also rising in plenty of Dutch regions (see Figure 3).

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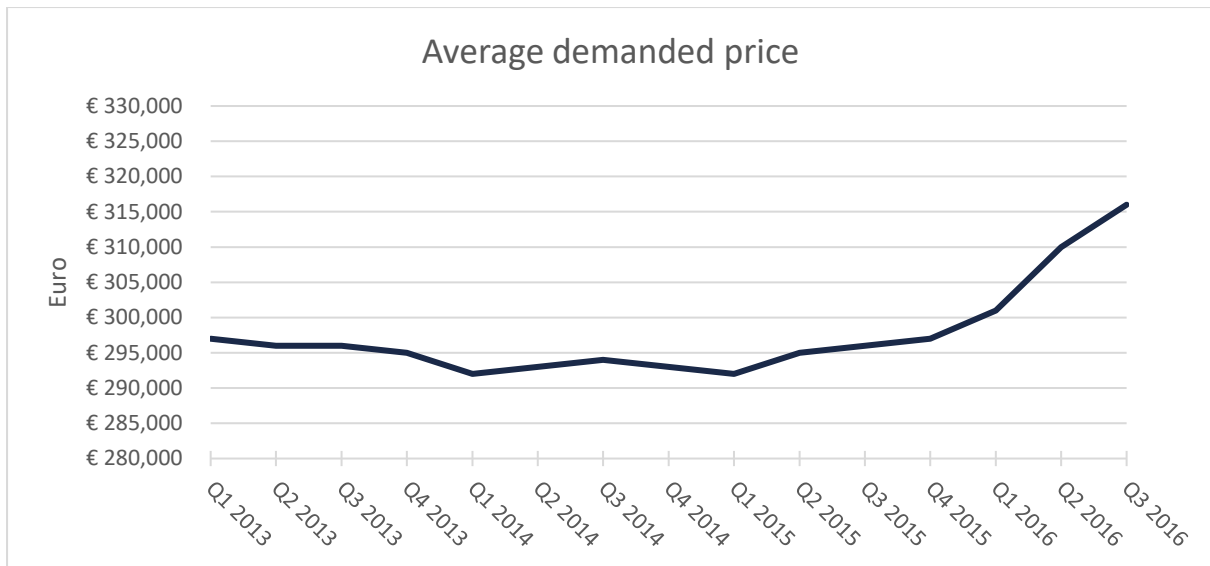


Figure 3: Development of the average demanded price on the Dutch market after the crisis (Statistics Netherlands [CBS], 2017a)

This increased activity is partly caused by low mortgage rates, but also the general positive economic development has positive influence on the market for owner-occupied residential properties (Boumeester, 2016). A variety of reports are monitoring the situation of the Dutch housing market. Those reports are showing positive facts and figures about the confidence in the market as well as the increasing residential property prices (Boumeester, 2016; van der Heijden, Dol et al., 2016). Confidence in the housing market and the interest in newly built dwellings has been increasing since 2013 (van der Heijden, Dol et al., 2016). The amount of newly constructed dwellings is slowly recovering, but it is still significantly lower compared to the situation before the crisis (see Figure 4). The high demand for new owner-occupied dwellings combined with a lack of new supply results in a very tight housing market (Boumeester, 2016; van der Heijden, Dol et al., 2016; Verheul, 2017). Also, the data of Statistics Netherlands supports the observations of a tighter market and a decrease in dwellings available for sale on the market (see Figure 5).

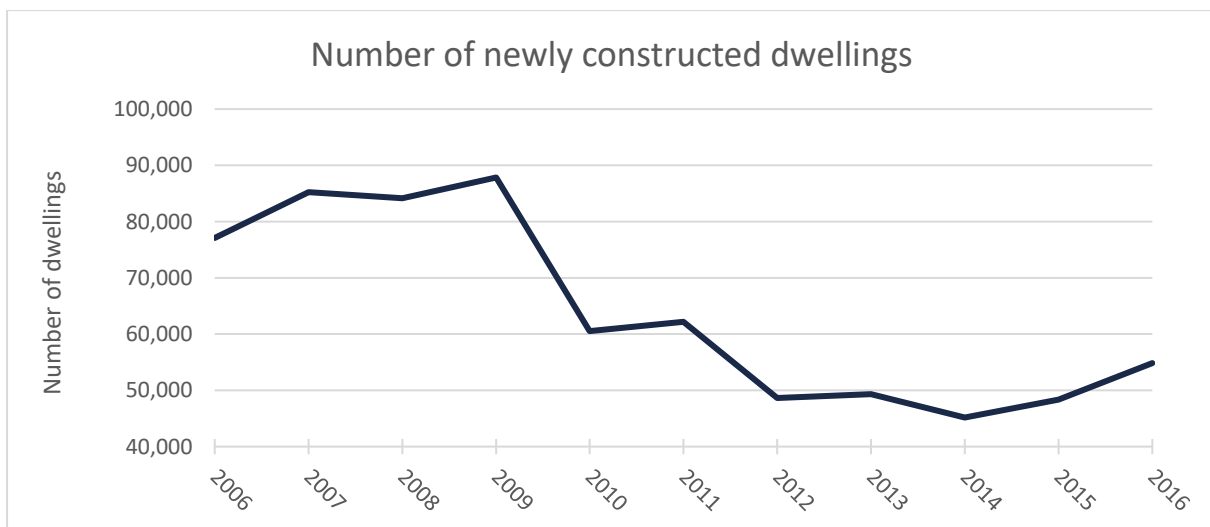


Figure 4: Number of newly constructed dwellings (Statistics Netherlands [CBS], 2017b)

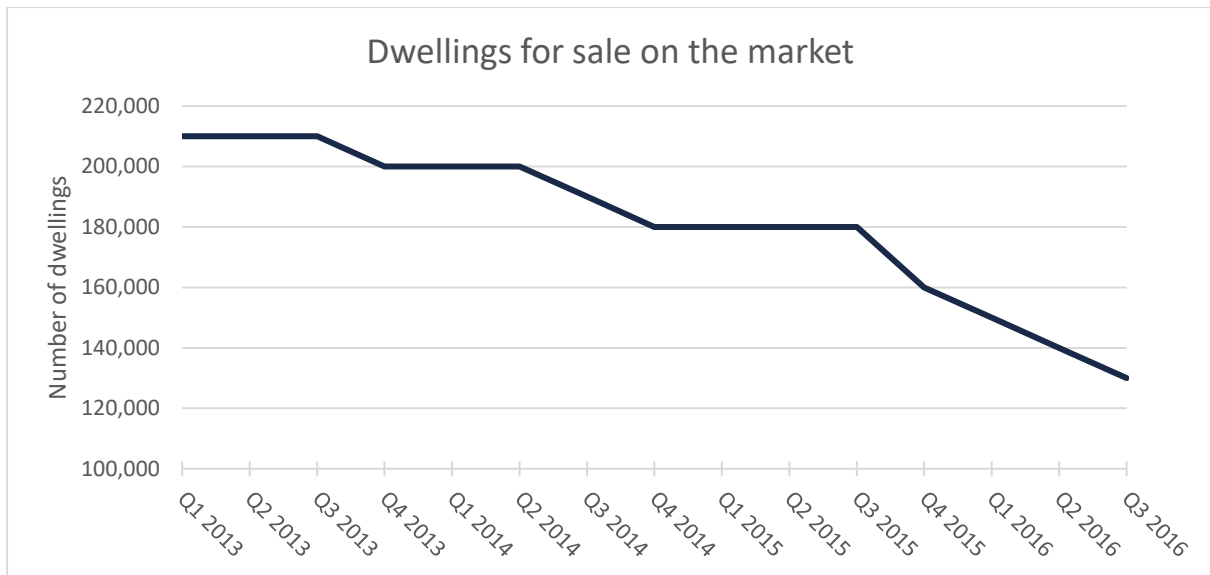


Figure 5: Development of the existing dwellings for sale on the Dutch market after the crisis (Statistics Netherlands [CBS], 2017a)

### 1.2. Economic theories & urban planning and development

Most of the analyses, which deals with housing supply, are based on the neo-classical economic theories. They assume that both suppliers and demanders try to maximize their gains (Buitelaar, 2004; van Gent, van Bergeijk et al., 2004). The free market with plenty of demanders and suppliers is according to this theory the best method to reach the optimal situation (van Gent, van Bergeijk et al., 2004). Price and quantity are automatically balanced by the supply-demand curve (Figure 6). The price will rise in the short term in case of high demand, but will fall back into its equilibrium, since the quantity of the supply will rise in the longer run as well (DiPasquale & Wheaton, 1992).

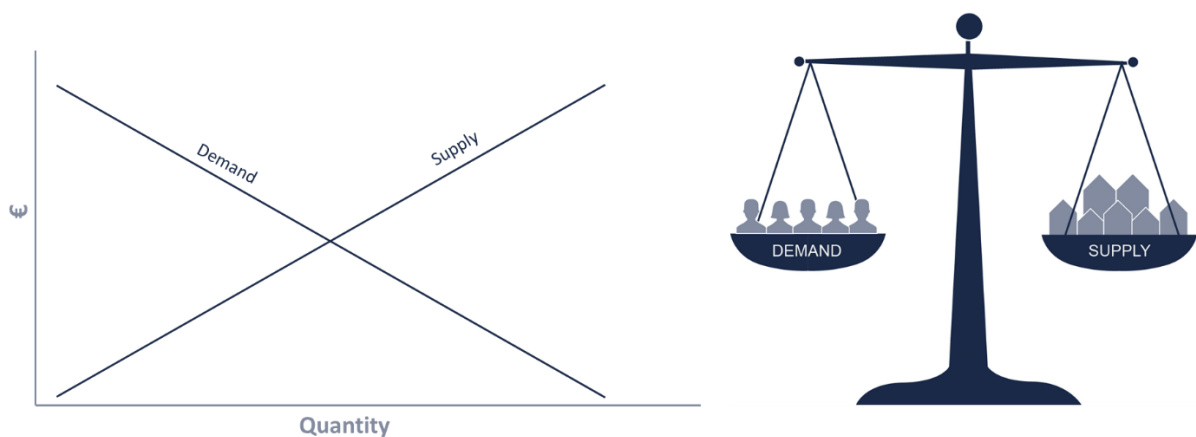


Figure 6: supply-demand curve

This neo-classical economic theory is also relevant for housing supply. Supply and demand are coming together in a free market. A separation between price fluctuation in the short term and balance between supply and price in the long run is used in several studies (Boelhouwer & Mariën, 1999; DiPasquale & Wheaton, 1992). An equilibrium will emerge in the long term where the price is comparable with the costs of the production for new dwellings (DiPasquale & Wheaton, 1992; DiPasquale & Wheaton, 1994). However, this approach is too simplistic for the complex real estate development supply chain, and fails to describe the actual situation. Housing prices are rising, due to the high demand, but the supply is still behind after years of a recovering housing market. This means

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that there are other constraints that limit the building outcome, not just the price and quantity equilibrium. This does not mean that this theory is not valid, because it succeeds very well in explaining the decline of the building output in times of a decreasing demand, such as we experienced during the last financial and real estate crisis.

DiPasquale (1999) recognized the lack of explanatory power of macro-economic, neo-classical theories in her paper: *Why don't we know more about Housing Supply?* (DiPasquale, 1999). She suggests doing research on micro-level and take the builder, investor or landlord as units of analysis to understand the decision making process and the outcomes of the housing market. Buitelaar (2004) criticises the neo-classical approach too, since it assumes the free availability of information and frictionless transactions, which are both not the case, according to Buitelaar.

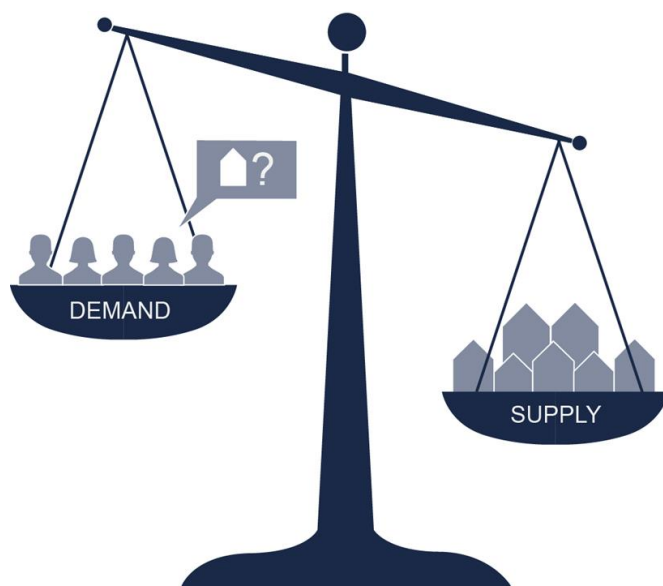


Figure 7: Housing market not in balance

New Institutional Economics is another economic stream which has developed over the last few decades and it might offer an interesting alternative for describing and understanding the market of residential real estate. This theory deals with transaction costs and it is focused on the governance structures and the costs relating to running the system. Coase (1937) was a pioneer of this economic stream, but it took quite some time (until the eighties) until Williamson gave a more theoretical and methodological foundation to the Transaction Cost Theory of the New Institutional Economics school (Williamson, 1981; Williamson, 1998; Williamson, 2002). The aim of this school is to describe the efficiency of the governance structure by analysing the costs of the transactions. Transaction costs are generally broadly interpreted and are even described as “all costs other than the physical construction” by Lai (1994). The Transaction Cost Theory can explain how the different actors in the network coordinate their transactions concerning labour, capital, intermediate goods, information and so on (Koppenjan & Groenewegen, 2005).

The first use of Transaction Cost Economics in planning theory was introduced by outsiders of the planning discipline and it dates back to the seventies (Ellickson, 1973; Fischel, 1978). It took until 1992 for the first planner, Alexander (1992), to use the Transaction Cost Theory to describe urban planning. After Alexander's attempt, some other scholars used the Transaction Cost Theory to describe and analyse governance structures in city planning (Buitelaar, 2004; Cho, 2011; Lai, 1994). More information about the use of Transaction Cost Theory in residential development and urban planning can be found in chapter 2.5 of this thesis.



Most of the current research is based on the neo-classical theories, which fail to describe the actual situation and dynamics of the housing market. Other analyses are needed to understand the decisions made in the production process and the outcomes as DiPasquale and Buitelaar have argued. The decisions, actors and agreements are, because of this observation, central in this thesis. The four-layer model of Williamson and the Transaction Cost approach are used to analyse the process and explain why the public and private actors make decisions and form alliances. This method is done on a micro-level instead of a macro-level. Knowledge will be developed by analysing trends on macro-level, mapping the structure of the cooperation and the efficiency of those structures. The findings will be validated by case studies in the local context. Chapter two elaborates about the possibilities, advantages and shortcomings of the four-layer model and the Transaction Cost Theory approach.

### 1.3. Relevance

This thesis gives insights in the institutions of the production process of owner-occupied dwellings. Furthermore, it aims to explain why the construction of new owner-occupied dwellings does not meet the demanded and desired level after the crisis. It is not just the crisis that influenced the real estate market; it has also been influenced by many other factors which have changed over the last number of years. Examples include changes in governmental policy, tighter restrictions on entering the social housing market and stricter rules for mortgages, which might affect the functioning of the market.

The fact that there is a mismatch between the housing supply and the demand for owner-occupied dwellings on local and regional scales is a problem. The supply is lagging behind the demand in most of the growing regions. This makes the pressure on the real estate market very high in popular regions, which results in prices for the dwellings sky-rocketing. This extreme growth in sales prices was already visible in Amsterdam in the last quarter of 2015 (CALCASA, 2015) and was noticed in the middle of 2017 in almost all other regions (CALCASA, 2017).

The topic of this thesis is socially very relevant, since unravelling the cause of the stagnation in the supply of newly built owner-occupied dwellings can be the first step in finding a solution to this problem. The situation is problematic, since the housing prices in some regions are currently so high that it is already hard to enter the owner-occupied market for first-time buyers. This problem is expected to increase in the coming years if the output rates of new production do not rapidly increase to reduce the pressure on the market. It is important to find a solution, because housing is one of the most important needs in life and should be accessible for everyone. A dwelling protects its residents from the outdoor elements and gives privacy (van der Schaar, 2006). Good housing is needed for one's wellbeing and health, as well as better school results (van der Schaar, 2006).

There is also an academic relevance to this topic. There is plenty of literature about housing demand and there has also been a lot of literature written on the housing supply in recent years (DiPasquale, 1999). Most of this existing literature is written on the macro-economic level (DiPasquale, 1999). However, most of the existing literature fails to explain the decisions made by the actors on the micro-level. More knowledge about the decisions made at this micro-economic level is needed to point out the shortcomings in the existing literature and to describe and explain the actual situation that we are facing in the Netherlands at the moment.

### 1.4. Outline

The next chapter (2) introduces the theory that is used in this thesis. Theory about institutions in general is covered in the first section of this chapter. Williamson's four-layer model is explained in the second section of this chapter to structure the different kinds of institutions. This four-layer model

places the Transaction Cost Economics, which is central to this thesis in a wider framework, which takes different kinds of institutions into account. Section 2.3 focuses on the Governance layer and Transaction Cost Economics, and gives more insights in the available knowledge and usability of this theory. It starts with a general introduction and is followed by an application of the theory on urban planning and real estate development. This chapter also discusses the shortcomings of the Transaction Cost Theory and how this thesis deals with those shortcomings.

The third chapter elaborates on the market of residential real estate. It shows why the market is different from many other markets and gives characteristics of the Dutch housing market. The different actors and transactions in the development process are also introduced in this chapter.

The fourth chapter describes the research approach and design of this thesis. The main research question and the sub-questions are introduced in the first section. The conceptual model and the methodology used and the way the data was collected for this thesis is also discussed in this chapter, as well as the units of analyses. The possible issues with the data are discussed in the last section of this chapter.

The fifth chapter covers the institutions and governance structures as they were before the crisis. It gives a structured overview of all the institutions in place before the start of the real estate crisis in 2008. This overview is based on the layers of Williamson's model. A case study is used in the end of this chapter, to illustrate how the institutions in place are present in the more concrete local context.

The sixth chapter describes the changes in all the layers of Williamson's model which occurred during or which were driven by the crisis. The seventh chapter sketches the institutional arrangements as they are now. This is again structured according to the framework of Williamson, meaning that the full spectrum of institutions is discussed; from the Embeddedness layer to the Resource Allocation and Employment layer. The main findings from chapters 5, 6 and 7 are summarised in chapter 8. This chapter describes the general trends of the institutions in place.

Two case studies of projects which were completed after the crisis are discussed in the chapter 9 to see if the general findings are also present in the local context and how the altered circumstances influenced that local context. One of the cases is a project which is based on a voluntary agreement between the municipality and a market party. In the other case, the municipality set the requirements for the project with the new Land Development Act. The actors, governance structures, transactions and transaction costs are discussed for both projects.

Chapter 10 is an analysis to explain the institutional change which has happened over time, supported by the dynamics between the different institutional layers described by Williamson. This chapter gives insights in the governance structures and why alliances might not arise. This chapter maps the change of the governance structures, transaction cost attributes and the effect on the transaction costs and the efficiency for the different arrangements too.

In chapter 11, the final chapter, there is a summary of all the important findings in a conclusion. This chapter provides also recommendations which are based on the conclusions. Those recommendations come in two parts. Firstly, advice is given for policy changes to increase the efficiency of the market for owner-occupied dwellings by institutional change. Secondly, some suggestions for further research are done in this section. Finally, this chapter contains a discussion of this thesis. There is a reflection on the collected data and the contribution to the academic field. This chapter discusses also the limitations of the applied method and how the thesis can be improved or supplemented by future research.

## 2. Institutions, governance structures and Transaction Cost Theory

This chapter describes the theoretical framework that is used for the thesis. It starts with the wide concept of institutions and the four-layer model of Williamson. The focus is later on the governance structures and the transaction costs that come along with the organisation of the governance structures. This chapter also contains an acknowledgment of the shortcomings of the theory used. In the final section of this chapter, attention is also given to additional elements, where public actors get involved in transactions.

### 2.1. Institutions

The concept of 'institutions' is widely used in plenty of disciplines of social sciences, but there is no unanimity of the exact definition (Hodgson, 1988). Several authors have made attempts to define this concept. Scharpf (1997) defined institutions as: "a system of rules that structure the course of actions that a set of actors may choose". North (1991) described institutions earlier as "the humanly devised constraints that structure political, economic and social interactions".

It is important to study and analyse institutions to understand the decisions of actors, market dynamics and the output of the market in complex socio-technical systems (Groenewegen, Kerstholt et al., 1995). The housing market is clearly an example of a very complex socio-technical system where institutions are playing an important role. The crucial role of institutions in this system means it is vital to analyse the institutions involved, in order to understand the market dynamics and results. This understanding can be the starting point of improving the market dynamics and steering the output in a more desired direction.

The broad 'container' concept of institutions must be more specified and defined to do proper analyses (Hodgson, 1988; Koppenjan & Groenewegen, 2005). Williamson (1998) brings more structure to this 'container' concept by dividing the institutions into four different layers in his model. The focus of this thesis is on the institutions that have to do with governance. Governance is important, but it is just one layer of the model of Williamson. Institutions in the Governance layer are basically part of a web of different categories of institutions. All those institutions limit and influence each other and shape the dynamics of the market. This mutual interdependency of the other layers of institutions makes it important to delve into those institutions too, to gain a full understanding of the mechanisms and decisions made in the complex system of real estate development. The four-layer model of Williamson is introduced in the next section.

### 2.2. The four-layer model

Williamson (1998) describes four different layers of institutions, namely: Embeddedness, Institutional Environment, Governance and Resource Allocation and Employment. According to Williamson (1998), the institutions in the different layers have different origins, but interact and influence each other (Figure 8). The arrows in Figure 8 show the interactions between the different layers. However, Williamson shows just the interaction between the levels directly bordering each other, he admits that in reality the system is fully interconnected (Williamson, 1998).

The first layer of institutions, the Embeddedness layer, contains the informal institutions. This is the research area of economic historians and social scientists (Nee & Ingram, 1998). New institutional economics and transaction cost economics are focussed in the second and third level of institutions: Institutional Environment and the governance structures (Niesten, 2009). Price and output are the most important decision variables in the fourth layer of Williamson's model. The neo-classical economists do research in this area (Williamson, 1998).

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The institutions in the different layers can be influenced by institutional change in the other layers. Legislation is based on cultural beliefs, but it can also influence the culture and norms of society, so here is for example a mutual relation between the Embeddedness and the Institutional Environment layer. Legislation determines the position of (public) actors and is influencing in this way the governance structures. The Governance layer influences the way in which organisations allocate their workforce and other resources. These were just some examples of how the different layers interact out of the numerous existing interactions in real life.

The model in Figure 8 structures the different kind of institutions and shows how they are connected, however the model is fully interconnected in reality. An example of the interaction between legislation & regulation, governance structures and transaction costs is the introduction of the Pre-emption Act (Wet voorkeursrecht gemeenten). This act gives the privilege to the municipalities to get the possibility of buying land from a landowner first. This changed directly the governance structures. The municipality became more powerful and market parties found partners to team up, to put the municipality on the side. The new relationships and power balances increased and changed the transaction costs needed for the cooperation. This decreased efficiency of the process. This happened in a time of good market conditions, which might have made the additional transaction costs acceptable, but in times of more uncertainty and less favourable economic prospects, these additional costs could decrease the building output. The next sections cover the different levels of institutions one by one.

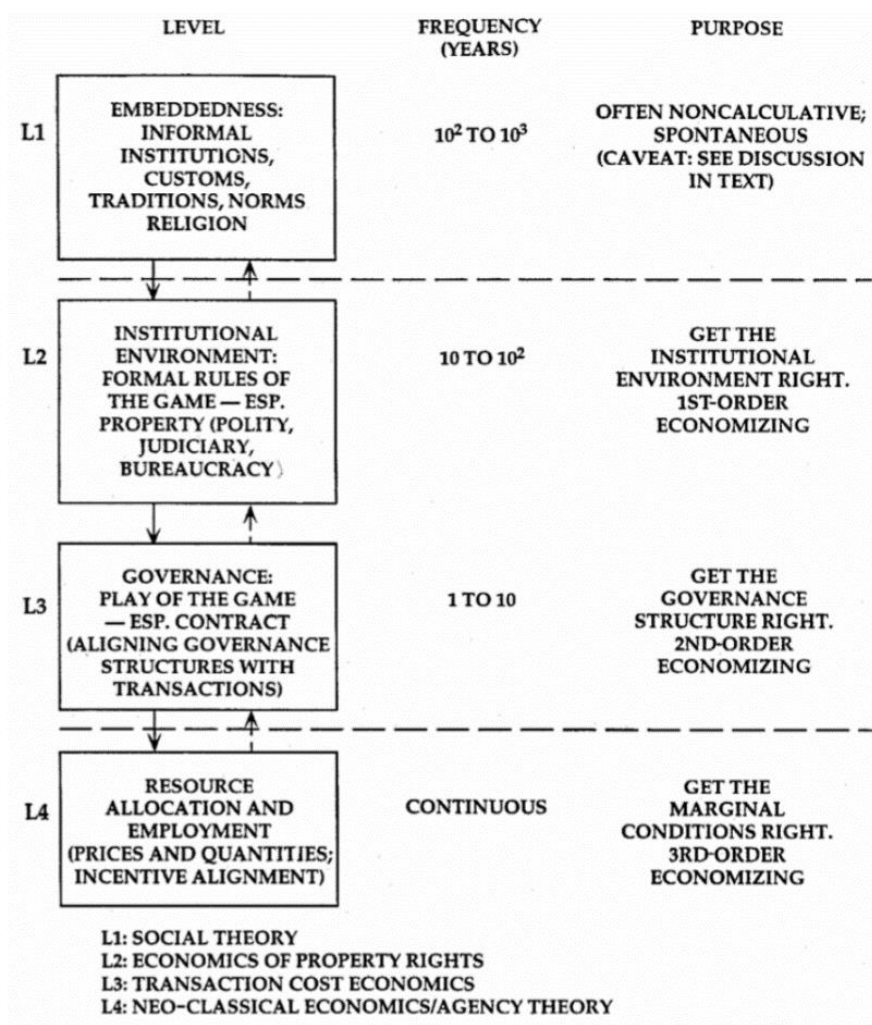


Figure 8: The four-layer model of Williamson (Williamson, 1998)

### Layer 1, Embeddedness

The first layer consists of informal institutions such as: Culture, Values, Norms and Attitudes. Those institutions shape the mind-set and constrain the behaviour of the actors involved in the network. Institutions in this layer are relatively stable and change spontaneously over long time spans (North, 1991). The institutions in this layer are mostly relatively static over time, but might change quickly by important phenomena in society, such as a revolution or a crisis (Williamson, 1998). The informal institutions in this layer influence the institutions of the other layers. Most economists do not deal with this layer and consider the institutions of this layer as a black box or take them as given parameters for their analyses (Williamson, 1998).

Culture, values, norms and attitudes are important factors within the housing market. They differ from country to country. An example of an important norm is the tradition to move a number of times during life. This tradition is different in a dynamic market such as the Netherlands, compared to more static systems, such as Germany, where making housing career by moving is less common (van der Heijden, Dol et al., 2011). The Netherlands has a typical dynamic housing market where people generally change dwelling multiple times during their life.

The dynamic culture in the Dutch market also influences the institutions in the other layers of Williamson's model. For example, it causes many transactions of owner-occupied dwellings compared to more static markets, where people prefer to modify or renovate their current property (van der Heijden, Dol et al., 2011). Dynamic markets are also more sensitive to economic downturns; people do not invest in more expensive dwellings if it is expected that the real estate values will decrease in the short term (van der Heijden, Dol et al., 2011).

### Layer 2, Institutional Environment

The second layer covers all the formal rules and is described by Williamson as the "Rules of the game", the output of politics (Williamson, 1998). This layer consists of the relevant legislation and regulation. Also, property rights are an important factor in this layer. Change in this layer tends to happen gradually over decades or centuries, but massive discontentment can open a rare window of opportunity for a quick and broad reform, according to Williamson (1998).

This layer is very important for the housing market. The way in which property rights are defined is important, since it describes the possibilities that the owner has for the land and it affects the choices the owner can make relating to the owned land and its value (De Alessi, 1991).

The abundance of governmental regulation in housing production also makes this layer very important, as this regulation limits the possibilities in the other layers. Legislation, rules and permits guide the process of constructing new owner-occupied dwellings from beginning to end. It all starts with the building land market that is restricted by the government (Barker, 2004). This means that it is the government, not the market which decides which land is available for urban development and which land is not. Zoning plans of local authorities regulate this. Formal institutions are also very relevant to the construction of new dwellings. Zoning plans indicate the maximum measures which can be undertaken on the real estate and prescribe other limitations for the permitted development, and building permits are required before construction is allowed on a specific plot.

Governmental regulation does not just work restrictively; it can also have a function as promoter, by means of subsidies or other advantages (Dieleman & Everaers, 1994). An example is the tax incentives for home owners. Home owners can deduct the paid interest of their mortgage from

their income tax. This makes it financially attractive to have a mortgage and promotes home ownership. This also results in a cultural change in the first layer, as it becomes the norm for many people to take out a mortgage for the purchase of a dwelling.

### **Layer 3, Governance**

Williamson calls this layer the “Play of the game” (Williamson, 1998). The cooperation structures are determined in this layer. Markets, hybrids, firms and bureaus are all possible structures. This layer deals with the cooperation within and between firms and other parties. Decisions of vertical integration or disposal of a business unit taken by firms are covered in this layer too. Williamson (1998) argued that contracts, needed within the governance structure, are not costless and that a perfectly working legal system, to enforce contracts, is certainly not for free. Decisions about governance structures are taken by the involved parties and generally change in time spans of between a year and a decade, according to Williamson (1998).

Examples in the market for new owner-occupied dwellings are (sub-)contracts between construction firms and developers or cooperation in joint-ventures in large and complex (re)development projects. The position of the government is also part of the governance structure. Municipalities, for example, act as a market party and compete against other market parties in case they have an active land policy. In all these cases, there is a regulatory relationship between municipalities and market parties by the development projects.

The institutions in this layer are central to this thesis, since the goal is to assess the efficiency of the governance structures. Transactions connect the different actors and create the governance structures. The Transaction Cost Theory is discussed in detail in the later sections of this chapter.

### **Layer 4, Resource Allocation and Employment**

The fourth layer, the Resource Allocation and Employment layer, is the area of neo-classical economists and agency theory. The marginal conditions, like prices and quantities, are aligned in this layer (Williamson, 1998). The parameters in this layer adjust more or less in a continuous way along with the actual market conditions. The institutions in this layer are based on the optimal allocation of the resources of the actors, with the goal to maximize their utility.

Optimisation of the actors’ utility takes place within the framework of the previously mentioned institutional layers. Developers, for example, must act within the regulations and restrictions that are set by the municipality and higher governments and should obey the contracts already signed with their partners. Within this framework they allocate their assets and employees as optimally as possible. Decisions made on up- or downscaling production, hiring or contracting of more workers, the amount of supply, and other responses to market developments are made at this level.

The previous chapter indicated the need for theories other than those based on neo-classical ideas to explain the dynamics and outcomes in the production process of owner-occupied dwellings. North (1992) indicated that high transaction costs can prevent growth in the market. This might be an explanation as to why the building output is not scaling up to a higher level at the moment. DiPasquale (1999) has indicated that a more micro-level of analyses, with a focus on actors, might offer new insights into the dynamics of the development market. Buitelaar also sees advantages in the actor-focused analyses and suggests using the Transaction Cost Theory (Buitelaar, 2004; Buitelaar, 2007). This theory looks very promising in grasping the governance structures and the costs that are related to them.

### 2.3. Governance structures and Transaction Cost Theory

The emergence and alteration of a governance structure has to do with the involved transaction costs. This section is an introduction to the Transaction Cost Theory, followed by an explanation and examples of the costs of transactions. Several transaction attributes, which influence the costs of the transactions, will be introduced. After that there is an introduction to the available literature of Transaction Cost Theory in the domain of urban planning and the built environment. Shortcomings of the Transaction Cost Theory are discussed in the last part of this section.

The Transaction Cost Theory is part of the New Institutional Economics stream (Williamson, 1998). Williamson (1998) describes that the New Institutional Economics comes in two parts. One deals with the Institutional Environment (layer 2 of the four-layer model) and the other deals with the institutions of governance (Layer 3 of the model). Both parts were introduced by Coase and were developed further during the seventies by other scholars (Williamson, 1998). In this thesis, the focus lays on the second part, the institutions of governance. The Transaction Cost Theory is useful in explaining and assessing different institutional arrangements.

The Transaction Cost Theory assumes that different institutions have different effects on the costs of the transactions. The transaction itself is the unit of analysis in the Transaction Cost Theory. According to Williamson (1985), a transaction occurs when “a good or service is transferred across a technologically separable interface. One stage of activity terminates and another one begins”. In order to aim for process efficiency, the transaction costs should be minimized (Buitelaar, 2004; Cho, 2011; van Rij, 2008). The focus is on the costs, which makes the transactions possible. Costs have to be incurred to run the economic systems, something that was neglected by neoclassical economics (Niesten, 2009). Williamson (1998) assumes that the institutional arrangement (governance structure), that will be chosen, is the one with the lowest total transaction costs.

The efficiency of the market is determined by the comparison of different alternative governance structures. This theory was first used by Coase (1937). He described that for some transactions, the market is the best structure to minimize the transaction costs and increase the efficiency. Other transactions are less costly to internalize within the firm. For example, if the contracting costs are too high, it becomes more efficient to bring the activity within the firm to avoid a contract and all the time and costs relating to drafting the contract to cover all risks. This might increase the internal organization costs, which can also be seen as transaction costs (van Rij, 2008).

The dichotomy of markets and firms was later successfully supplemented by other (hybrid) relational structures (Buitelaar, 2007). Actors are operating autonomous in a market, while firms are hierarchical structures within the market network of individual actors (Williamson, 1985). The more cooperation happens between the actors, the more the structure transforms into a firm, and thus a hierarchical structure (Jolink & Niesten, 2008). In cases where the coordination adapts to more individualistic and autonomous actions, the governance structure gets the characteristics of a market (See Figure 9).

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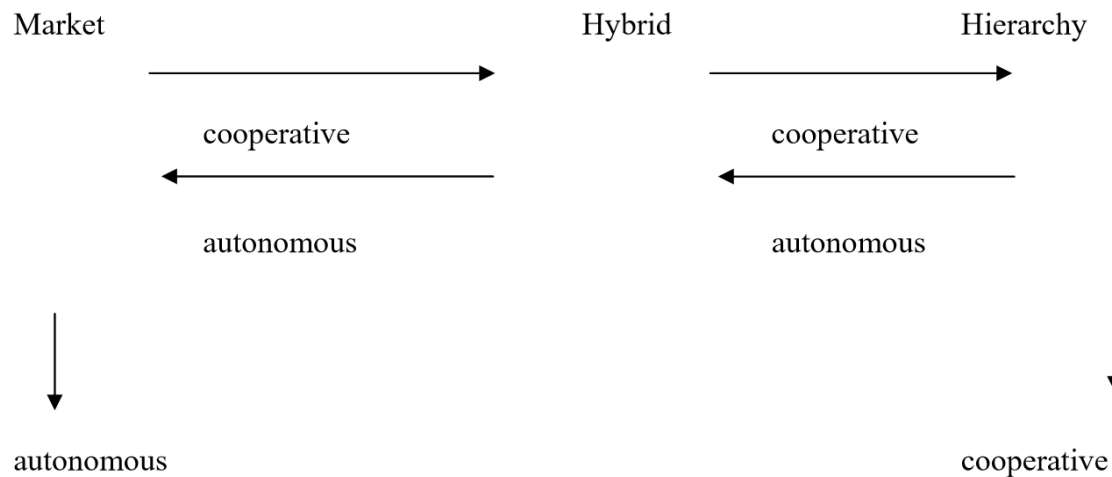


Figure 9: Directions of adaptation (Jolink & Niesten, 2008)

The theory, which was originally developed to understand the governance structures in the private sector, has also been slightly adapted for and applied to analyses in the public domain where governments are involved (Alexander, 2001b).

The economising of the transaction costs is the basis of the Transaction Cost Theory of neo-institutional economics (Cheung, 1998). The costs to come to a transaction emerge, for several reasons, like the fact that there is no perfect free information available and the fact that perfect rationality does not exist in the real world. Those two invalid assumptions are present in the neo-classical theories (Buitelaar, 2004). The key position of the transaction costs in neo-institutional economics makes it important to elaborate more on them. This section gives an overview of some different definitions in the existing literature and concludes with the definition that is used for this thesis.

Different definitions for transaction costs can be found back in the existing literature. Most of the scholars define transaction costs more widely than one might think in the first place. "Although the concept of 'transaction costs' suggests that only the costs around a transaction are involved, it is often used more broadly" according to Buitelaar (2004). Several authors made an attempt to define the concept 'transaction costs'. Founding father of the theory, Coase (1960), used the words: "the cost of carrying out market transactions" to describe transaction costs. Arrow (1969) extended the reach of the concept and emerged as one of the first with a wider definition which is: "the costs of running the economic system". Lai (1994) also takes the concept of transaction costs quite wide and defines it as: "all costs other than the costs of physical production". Most of the definitions are close to each other, but described from a slightly different viewpoint. Coggan, Buitelaar et al. (2013) claim that the definition "the cost of resources used to create and use a policy through defining, establishing, maintaining and transferring property rights" is widely used in the existing literature of environmental policy. Most of the definitions are not very concrete and leave space for debate.

Existing literature gives also several examples of transaction costs. Those examples make the concept a bit more concrete. Lai (2005) comes up with examples of transaction costs, such as the costs for: "competition, information, measurement, contract formation, and contract enforcement under a specific institutional arrangement". Niesten (2009) goes more into detail and makes a division in the stage of the process where the transaction costs are made. Some examples of costs that are made before the actual transaction took place are: bargaining, drafting, negotiating and safeguarding an agreement. Costs for planning and monitoring task completion are made during the transaction. And finally, Niesten (2009) mentions transaction costs which are made after the transaction is completed.



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Examples of those costs are the costs for enforcing and policing an agreement and the costs of misalignment.

The definition of Transaction Costs that is used in this thesis is: *All the costs that are made and time that is invested to develop and enforce the plans, contracts and agreements. This includes communication and research that is done in order to conclude those documents.* Those costs are in the development process of owner-occupied dwellings made by market parties and by governments.

### Transaction attributes

The decision to use market mechanisms, to keep the transaction within the firm or to use other coordination structures, depends on the transaction costs (Williamson, 1985). Transaction costs of a can increase in cases where there are more potential hazards involved in the governance structure. Transaction attributes describe the degree to which certain hazards might arise in specific situations. Asset specificity, uncertainty and frequency are described by Williamson (1985) as the main attributes. North (1991) added also the number of participating actors to this list. The main attributes and how they increase the transaction costs are described in this section.

Asset specificity is the easiness with which an asset can be reallocated to alternative uses and by other users without a significant decrease in value (Williamson, 1985). The actor that will deliver a very specific asset cannot easily sell it to other parties or use it for another goal, due to its specificity. The more specific the asset is, the higher the potential for opportunistic behaviour from the contracting partner. The contractual hazards of potential opportunistic behaviour cause additional transaction costs, since the contract must be very extensive to prevent such opportunistic behaviour from the parties. There are four different types of asset specificity, namely: site-specificity (immobility or heavy relocation costs of the asset), physical asset-specificity (assets that are tailor-made for the customer), human asset-specificity (knowledge developed or gained by doing) and dedicated assets (high quantities of a generalized product, where it is hard to find other demanders for the high quantity of produced goods), according to Williamson (1985).

Uncertainty is the chance of disturbances that might affect the transactions. Disturbances can have different origins. Williamson (1985) mainly looks at the uncertainty that is connected to opportunism. This is a behavioural uncertainty, caused by strategic behaviour with information, such as a withdrawal of information (Williamson, 1985). Transaction costs increase by gathering more information about the goals of the other players, or by dealing with the information asymmetry by adding safeguards in the contract.

The frequency of a transaction is also relevant. There might occur reputation effects, if the same parties are cooperating on a more recurrent basis (Williamson, 1985). Costs that are involved in very specialized governance structures are easier to recover by higher frequencies (Niesten, 2009).

The number of participating actors is also an important attribute of a transaction (North, 1991). Transactions will be organized differently if there are just two parties involved or when the transaction deals with a high number of actors. The time and effort to come to a contract will increase if the number of involved parties increases.

### Shortcoming of Transaction Cost Theory to analyse the real estate development process

The Transaction Cost Theory was not originally developed for the coordination of transactions in which the government is involved. However, this theory has already been successfully applied in several cases, where public parties are involved and acting as players. In any case, the Transaction Cost Theory can be supplemented and adapted to make it fit better for government-market interactions.

As Williamson (1998) already stated, the reach of Transaction Cost economics is quite broad, but it does not explain the entire complexity of governance structures and transactions in the

development process. Other, sometimes competing, and sometimes complementing theories are needed to extend its reach (Williamson, 1998). Chapters 2.1 and 2.2 placed the Transaction Cost Theory in a wider framework. This four-layer framework explains how the Transaction Cost Theory is located between and interacts with other institutional theories. This interaction with other levels of institutions is analysed in the later chapters of this thesis.

The efficiency of the governance structure and the building output rates are important assessment criteria, but urban development has many more criteria that should be taken into account by (public) actors. Examples of other assessment criteria are equity, redistribution, fairness and justice (Pearce, 2005). Those other criteria are indeed important too, however, the focus of this thesis will be on the governance structures, the associated transaction costs, and process efficiency.

It is hard or even impossible to quantify the analyses, due to the complexity of the housing production chain. Buitelaar (2007) shows that relations between cost and institutions are often hidden or indirect. On top of that, there is a wide variety of different institutions at different levels and there are loops between them (Buitelaar, 2007). Williamson (1985) admits the difficulty in quantifying the transaction costs, but refers to the comparative nature of transaction cost economics. The costs do not have to be absolutely quantified to compare different modes of governance. Lai (2005) also indicates that it is hard to find the exact transaction costs, but ranking the transaction costs of different institutional arrangements can be very useful. Exact costs are not needed to rank the different institutional arrangements. By ranking the transaction costs, it becomes possible to compare the different alternative governance structures on their efficiency.

The Transaction Cost Theory is very useful in analysing the functioning of the existing institutional arrangements. It is interesting to assess different governance structures in the process of real estate development with Transaction Cost Theory, but this theory must be seen in the context of the four-layer model to increase the explanatory power and to understand the dynamics, structures, and output of the market.

### **2.4. Urban planning and development**

The Transaction Cost Theory is used in many different fields. The Transaction Cost Theory was originally developed and applied in situations which solely involved market parties. Several researchers in the field of urban planning adapted the Transaction Cost Theory to apply it to the unique situation of the complex development market with a lot of regulation and governmental involvement. This section gives a brief overview about how the Transaction Cost Theory is used in existing literature on urban planning and the spatial development domain.

It is important to make a shift from the traditional welfare economic to the neo-institutional approach theories to analyse planning, according to Lai (2005). This shift enables a new way of thinking and offers a set of analytical tools that enables comparison between several market and non-market transaction mechanisms (Lai, 2005). Lai (1994) analysed the most used institution in planning globally, this is zoning, through the lens of the Transaction Cost Theory. He describes why societies choose zoning as a formal institution in many countries, and the advantages and disadvantages in terms of transaction costs of the alternative institutional arrangement to zoning, non-zoning.

Literature often describes the dichotomy between market and planning, but they are empirically not distinguishable, not even for analyses according to Alexander (2001b). Planning is mostly associated with intervention from the government (Alexander, 1992), but market parties are also involved in planning, which makes it not the sole domain of the public authorities (Alexander, 2001b). Alexander (2001a) is the first to come up with an economic-political transaction-cost approach that can be used to analyse transactions involved in the development of the built environment. The model should answer the question why of society is organising the control and production in the built environment in the way it does. He distinguishes between the planning and the development control

tasks and comes to both of them with several alternative governance suggestions (Alexander, 2001a). The planning authority can support administratively as a third party or by being involved in the market. In both cases several governance structures are possible and there is space for market and public parties (Alexander, 2001a). Alexander stays on quite a theoretical level with his analyses and unfortunately does not show concrete empirical examples in his work.

Buitelaar (2004) discusses the fact that most of the literature on the Transaction Cost Theory in the planning domain lacks the practical usability of the theory. He also mentions that the transaction costs are numerous and ill-specified, which makes it harder to apply the theory to real urban development cases. He proposes a method to define the transaction costs by distinguishing them from the costs that are directly made for the production. After the identification of the transaction costs, it is possible to compare different modes of coordinating the development process (Buitelaar, 2004). In the PhD thesis of Buitelaar (2007), he compares three cases, which all have very different Institutional Environments, namely Nijmegen in the Netherlands, Houston in Texas (USA) and Bristol (UK). He describes four main factors that influence the transaction costs: the quest for control over development, the relationship between the public and the private sector, attitudes towards transaction costs and legal styles: flexibility, certainty and accountability (Buitelaar, 2007).

More recently Cho (2011) published an article, where he worked out a transaction cost analysis for the case of a housing redevelopment project in South-Korea. Development comes with a lot of uncertainty about the development's potential, its effects, interdependencies and strategic behaviour. Cho (2011) claims that the transaction costs are identifiable. Examples of identifiable transaction costs are delays in the process, prolonged negotiation, planning decisions, information & monitoring costs and enforcing the implementation of concluded contracts. However, his analyses are solely qualitative. For different stages in the development process, various forms of governance are institutionalized, as a response on the risks and characteristics of the transactions, which results in rather hybrid governance structures (Cho, 2011).

Existing literature made the first steps to apply the Transaction Cost Theory in the domain of planning and real estate development. However, the transactions and relations are often very complex, which makes it impossible to list and quantify all the costs. This thesis takes also a qualitative approach to assess the transaction costs of the different possible governance structures.

### 3. The market and process of residential real estate development

This chapter gives an elaborated overview of the market and the context of residential real estate development. It starts in section 3.1 with a description of characteristics of the housing market in general, and an explanation as to why it is different from many other markets. Section 3.2 continues with a focus on the Dutch housing market. The development process is divided into the planning and land development process and the real estate development process. Chapter 3.3 and 3.4 are dealing with those sub-processes, the actors and transactions involved in them and the governance structures.

#### 3.1. The housing market, a different market

Perfect markets reach a Pareto-optimal result under certain basic conditions (Barr, 1998). The housing market has many different characteristics compared to a perfect regular market. Examples of the basic conditions of a perfect market are: A high number of demanders and suppliers, homogeneous products, no governmental intervention, every actor aiming for profit maximization, and perfect information about the present and the future is available to all (Koutsoyiannis, 1979). This is certainly not the case in housing markets (Kiel & Zabel, 2008; Priemus, 2000a). The fourth layer of Williamson's model, Resource Allocation and Employment, assumes the conditions of a perfect market. The other layers of the four-layer model are clearly needed to explain the dynamics on the housing market, since the assumptions of a perfect market are not valid for the housing development chain. The system gets disrupted due to several causes.

The market forces are disrupted, since there is government intervention everywhere. In the entire supply chain of residential real estate development, there are actors who have more power than others active on the market, as well as social organizations, not aiming for profit maximization (Haffner & van Dam, 2011). An example of governmental intervention is zoning. Zoning is the most used tool to control land use in the world and is applied in almost every country (Lai, 1994). The use of zoning or other control mechanisms results in limitations on the availability of building land (Barker, 2004), which is one of the most important resources for real estate development. In many countries, there are social actors which provide housing on the market for the financially poorer members of society. Those housing associations have social goals and do often not aim for profit maximization.

Next to the previously mentioned disrupting factors, there are also several other features in the nature of the product, dwellings, which make the housing market special. According to de Wildt, Keers et al. (2005), there are two main characteristics of dwellings which cause a lot of natural imperfections in the market, namely the relatively long lifespan of dwellings and the fact that a dwelling is fixed on its location. Alongside the characteristics of de Wildt, there are also other characteristics mentioned in existing literature, which cause natural imperfections, like the fact that real estate is a heterogeneous product, it has a relatively long construction time, and involves large investments (Sociaal-Economische Raad, 2000). Dwellings are heterogeneous, as every dwelling has different characteristics. Location, building lay-out, quality, and age of the dwelling are just some examples of the characteristics which divide the housing market in numerous submarkets.

#### 3.2. Characteristics of the housing market in the Netherlands

The market forces in the Netherlands are similarly disrupted, since there is much government intervention in this area. There are actors more powerful than others and organizations that do not aim for profit maximization (Haffner & van Dam, 2011). The Dutch housing market is also special in itself, next to the governmental interventions and the fact that many assumptions of a perfect regular market are not met, resulting in a more complicated market (de Wildt, Keers et al., 2005). The Dutch

housing market is characterized by its structure as a stock market. The construction of new dwellings adds no more than 1.5 percent per year to the existing housing stock (Priemus, 2000b; Verhoeven, Knops et al., 2013). This makes it impossible to adjust the supply to fully satisfy the demand (Sociaal-Economische Raad, 2000). This inflexibility in the adjustment of the construction to the demand is reinforced by constraints on the supply of land due to governmental policy and zoning plans (Barker, 2004).

The fact that we deal with a stock market means that the price for real estate on the market is determined by the existing stock and not by the relatively small amount of new supply. This makes the construction of new dwellings financially feasible in situations where the selling price on the actual market is higher than the sum of the land price and the construction costs of the real estate (Needham, 1997). This argument can be reversed. The land price is determined by the price of a dwelling on the market minus the construction costs of the building itself. This is called the residual value calculation and is widely applied in the Netherlands for determining the market value of a piece of land (Needham, 1997).

It is not just the differences which exist between the Netherlands and other countries which sets the Dutch housing market apart; it's also the fact that the Dutch housing market cannot be seen as one single market, due to large regional differences therein (Haffner & van Dam, 2011; Maclennan & Tu, 1996). Differentiations can be made depending on region and sector (Maclennan & Tu, 1996). There is, for example, a high demand for new housing in Amsterdam, and the speed and scale of construction is not sufficient to fulfil it (Willems, 2016). The housing market in Amsterdam is booming in such a way that 40 percent of the dwellings were sold above their initial price in 2015 (CALCASA, 2015) and that figure reached 79 percent in the second quarter of 2017 (CALCASA, 2017). Conversely, there are also plenty of shrinking regions in the Netherlands with a more relaxed housing market (Vermeulen, Teulings et al., 2016). In general, it is hard to estimate the population increase of cities in the long term, which determines the needed number of dwellings, but actual growth is a good determinant for the growth in the short and medium term, according to Vermeulen, Teulings et al. (2016). The regional segregation of the market is an important feature of the market, since dwellings are land-based, and the location is a key feature of the product.

### **3.3. Actors, transactions and governance structures in the planning and land development process**

The construction of dwellings is a complex process, which can be split in several sub-processes (Verhoeven, Knops et al., 2013). The first sub-process is the planning and land development process. This has to be finished before the next phase, the real estate development, can start. There are several actors active in this sub-process. Traditionally, the municipalities had a double role. They were in charge of the planning process and they took the lead in the land development process too (de Wildt, Keers et al., 2013). Market parties were satisfied with this situation, since the development of land is relatively risky and municipalities offered the serviced building plots relatively cheaply to the market parties, since they did not aim for high profits (Needham, 1997).

The situation changed after the introduction of Vinex, a policy document from the central government of the Netherlands (See page 38 of this thesis). The central government indicated where development was desirable and shifted the responsibility to realise this development to the local governments and market parties. Many market parties safeguarded their positions by purchasing the Vinex-assigned lands with information about potential locations and rising real estate prices in mind (Groetelaers, 2005). From then on, the municipalities got competition from market parties.

## The Market for Owner-Occupied Dwellings After the Crisis

The increased demand for agricultural land enabled farmers to earn a greater profit because of the new more open process and the fact that the land had a high probability to be zoned for residential use. The new situation on the market resulted in many different governance structures emerging in the land development process, as the municipalities had lost their semi-monopoly position in the land market and now had to cooperate with market parties (Priemus & Louw, 2003).

In most of the emerging governance structures after the nineties there was still much municipal involvement in the process. But in some other projects the municipalities became less important and were just a partner for the regulatory adjustment and permits that are needed to enable the development. Literature describes the following cooperation models as ranging from a lot of municipal involvement to almost none: Public land development, building claim model, joint-venture, concession and private land development (van den Berg, 2011).

Public land development is the most traditional active method. The municipality took the lead and acquired the land, and visions and programmes were designed by the municipality too. They prepared the land to make it suitable for constructions and sold the serviced plots, suitable for real estate development, to market parties which took care of the real estate development. The municipalities were also in charge of the public spaces and facilities, such as roads and green spaces.

Many market parties acquired land with the goal to safeguard their positions after the central government published the Vinex document. They were willing to cooperate with the municipality by signing a building claim agreement. In this arrangement, they sell the land to the municipality, so that they can service the land to prepare it for real estate development. They get the right to construct dwellings on parts of the land in return for this voluntary sales agreement.

The joint-venture model is a Public-Private Partnership. The municipality and one or more market parties cooperate in a newly established development company. This makes it easier for the municipality to keep control, while they reduced the risks of the land development process at the same time. The advantage for the developer is that they can be sure that they can develop the site and that they can share the risks and costs of the land development with the municipality.

The concession model is also a Public-Private Partnership (PPP), but the municipality is financially less involved compared to the joint-venture. The municipality creates preconditions and boundaries, which are mostly based on the plans of the developer.

The municipality has a marginal role in the private land development model. They facilitated the development by alteration of the zoning plan and other necessary procedural steps. The plans and the execution of the land preparation are fully completed by market parties, as is the development of real estate, too. The public spaces and facilities are later constructed by the municipality or by the market parties (van den Berg, 2011).

In 69 percent of the cases the land development phase was done by the municipality and in 22 percent as a Joint-venture (PPP) (Groetelaers, 2005). This shows that market parties were still willing to cooperate with the municipalities, even though the market parties obtained a more powerful position by having land positions. Full private land development was unusual practice during that time.

The production of residential real estate comes with many different transactions, some in the land development phase and others in the real estate development phase. Some of those transactions are in fact a bundle of different comparable transactions. Alexander (2001b) describes different kinds of transactions for land development and the real estate market. It is important to note that the transactions described by Alexander are not exhaustive, since the kind and the amount of transactions vary from case to case, depending on the governance structures, the initial ownership structures, and the site-specific conditions.

## The Market for Owner-Occupied Dwellings After the Crisis

Several transactions take place in the planning and land development phase. The transactions discussed by Alexander show the numerous transactions needed in the development process and they are described as the following:

**Land purchase:** The value of land, and so the sales price of the plot, is, in the Netherlands, most commonly determined by the residual value method. The price of the real estate will be determined by the existing stock, since the real estate market is a typical stock market, where the prices of new products are determined by the value of the existing products on the market. So, the expected revenue of the sold owner-occupied dwellings is set by the market. The price for the building supplies and workforce, which results in the construction costs is also nearly fixed. This means that only flexible part of the price of a dwelling is the price of the land. The price that will be paid for the land is the market price of the dwelling minus the construction costs and a normal profit and risk surcharge for the developer and other involved actors. There are always two parties involved in the transaction, namely the seller and the buyer. The sellers of the land are the initial landowners, mostly farmers, and the buyer can be: a speculator, a developer, a builder, a householder or another actor buying the land to develop it themselves (Alexander, 2001b). The assets are land-based, which makes them very specific. There might be uncertainty about when and how exactly the zoning plan will be adapted and which future neighbourhood effects will arise, and this has a huge influence on the price. There is also information asymmetry as to the potential gains of the land. The frequency of land purchase transactions is relatively low and there is a small number of participating actors by those transactions.

**Land preparation & development:** Consultations from several parties, such as urban planners, architects and engineers, are needed to prepare the land for real estate development, and the use of construction firms is unavoidable (Alexander, 2001b). This is a bundle of relatively simple transactions. The assets are very specific, since services are requested for a particular location. The physical changes and developed plans are not usable on other locations without drastic changes. Uncertainty does not play a large role regarding those transactions. The frequency of the transactions on this specific site is very low, but the parties might have experience with comparable sites. There is a limited number of actors involved in one single transaction. However, the total of involved actors might be quite high in the bundle of transactions.

**Land disposition,** is the transaction of issuing the plots available and ready for real estate development to other parties (Alexander, 2001b). If the developer is in charge of the land development process, like in the concession model or the private land development model, this transaction might not take place for all or a part of the available plots, since they do the building development process (partly) themselves. The possibilities of the land are limited by the land-use plan. This causes, on the one hand, certainty about the possibilities for development, but it also makes the site more specific and decreases alternative allocations of the plot, which increases the site specificity of the asset.

Municipalities have a double function. Firstly, they are the planning authority, which places them in the situation of altering policy documents, but they are also often the supplier of building land at the local level (Badcock, 1994). This situation is a hazardous regarding governmental opportunism, according to the Transaction Cost Regulation theory, since the municipality, in its capacity as a regulator, can provide favourable conditions to itself as a party acting on the market (Spiller, 2013). Furthermore, third-party opportunism might occur during the land development process, since land development can have many downsides for the parties involved (Spiller, 2013). The planned development can be seen by lobby groups as undesirable, because of numerous reasons, such as environmental degradation.

### 3.4. Actors, transactions and governance structures in the real estate development process

The building development process starts when the land development process is finished. Real estate will be constructed at the issuable plots. In this phase, there are several actors and transactions involved in the process. The involved actors partly depend on the governance structure that is used in the earlier land development phase. Some private parties serviced the land themselves in a private land development model. These same parties can also lead the real estate development. In other cases, a private party might have development rights on some of the plots, since they agreed upon a building claim with the municipality during the land development phase. In other situations, the allocatable plots will be sold to market parties. This transaction does not occur in the case of full private development, where the plots are already owned by market parties who intended to develop the real estate by themselves. The governance structure in the earlier phase can limit the possible governance structures in the real estate development phase.

There are many parties offering construction services and building supplies, and regulations are less dominant in this process, which creates different governance structures compared to the land development process. Some developers are working with fixed partners or have their own construction department within the firm. Other developers look every time for the economical best deal on the market. Construction and property transfers are mentioned by Alexander as examples of transactions which take place in this phase.

**Construction:** It is the procurement of professionals and services of construction firms (Alexander, 2001b). This is again a bundle of relatively simple transactions, since different kinds of construction firms, sub-construction firms and other professionals are needed to complete the construction. The uncertainties are smaller, since the development is further in progress and the frequency of those interactions occur relatively often. However, the scale of the project can increase the uncertainty and demands for other contracting strategies, like long-term relationships (Alexander, 2001b).

**Property transfer:** Change in ownership of the land, including the buildings detached to it. Property transfers take place with high frequency in the Netherlands, due to its dynamic market. It is institutionalised by the Cadastre, which reduce the risks for both of the parties involved. In most residential projects, the physical construction process starts after a certain ratio of the buildings is sold, bearing risk reduction in mind.



### 4. Research design

Theoretical research is done to identify the problem and to gather more theoretical knowledge of the housing market. Also, secondary quantitative data is used to give a proof for the need for more owner-occupied dwellings. More empirical insights are needed to answer the sub-questions which are introduced in this chapter. The goal of this thesis is to assess the efficiency of the existing governance structures and to discover ways to improve the efficiency and increase the building output. The macro data which is collected by means of desk research will be validated on micro-level. Data from the micro-level is collected by means of semi-structured interviews to validate the findings and give new insights into the efficiency of the governance structures. The micro-level data needed was not available in existing literature, journals, or government reports. This makes the collection of primary data essential.

This chapter discusses the research design. The research questions are introduced in the first section. Section 4.2 explains the methodology which is used in this thesis and how the data was collected. In section 4.3, attention is paid to the units of analysis that are used in this thesis. Section 4.4 gives an overview of all the sources used for the data gathering. The conceptual model which is central in this thesis is discussed in section 4.5. The final section of this chapter (4.6), pays attention to the possible hazards of the research and data collection methods that are used in this thesis, how this might affect the outcomes and how the hazards are minimized.

#### 4.1. Research questions

There is one leading research question which is answered in this thesis. Several sub-questions are defined to structure the information gathering and argumentation, which are used to answer the leading main research question.

##### Main research question

This thesis aims to identify misalignments in the governance structure for the production of owner-occupied dwellings, and how actors can reduce transaction costs to increase the process efficiency by using alternative governance structures. With this knowledge, it might be possible to boost the output of the construction of owner-occupied dwellings. The leading main research question in this thesis is:

- *How can improvements of the governance structures enable a better-functioning market for newly built owner-occupied dwellings?*

##### Sub research questions

This main question will be answered by a synthesis of several sub-questions. The sub-questions that are answered during the research process are the following questions:

1. *How can Williamson's four-layer model be used to explain the institutional change of the last decade?*
2. *Which kinds of institutions are present in the construction process of owner-occupied dwellings?*
3. *What is the impact of the crisis on the institutions in place?*
4. *What do the actual governance structures look like in the construction process of owner-occupied dwellings?*
5. *Are the existing governance structures efficient?*
6. *How can the production of owner-occupied dwellings be stimulated by more efficient governance structures?*

### 4.2. Methodology & Data collection

Desk research is the appropriate method to gather background information on the topic of the owner-occupied housing market. This available information is used to compose a review of the available knowledge and to identify the knowledge gap in a preliminary stage of this thesis. Desk research as a research method was also very helpful in later phases of the thesis. There is sufficient qualitative data about the functioning of the housing market and the interaction of the market with governmental policies and legislation as well as about interactions with the financial market. There are also various reports available that describe the fact that the new owner-occupied dwelling output does not meet the current high demand. Those qualitative descriptions are also supported by quantitative data on the macro-level, published by Statistics Netherlands (CBS) and real estate agency unions. This available secondary data is used as a starting point for this thesis.

The first three chapters of this thesis contain a review of the available information. The second and third sub-questions about the institutions in place and how they changed can also largely be answered with the data gathered by desk research, supplemented by the data gathered in the orientation interviews with a selection of different actors, which are active in the development process.

Data sources are selected in several ways. Examples include searching for articles with key words in online search engines, advice from several contributors and being referred to other articles and documents by the reference lists of interesting and relevant articles. The most important findings in the literature are validated and sometimes supplemented by semi-structured orientation interviews with a variety of practitioners out of the public and private domains which are involved in the housing construction sector.

The information used is primarily qualitative, rather than quantitative. The choice for this descriptive, qualitative approach is made because it enables insights into the changes of the institutional settings and potential misalignment and inefficiency in the governance structure. This approach is used to make it possible to understand the relationship between the bottlenecks experienced in the process, the changed market situations, and the shifts in the Institutional Environment. The aim is to give a descriptive overview of the current situation and how governance structures have been shifted and influenced by the financial and real estate crises. With the comparison of the old and new situations it becomes possible to see which effects the changes have on the governance structures and the efficiency of the structures in the other institutional layers.

The data about the relations, transactions and shifts over time found in the literature and other sources will be verified for the local context by means of two cases. Information about those cases and the institutions at micro-level is collected by means of semi-structured interviews. Public actors and several market parties were consulted to gather information about their views on the development sector before, during and after the crisis. During the interviews, the attention was on changes in possibilities, attitudes, power, and relations of the different actors involved in the production process. Also, changes in legislation and policy were discussed during the interviews.

This semi-structured technique makes sure that all the relevant topics are discussed, but it gives also flexibility and freedom to the interviewer to ask further about certain statements and add questions if needed. The topic list with initial questions is included in Appendix 1 of this thesis.

### 4.3. Units of analysis

The units of analysis are the institutions in the residential real estate development sector. This is a complex assembly of different markets (Figure 10), like the land market, building materials market, labour market and financial market. The important institutions of all of those different markets which can be divided according to the layers of Williamson's four-layer model are used as units of analysis in this thesis. The same institutions will be analysed in the situations before, during and after the crisis.

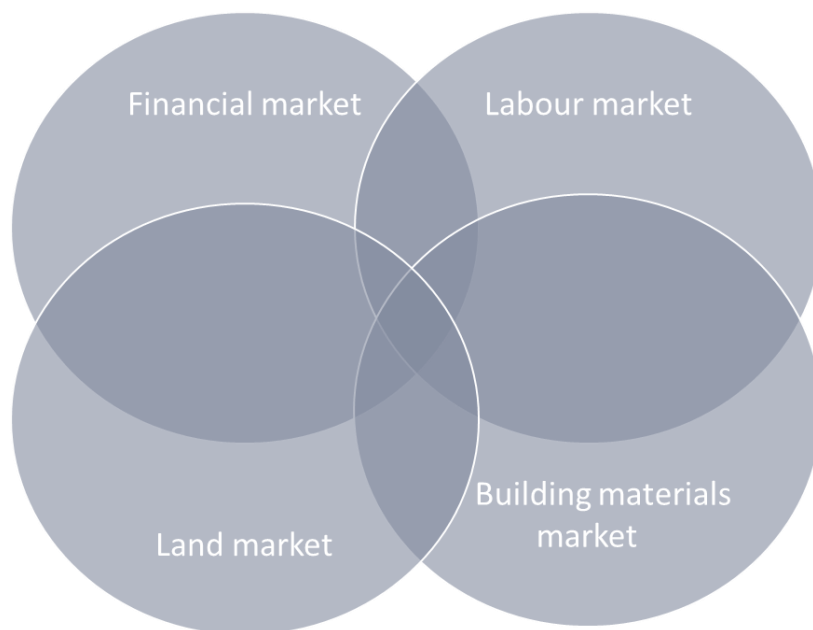


Figure 10: The residential construction market, a mix of different markets

### 4.4. Sources

Several sources of literature, journals, government reports and news articles offer a wealth of information about the construction of owner-occupied dwellings. Those sources are used to identify the problem. This qualitative unit is supplemented with secondary data from the database of Statistics Netherlands to give a further quantitative proof of the problematic situation and the current housing shortages in the Netherlands. Primary data from the orientation interviews is used to verify and supplement the available secondary information.

The analytical part of the thesis is based on intertemporal comparison. This method is chosen, since this thesis aims to find solutions for the owner-occupied housing shortages by understanding the dynamics between the different layers in time. Institutions and governance structures are compared at different moments in time, namely: before, during, and after the last real estate crisis. This is done on the basis of the four-layer model of Williamson.

The general findings will be validated by analysing the institutions and the institutional change in the local context. The cases which are used to check the general findings in the local context are three different development projects in the Lansingerland municipality. They were selected because they share several important comparisons. They are all located at the West side of Berkel en Rodenrijs, a location which was assigned as a Vinex location. Furthermore, the output of all the projects is focused on residential buildings, with a majority in the owner-occupied sector. The geographical location of the different projects is indicated in Figure 11.

## The Market for Owner-Occupied Dwellings After the Crisis

The first project is the Gouden Griffelbuurt, a Vinex location which had been developed before the crisis. The involvement of private parties was deep during the entirety of the project, from land acquisition and preparation until the sales of the individual dwellings, which reduced the risks for the municipality. This was not common practice during that time, since municipalities mostly got involved in the land development phase, but this situation is the model that the majority of the municipalities have been aiming for since the crisis. This project is considered as the base situation, the T=0 of Figure 12. The second research sub-question will be answered by analysing the 'pre-crisis' project in chapter 5.5.

The two other projects are both ongoing and not fully constructed yet. They are different; one will be developed with the help of a voluntary agreement (Gouden Podium) and the other supported by the new Land Development Act (Meerpolder). Gouden Podium and Meerpolder are both a T=2 situation as indicated in Figure 12.

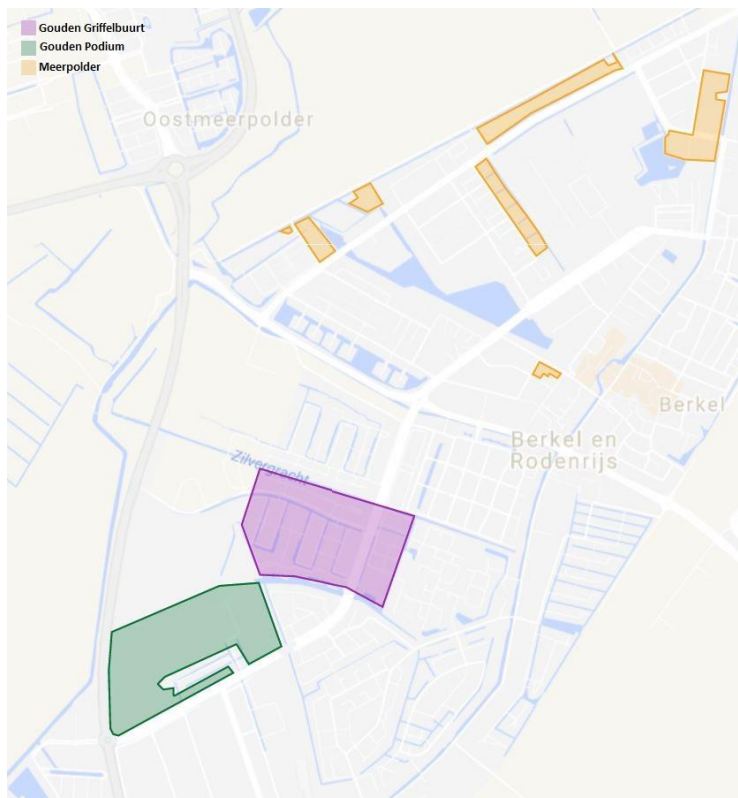


Figure 11: Geographical location of the cases

### 4.5. Conceptual model

The four-layer model of Williamson, presented in chapter 2.2, is used as the conceptual model in this thesis. All the information about the institutions in place is divided into the different layers described by Williamson. Williamson received criticism that his four-layer framework does not take into account the dynamics of real life, but Williamson (1991) defends his framework against this criticism by claiming that changes in the Institutional Environment make the governance structures dynamic. Shifts in the environment influence the costs of the governance structures and thereby increase or reduce the use of certain structures (Williamson, 1991). This approach enables statistical comparative analysis with the four-layer model. This method is also used in this thesis to make an intertemporal analysis. This method is used to find solutions for the owner-occupied housing shortages, by understanding the dynamics between the different layers over time. The structure of this method is graphically shown in Figure 12. Time 0 is the starting position. Changes in one of the institutional layers

## The Market for Owner-Occupied Dwellings After the Crisis

might occur and are indicated with  $\Delta$ . Those changes might have affected the institutional arrangements in the other layers, which resulted in differences between the situation at time 2 compared to time 0. The model will be used to describe, analyse, and explain the situation in the development sector in in general. Moreover, the cases which are introduced in the sources section will be analysed with this conceptual model, to verify if the general findings are also present in the local context.

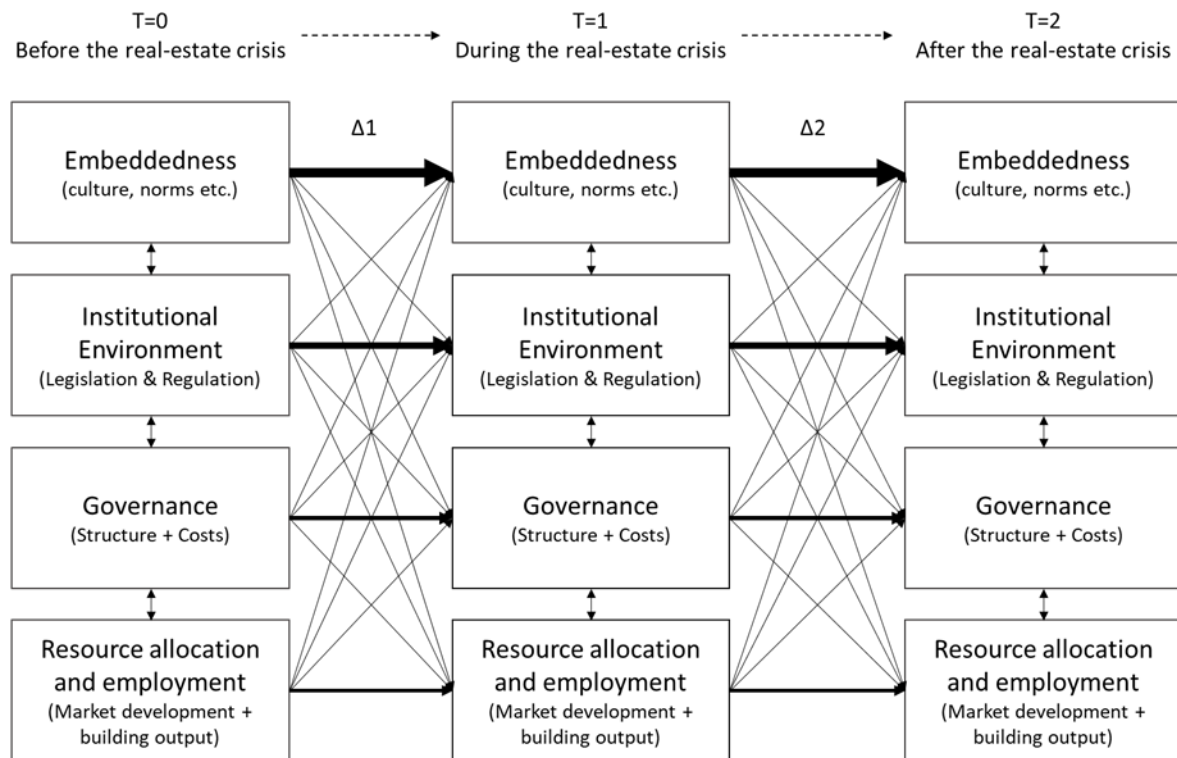


Figure 12: Conceptual model

### 4.6. Data issues

The projects of the case studies are all located in the same municipality. This is a conscious choice, aimed at keeping as many variables as possible the same to allow good comparison. The number of cases and the proximity of the cases in one single region makes it impossible to generalize the findings over the Netherlands, but offers the possibility of verifying the national findings and changes in a local context. The case studies are intended to give insights into the policies and decisions of actors on a micro-level. Furthermore, the local consequences of the national policies are shown by means of the case studies.

The techniques of data gathering used, semi-structured interviews, could bias the findings. Interviewing as method of data gathering always has a risk of getting socially desirable answers from the respondents. The fact that the interviews are conducted by the actors that have or had a stake in the development projects might result in strategic answers of the interviewees. Those actors have a stake in the building industry and probably do not share information that could be used against them or their organisations. Interviews are done with multiple parties to compare the points of view and experiences of several actors of the projects. This increases the reliability of the data, since more points of view are covered in the analysis.

### 5. The situation before the real estate crisis

The situation and the institutions in the development process of owner-occupied dwellings is described as it was in the years before the crisis in the Netherlands in this chapter. Analysis has been completed in accordance with the layers Williamson's model. Each of the following sections describes the key institutions which were relevant in the development process, starting in section 1 with the Resource Allocation and Employment institutions and finishing in section 4 with the institutions of the embedded layer. This chapter concludes with a case to illustrate how the general institutions are present in the local context in section 5.5.

#### 5.1. The market, Resource Allocation and Employment

The institutions in this layer deal with the utilization of production factors. These are mainly decisions made on a business or a personal level. The decisions made by the actors involved in the residential building industry should be seen in the context of the economic development in the sector to understand the decisions which are made. The economic situation in the residential building sector was favourable to almost all the involved actors since the turning point of the national policies in the beginning of 1990s, the time when the market parties took the lead from the central government.

##### Residential real estate market

The favourable economic conditions had a large impact on the market for residential real estate. It started with the situation of the buyers; the future residents and owners of the dwellings. People with a higher income are more likely to allocate their financial means to buy their own dwelling (van der Schaar, 2006). The average household income increased, and the mortgage interest rates decreased in the decade prior to the crisis. These were important trends which supported the affordability and increased the demand of owner-occupied dwellings (Elsinga, de Jong-Tennekes et al., 2011).

The real estate prices rose very fast due to the high demand and the inelasticity of the supply, which was caused by several formal institutions (Needham, 1997). Figure 13 shows the percentage change of the price of owner-occupied residential real estate in the years before the crisis. The average sale price of a dwelling in the Netherlands increased in the peak year, 2000, more than 18 percent compared to one year before. After this year, the price increase normalised a bit and fell back to around a 4 percent increase per year. The value of real estate rose so fast that people bought a dwelling or moved to a more expensive dwelling to increase their living standards, but also with the future value increase as an investment in mind. This resulted in even more demand and further price increases.

## The Market for Owner-Occupied Dwellings After the Crisis

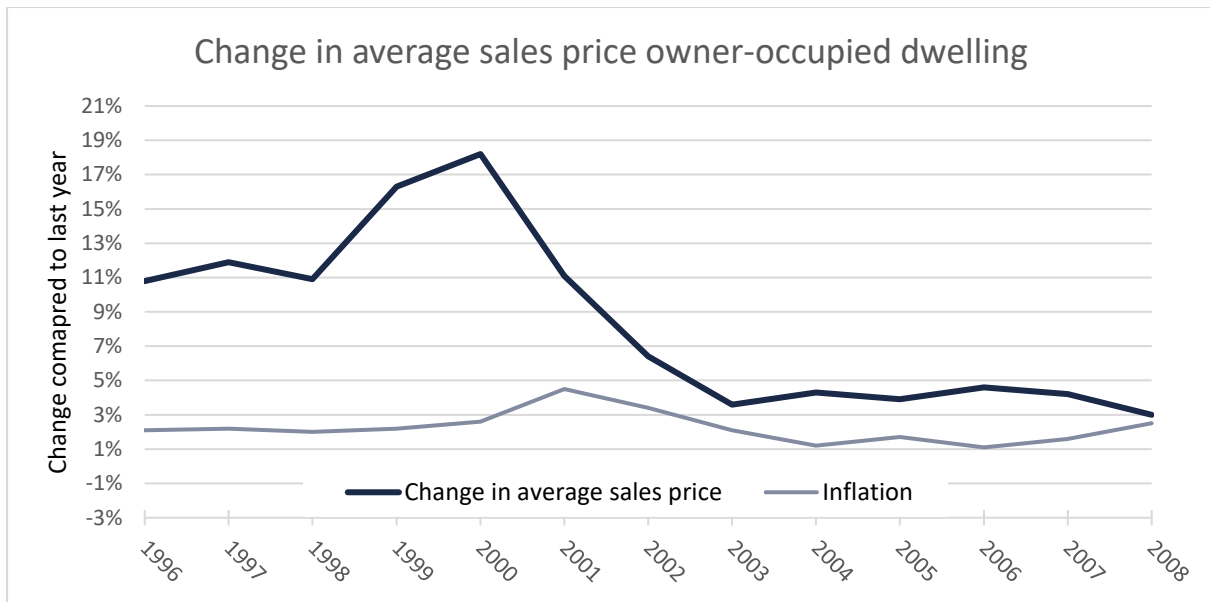


Figure 13: Development of the sales price of dwellings (Statistics Netherlands [CBS], 2018a)

The increase in price and demand was enabled and even reinforced by the mortgage products that were offered by the financial institutions in the time prior to the crisis (Elsinga, de Jong-Tennekes et al., 2011; van der Schaar, 2006). Financial institutions were needed to support the price increase, since most of the buyers did not have sufficient funds themselves. The financial institutions created mortgage products to maximize the advantages of the mortgage interest rate tax deduction, relaxed the requirements to qualify for a mortgage and increased the loan-to-value and loan-to-income possibilities (de Vries, 2009). The possibilities which were offered by the financial institutions resulted in an enormous increase in mortgage debt as indicated in Figure 14.

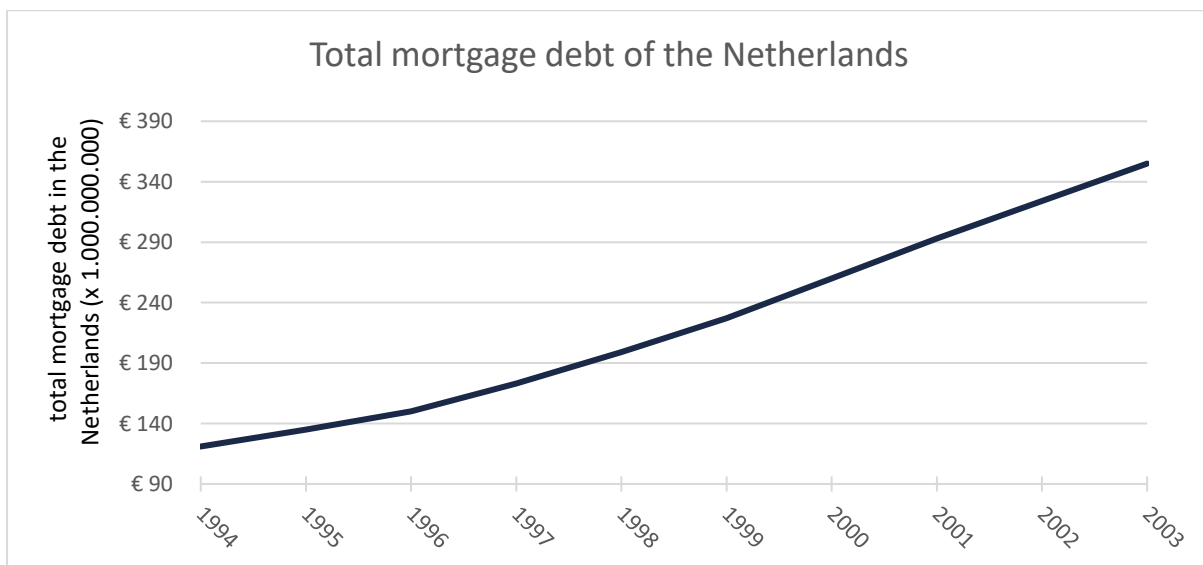


Figure 14: Development of total mortgage debt of the Netherlands (Statistics Netherlands [CBS], 2017c)

### Land development phase

The increase in sales prices was 59 percent between 1995 and 2003, while the cost for the construction was rising at a much slower pace (Boelhouwer, 2005; de Vries, 2009). This means that the profitability in the development sector increased unimaginably quickly during this period. There were enough developers willing to allocate their workforce and resources to develop sites in the time prior to the

crisis. Developers were also positive about the market, due to the increasing residential real estate prices. Developers were acquiring land which was likely to get assigned as land for development partly on a speculative basis, as land prices were rising too.

This increase and market activity was also backed by the financial institutions. Some development projects were even possible without any financial means of the developer himself, as financial institutions were willing to finance the entire project. This situation resulted in the fact that many developers had lofty ambitions and worked with high leverages to finance their ambitious projects, which would have been impossible with just their own funds.

This increase in land value was also seen by the local authorities. This made active land policy an attractive tool to control the land development and recover the costs for planning and public facilities. However, the amount of development was slowed down by the public parties. The available land for development was for example limited due to the national Vinex policies (See page 38). The available land was further restricted by the enforcement of the renewal obligation of municipal zoning plans. This made the available land for residential development scarce, but on the other hand gave more certainty and reduced the risks of the projects indicated as Vinex locations.

A certain percentage of affordable housing had to be realised in most of the projects. This already had impact in the land development phase. Mostly different land prices were calculated for the private developers and the social housing associations. This means that the price of the allocatable plots for the commercial parties had to balance the lower prices of the 'social' plots.

### **Real estate development phase**

The favourable economic circumstances which resulted in the high demand for owner-occupied dwellings caused shortages of personnel and building materials in the building sector (van der Heijden, Hoekstra et al., 2001). A tight general labour market and shortages of internship places are mentioned as being the most important reasons for the lack of available construction workers, notably carpenters, bricklayers and plasterers (van der Heijden, Hoekstra et al., 2001). The research of van der Heijden, Hoekstra et al. (2001) points out that the problem in supplying building materials was caused by the tight market for supplies. Prefab-concrete elements, piles and frames and bricks had the largest availability problems.

Companies would generally aim to use their resources in a way which would maximise their profits. Earlier research indicates, for example, that building resources are allocated by companies to the construction of offices at the expense of the production of dwellings in times of a long lasting economic growth (de Wildt, Keers et al., 2005). This is caused by the fact that residential development has a longer time span and is less flexible compared to the development of offices (de Wildt, Keers et al., 2005).

The tight market for building supplies and workforce made it possible for the supplying industries and the labour force to increase the prices. A scarcity surcharge was calculated by many suppliers to increase their profits. The surcharges reached the level of 12 percent of the total sum of all the involved construction costs (de Wildt, Keers et al., 2013).

Furthermore, the local authorities also tried to optimise their gains. They mostly used active land policy as a means to steer the development and recover the costs for public facilities and infrastructure. To reach an agreement with the developers they also used the required percentage of social housing as a trade-off in the negotiation process. This resulted in the amount of social housing in new projects decreasing in the years prior to the crisis (van der Schaar, 2006).



### 5.2. Governance

The institutions in this layer deal with how the different parties collaborate in the complex process of residential real estate development. The prominent role of the government in spatial development is characteristic of the Dutch system. (Groetelaers, 2004).

It all starts with the planning phase. The national government, the province and the municipality all make zoning plans (Inpassingsplannen and Bestemmingsplannen) and visions (Planologische kernbeslissingen, streekplannen and structuurplannen). The plans of the lower governments are more detailed but must fulfil the requirements given by the higher governments. The local governments are assigned to realise a part of the total targets set by the higher governments in a certain period, within the constraints which are also set by the higher governments. The targets that are set and divided by the central government are based on prognoses. The targets are fixed for a certain period, which makes the building output inflexible by changing (market) circumstances, such as better economical situations, as anticipated. This process was a typical top-down process, where the local government must work within the framework of the higher government(s). The higher government(s) also had the power to overrule the local plans.

Market parties can request that the municipality makes certain development possible, but in the end, it is solely the municipality which decides where development is permitted. The procedures require careful balancing of interests; new preliminary plans must be publicised, and stakeholders have the right to object. A change in the municipal plans and visions or a request for a change initiated by a market party is usually a lengthy process, which can take five to eight years (Verhoeven, Knops et al., 2013). In the planning phase, the municipality has the leading role, but market parties can request an alteration.

The production of dwellings is a complex network of many actors and the development chain is an assembly of different markets including land markets, financial markets and real estate markets (van der Schaar, 2006). The upcoming sections make a separation between the actors and governance structures in the land development phase and the real estate development phase of the process.

#### Land development phase

There is a limited number of actors involved at the land market (van der Schaar, 2006). Most of the municipalities chose an active land policy, which enabled the initiation of projects and gave municipalities a leading position in the land development phase. However, market parties could also take the lead. In practice most of the market parties were willing to cooperate with the municipality and work according the conservative model, where the municipality took the lead and the risk (Needham, 1997). In 69 percent of the cases the municipality took the entire responsibility for this phase and in 22 percent of the cases the municipality was involved in a public-private partnership for it (Groetelaers, 2005). This means that municipalities were actively involved in 91 percent of the cases.

Several different governance structures emerged, some with much municipal involvement. In other structures the municipality had merely a facilitating role (van den Berg, 2011; de Wildt, Keers et al., 2013). The different models for land development are the following, ordered from a lot of municipal involvement to a little municipal involvement: public land development, building claim, joint-venture and a concession model (van den Berg, 2011; Nijkamp, Van Der Burch et al., 2002; de Wildt, Keers et al., 2013). Cooperation between market parties and the municipality is in the end needed in all different governance models, since they need each other to reach their final goals.

Public land development takes place where municipalities aim for an active land policy. Active land policy is a strategy where the municipality takes the responsibility for site acquisition, site servicing, and plot allocation of the entire project (Buitelaar, 2010; Groetelaers, 2005). A prerequisite is that the municipality is able to get their hands on all the land involved (de Wildt, Keers et al., 2013). After this

process the allocatable plots are sold off to social housing associations, real estate developers and sometimes individual households or businesses (Buitelaar, 2010; Needham, 1997). Municipalities use this strategy to reach their policy goals, next to other land-use planning tools like zoning plans. However, this active land policy has also some disadvantages for the municipality. The risk of the saleability of the serviced building plots lie completely within the municipality's responsibility (de Wildt, Keers et al., 2013). This means that if the building programme does not match the market demand, the plots are not sold or for lower prices to market parties. This can result in a negative project balance for the municipality (de Wildt, Keers et al., 2013).

The building claim construction was the most popular construction just before the crisis. Municipalities often aimed for public land development, since they were in favour of active land policy, but had to make agreements with market parties to acquire the required land. Municipalities wanted to purchase the land to prepare it for real estate development, but this was not just owned by the original owners anymore; market parties had also already taken positions (Groetelaers, 2005). They were often faster with their purchase than the municipality. The market parties who obtained the land which the municipalities wanted to acquire, were quite diverse. Those parties were sometimes speculators, but many developers who wanted to safeguard their positions, took land positions too. The fact that the municipalities could not get their hands on all the land and that developers could use their right for self-realisation forced the municipality to make agreements with the market parties (de Wildt, Keers et al., 2013).

The new owners were mostly willing to make deals with the municipality to sell the land in exchange for the right to construct a given number of units in the real estate development phase (Groetelaers, 2005). They bought the land to ensure that they could develop real estate on it in the future. They were fine with the fact that the municipality wanted to take the lead in the land development phase in exchange for a guarantee that they could develop (a part of) the real estate on it in the later phase. In this model, the municipality is in the lead, but there is mutual dependency, so the interests of the involved market parties have been taken into account to come to an agreement (de Wildt, Keers et al., 2013). According to Groetelaers (2005), in 42 percent of the cases, parts of the site had building claims. The advantage of the building claim agreement for developers was that they did not have to make the large upfront investment for the site preparation, nor bear the risks of the site preparation. The municipality benefited from the agreement too, since they could use it as a steering tool to reach their policy goals, and they were able to capture a part of the development gains to finance public facilities and infrastructure.

In the joint-venture model the control, risks and responsibilities are not divided like in the previous two models, but shared instead (de Wildt, Keers et al., 2013). The municipality and a market party or several market parties founded a separate body, a public-private partnership (PPP) for the land development project. Sometimes the real estate development was also carried out within the PPP, mostly in cases where many public facilities were developed within the project (de Wildt, Keers et al., 2013). An advantage of this model is that knowledge from market parties and the municipality are both incorporated in the PPP. This construction leads to less control on the (urban) planning and the preparation of the site, but also reduces the municipality's risks, since those are shared with market parties. It is appealing for market parties to enter into a cooperation like this, as they can have a larger influence on the planning and the building programme.

The land is developed entirely privately in a concession model. In some situations, the municipalities owned the land and were selling or tendering it to market parties. In that case they can still make private agreements about quality, housing programmes and other policy goals (de Wildt, Keers et al., 2013). In other situations, the developers own the land already. They have the right of self-realisation if they own the land and can prove that they are able to develop it according to the

zoning plan. This situation results in more freedom in the planning and realisation of the building programme for market parties. This model can also be interesting for municipalities in case they are not willing or able to take any risks, but also in situations where the municipalities do not have the knowledge or capacity to lead the process themselves (de Wildt, Keers et al., 2013). The municipality is in this model just able to steer by public law instruments, such as zoning plans. However, this model has also plenty of advantages for the municipality. They do not have to take any financial risks and smaller civil servant workforce is required (de Wildt, Keers et al., 2013).

The governance structure in the land development phase is characterised by different governance arrangements. There is the public land development model, where the municipality is fully in charge of all the steps for preparing the land for real estate development, and there the model where all the transactions are arranged entirely in the private sector. There are also several arrangements in-between the extremes of entirely public or entirely private land development.

Active and passive land development is often the jargon used. Active land policy means that the municipality is in charge of the land development and is selling the issuable plots to developers for real estate development. Public land development and the building claim model are clearly based on active land policy, since the municipality owns the land and is in the lead during the land development phase. The municipalities do not obtain land themselves when the municipalities apply passive land policy. In these cases they are steering the development by public law tools. The concession model is an example in which the municipality steers with public tools and applying passive land policy. Whether the policy is active or passive depends on the situation and the agreements made between the parties involved in a development project based on a joint-venture model.

In practice, there is cooperation between market parties and the municipality in all the arrangements, otherwise it would be impossible to reach the final goals of both parties. The municipality has the enabling power by being in charge of the building permits and alternations of the zoning plans. The municipality needs the developers, especially in cases where huge building output rates need to be realised.

### **Real estate development phase**

The responsibility and the lead clearly shifted to market parties in the real estate development phase. The municipalities take a mostly passive role in the development of the real estate itself. However, the municipalities have already set boundaries on the possible real estate development in the planning phase. The realisation of the dwellings must be according to the zoning plan. In this plan the maximum building measurements and the type of dwellings are described. Municipalities that got a Vinex task were mainly collaborating with developers with large construction capacities, since high numbers of residential real estate had to be developed to reach the target output rates.

The developer is mostly the initiator of the real estate development process and takes the lead in this phase. Also, other principals were active in this phase, like social housing associations, and private and institutional investors, or a combination of those parties. There are also projects executed on smaller scales by private commissioners.

The goals of the parties are different. A social housing association's core objective is to provide affordable and liveable housing. Aside from that, they also developed more expensive housing to cover the losses on the social exploits (Wolting, Bregman et al., 2006). Commercial parties, like investors, make a trade-off between different asset categories to create rates of return. The rent is the direct rate of return in the case of a real estate investment, but there is also the indirect rate of return, namely the value increase of their property (Wolting, Bregman et al., 2006). The developers are the initiators and sell the real estate with a margin to the investors or individual owner-occupiers (de Wildt, Keers et al., 2013).

## The Market for Owner-Occupied Dwellings After the Crisis

There are many demanders and suppliers in the market for the development of real estate. However, a large share of the residential real estate projects was done by developers with a large market share (van der Schaar, 2006). Those developers were mostly cooperating with fixed financial institutions and investors for the risk-bearing and funding of the projects.

There are two kinds of developers; the developers with a construction pillar and developers who are outsourcing the realisation of the real estate to a construction firm. In both of the cases the developer needs knowledge from many different fields; design, architecture, constructions, installations, project management, financial aspects, and supervision at the construction site (de Wildt, Keers et al., 2013). All those functions can be and are sometimes internalised within the firm, but they are more often (partly) outsourced to other firms.

The physical construction is either done by the construction pillar of the developer or a contracted external construction firm is. The construction firms are sometimes selected on relational reasons and sometimes a request for proposal is sent out to different parties. In many cases the construction firms are taking over a part of the sales risks from the developer (de Wildt, Keers et al., 2013). Also, the building firms often do not have all the required knowledge or workforce within their firm and outsource work. The partners here are also selected because of relational reasons, but requests for proposals are common practice too. This can be a request with the intention to choose the party with the best price quality ratio, but is also done to check if the prices of the relational partner are still common market prices.

Developers and construction firms subcontract, since they need knowledge and require workforce. This makes the supply chain in the construction sector highly fragmented and complex. A large percentage of the involved parties are small- and medium-sized enterprises in this labour intensive production chain (de Wildt, Keers et al., 2013).

Real estate brokers are the link between the developer and the final customers. The final users were mostly solely seen as users and buyers of the dwellings designed and constructed by other parties, and are in general not that much involved in the design and development process. An exception to this are the (small) number of projects that are commissioned by the dwelling owner itself. It was and still is a common Dutch practice that the final owners of the owner-occupied dwellings are pick one of the dwellings provided by the developer and have not much to say about the design and the execution of the construction, aside from the extra options offered by the developer.

### Transaction Costs

Many transactions are involved throughout the development process, from the planning phase until the handover of the real estate to the final users. The amount of transactions, how they take place, the associated costs and the parties involved in the transaction all depend on the governance structure. Transactions take place in all the different cooperation models and those transactions are not settled for free. Transaction costs are involved for many aspects, like acquiring information, negotiations, and drafting contracts.

Some of the transaction costs are institutionalised, since good registration of the property rights is desired by public authorities and can prevent future conflicts. Other transaction costs are made to reach a deal between the involved parties or to reduce the risks and uncertainties of a project.

The land purchase is one of the most important transactions in the land development phase. This is a transaction which takes place between the current landowner and the future landowner. Mostly between farmer and municipality in the case of a project where the municipality applies an active land policy. In cases of projects where the developer is in charge of the land development and the municipality applies a more passive attitude, this transaction takes mostly place between the farmer or municipality as a landowner and the developer as the future landowner. This transaction often comes with uncertainty, since land is sold without having development possibilities according

to the zoning plan yet. However, the uncertainty is reduced if the municipality already enables development in a zoning plan. The publication of the Vinex document made it clear where development would be permitted. This reduced the uncertainty for developers to buy land in the assigned areas. Developers often want to have more information than is available straight away. Research to find the desired information costs time and money. For example, information about previous use might be relevant, since this might cause additional costs further in the process due to soil contamination.

Many transactions have to be carried out for the land preparation and development. One of the parties involved in all the transactions of this bundle is the developer or the municipality, depending on the cooperation model between them. External parties like designers and firms are contracted for the physical transformation of the site. Those transactions also carry costs with them. The potential contract partners are working on site-specific products. They are consulted and contracted for a specific project. Their work cannot easily be used for other sites. This makes it risky to participate in tenders or competitions, since there is a high risk that they are not selected by the developer or municipality.

Land disposition is the transfer of the issuable plots for real estate to the developer responsible for the real estate development. In the case of an active municipal land policy, the property rights of issuable land are transferred from the municipality to the developer. In case of private land development, the land stays the property of the developer, is (partly) sold to another developer or to another juridical entity of the land developer. Risks and transaction costs are reduced due to the availability of a zoning plan. This means that it is clear to all the parties what is allowed on the plots. The risk of the transaction itself is reduced by institutionalisation by means of a cadastre registration.

The construction is a bundle of relatively simple transactions. The developer is contracting a construction firm or sometimes multiple construction firms. The selection can be based on a partnership, but tenders are also common practice. A tender means high transaction costs for the developer, who must write and organise the tender, but also for the participating construction firms who have to collect the prices from the subcontractors and calculate the entire project. This process of selecting partners goes through the entire supply chain. The construction firms are subcontracting to their partners in similar ways.

Property transfer is a transfer that happens very frequently in the dynamic housing market of the Netherlands. This transaction is institutionalised by the cadastre to protect the involved parties. In the development of new residential real estate, this transfer takes place when the real estate is realised, and the plot, including the real estate, is transferred to the final buyer.

### 5.3. Institutional Environment

The Institutional Environment is an important layer in the building sector, since there is a lot of regulation which influences the processes and market performances significantly. Formal institutions were mentioned several times before the crisis as being an important reason for the inflexibility of the building supply (Barker, 2004; Dol & van der Heijden, 2009c). The plan capacity was too small and the procedures too complex and time consuming. The required procedures (of the municipality) were often experienced as a larger bottleneck than the shortages of personnel or building supplies of the developers (van der Heijden, Hoekstra et al., 2001). The bottleneck monitor for dwelling production indicated that bottlenecks were experienced due to the procedures (Dol & van der Heijden, 2009c). Those procedures were perceived as being too complex and the lead time too long (Dol & van der Heijden, 2009c). This results also in the fact that the supply reacts slowly to the demand.

Institutions out of this layer have a great history in the construction sector in the Netherlands. There were enormous housing shortages despite the high output rates of new constructed dwellings

in the time after the Second World War. Those shortages of dwellings placed housing policy high on the agenda of politicians (Groetelaers, 2004). In first instance, housing production was stimulated and regulated by many subsidies, but almost all the subsidies disappeared in the 1990s (Boelhouwer, 2002; Ronald & Dol, 2011). There were still some subsidies available, but just for the development within the Vinex areas. The fact that the number of available subsidies decreased does not mean that all the problems with housing provision were solved, but that a shift of responsibilities to the market parties fitted the philosophy of liberal market thinking of that time. Housing was still an important topic for politicians despite the abolition of the supply subsidies. The national government tried to reach its housing goals from that moment on mainly by national visions and agreements with lower governments.

Before the crisis (and still today), there were a lot of rules and regulations which deal with all aspects of spatial planning and real estate development. There are regulations and policy documents, which indicate on which locations development is allowed, what kind of development is allowed, and how the process should be carried out. The minimum quality and environmental standards are also set by law. The entire judicial framework is complex, since some of the legislation is on the national level, but other legislation on the level of the provinces and the municipalities is also setting important rules of the game.

Several formal institutions have been changed since the beginning of the 1990s (Boelhouwer, 2002; Groetelaers, 2005). Market parties and governments adapted to this changed regulation, which resulted in a shift of the governance structures. This section elaborates on the changes in legislation that the land market and construction sector for owner-occupied dwellings had been subjected to in the decades before the crisis.

The central government of the Netherlands enabled the construction of dwellings by providing many subsidies because of the huge housing shortages in the aftermath of the Second World War until the nineties. Local authorities were in charge of assigning enough land to construct the desired dwellings and avoid shortages (Needham, 1992). The process was mostly directed by the municipalities; they provided the serviced building land to market parties. The land was reasonably priced, since the municipality did not aim to make profit. The municipality selected the market party to develop the site which offered the best quality in a given price (Needham, 1992; Needham, 1997). The price was basically determined by the national government by different subsidy categories.

The process was very top-down directed. Governments used public and private law to maintain control over the development. Building acts and local zoning plans were used as public instruments to restrict development. Municipalities used private law to get involved as a party responsible for the land development and to have more influence on the process and the outcomes of the projects by distributing the serviced plots to market parties. This is called active land policy and was common practice in the Netherlands. The municipalities had mostly a monopoly within their territory on the provision of serviced building land (Buitelaar, 2010).

In the beginning of the nineties, the Dutch government decided that housing provision should be more market orientated and ended most of the subsidies. An official policy document, the Fourth Memorandum on Spatial Planning Extra (Vinex, see page 38) indicated large sites, where new development was desired (Groetelaers, 2005). In this, national subsidies were still available for Vinex assigned areas. Furthermore, the restriction for development outside the Vinex locations became tighter (Needham, 1997). The responsibility for the implementation was decentralised to the municipalities. The central government was still providing clear guidelines to stimulate development,

but the provision of financial means and active roles had been passed to lower governments and market parties.

The land market and the real estate development market became intertwined (Schultz van Haegen, 2015). Competition moved to the land market from the market of real estate development, where the competition was based on the quality of the plan within set prices. This move was caused by the fact that many market parties acquired land or signed option agreements with landowners in the Vinex-assigned areas to safeguard their positions (Segeren, 2007). Municipalities needed some time to develop plans for the sites. By the time they were ready to acquire the land, they were surprised by the fact that most of the land had already been sold to market parties (Needham, 1997). Theoretically, the municipalities lost their monopoly position and were in competition with market parties (Groetelaers, 2005), but in practice the market parties were very willing to cooperate with the municipalities (Korthals Altes & Groetelaers, 2000; Needham, 1997). Different cooperation models emerged (van den Berg, 2011; Korthals Altes & Groetelaers, 2000)

### Planning with different levels of government

This section pays attention to the role, responsibilities, and possibilities of the different governmental levels in the Netherlands. The institutions in the Institutional Environment that can be used by governments can be categorized in different ways. A distinction can be made between civil law, which has much more negotiation freedom, and public law tools, which work more restrictively (Groetelaers, 2004; de Wildt, Keers et al., 2013).

Dutch governments were producing environmental plans, zoning plans and visions at all the official governmental levels to control development and land use. The actual function or the desired function of land is indicated in a visualization on a map in the zoning plans. The more local the governmental level, the more detailed the plans. Zoning plans also indicated, next to the aforementioned visualization of the functions, what kind of development was allowed, and other restrictions in the rules and regulation part of the zoning plan. These are rules that deal with, for example, the maximum size and height of the permissible development. In fact, they had to produce those documents and revise them after a certain time. This means that the national government, provinces and municipalities were all involved in this planning process. The plans and visions of lower governments had to be aligned with the plans of the relevant higher governments. This was a top-down process from the central government, over the provinces to the municipalities. The process was clearly shaped as a hierarchy (Priemus & Louw, 2003).

The zoning plans had to be revised by the municipality every ten years. This did not always happen in practice, but the national government enforced this requirement, with the goal to reduce the available plan capacity outside the Vinex areas.

From the 1990s onwards, the national government took steps back. The national policy before 1990 focused on steering with financial instruments. In the 1990s they ended most of the supply subsidies. However, there were still subsidies available for the development within the Vinex areas. Furthermore, they kept steering with policy documents and agreements between the national government and the local and regional governments. From the 1990s on, the national government was mainly steering with public law instruments. They produced visions, plans and other documents, which showed where development was desired and the target output rates of the building production. This happened often in dialogue with the municipalities, which had an important task to fulfil. The official timeframe of the Vinex was from 1995 until 2005, but basically the entire 1990s and 2000s (until the crisis) were marked by the Vinex policies of the national government. The execution of the policy was, for a large part, the responsibility of the municipalities. They used the public law instruments like visions and zoning plans to reach their goals, but also civil law instruments were used by participating in the land market and land development process. The next section elaborates more

on the establishment of the Vinex, the goals and effects on the spatial planning and construction sector of this document.

Housing policy, about the quantity and quality of the existing and desired new housing stock of all governmental layers, is partly based on prognoses and partly based on political visions instead of on the real actual demand (de Wildt, Keers et al., 2013). This can sometimes cause a mismatch, say, if there is a demand for single-family dwellings, but instead apartments are being built. This mismatch is caused by the political desire to create denser cities. The target output values and the land that is made available for development are based on those policies and goals. The targets are set for several years, which causes an artificial scarcity on the market in times of stronger economic growth than expected, since more people want to move to better quality dwellings in good times. This made the supply of new dwellings inflexible and caused an increase in the real estate prices which influenced the way parties collaborated in the development process in the Governance layer.

The latest spatial Memorandum published by the central government before the crisis (2004), was focused on a decrease of the regulation pressure (van der Heijden, Groetelaers et al., 2014). This should give more freedom to decentralised governments, community organisations, market parties and citizens. This document indicated also clearly that the matters that could be arranged at the local level, should be arranged and decided at this level (van der Heijden, Groetelaers et al., 2014). The motto was: "Decentralise what is possible, centralise what has to".

### Vinex

Vinex is already mentioned several times in this thesis, as it is an important document. It characterised spatial development in the years before the crisis. The central government published several documents, but this one is the most characteristic of that period. Vinex was developed as an answer to the housing shortages of that time and illustrates the top-down approach in the public sector.

Vinex is an acronym for *Vierde Nota Ruimtelijke Ordening Extra* (Fourth Memorandum Spatial Planning Extra), a report published by the former ministry of Housing, Spatial Planning and the Environment in 1990 (Boeijenga, Mensink et al., 2008). Vinex became a known concept in the Dutch planning world, since it aimed for drastic changes and left a mark on the urbanization of the Netherlands (Ministry of VROM, 2006). This report was an answer of the Dutch government on the housing shortages. It was planned to create 600,000 dwellings in the period of 1995-2005, from which 455,000 had to be constructed in the Vinex-assigned regions (van Iersel & Marsman, 1999). Municipalities received a subsidy from the central government for each dwelling that was realized within the Vinex areas (de Wildt, Keers et al., 2013). By indicating where new development is desired, the development had to be reduced outside the Vinex-assigned areas (van der Schaar, 2006).

The target numbers for the production output of new dwellings were not met in the beginning of the Vinex period. This was caused by long production times of those large development sites, significant risks, the fact that most of the land was owned by private parties and the difficulties in finding the right development alliances (van der Schaar, 2006). Risks for the involved parties at Vinex locations were reduced and alliances were shaped after the national government limited the development possibilities outside the Vinex locations.



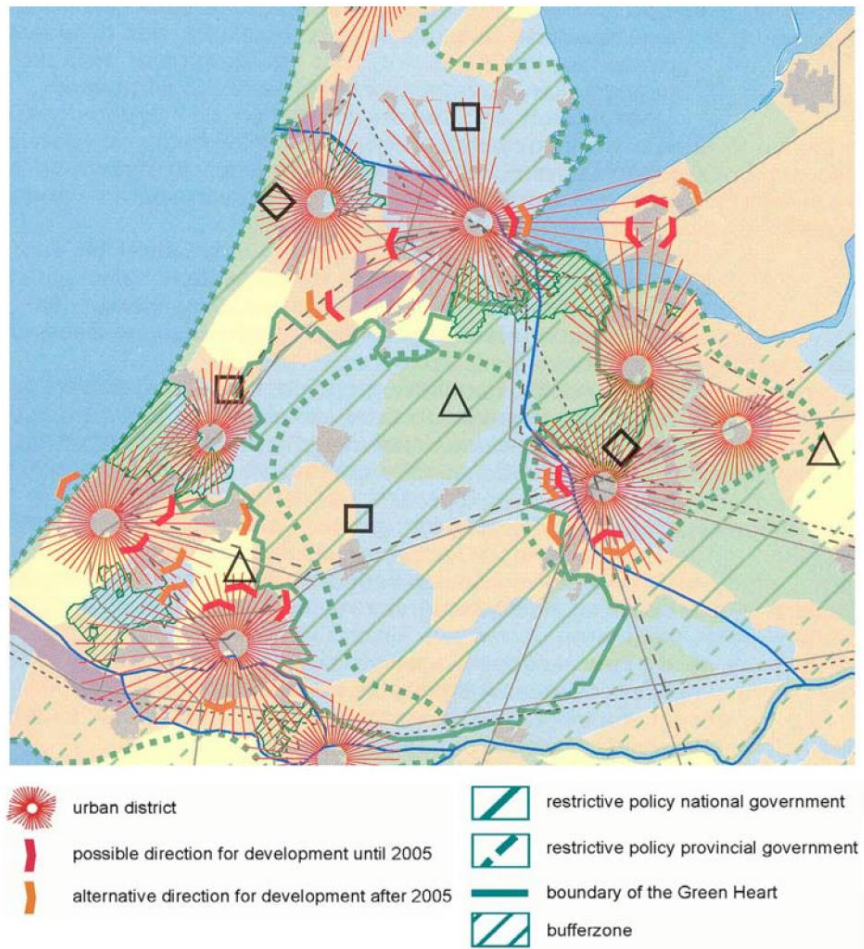


Figure 15: Vinex locations (Ministry of VROM, 1990)

The spatial policy was focused on the development of large sites between 1995 and 2005 (Ministry of VROM, 2006). The goal was to develop sites close to existing urban agglomeration, but also a large share had to be realised within existing urban areas. Figure 15 shows the possible direction of urban sprawl according to the Vinex document. This document looks very top-down, but the locations are planned in cooperation with the involved provinces and municipalities. Implementation agreements were drafted per region with all the involved governmental layers (Ministry of VROM, 2006). The detailed planning and the exact location determination is something that had to be decided at the local level. Strengthening the existing commercial centres, preventing the depopulation of the midsized and large cities, protection of open spaces and reducing car traffic were the main policy objectives of the Vinex development. There was also a focus on the public transportation connections to the existing centres. Furthermore, a significant portion (+/- 30 percent) of the dwellings had to be realised for the social rent sector.

### Planning, land use and land development

The acquisition and land development process were also shaped by formal institutions. There are rules for the development and implementation of zoning plans. The formal institutions start to play a role in the land acquisition that is needed for the development from the start. Dutch law makes it possible to trade land and gives also the right of self-realisation if the landowner is able to develop the site himself according to the zoning plan. The law also provides a tool to local governments to get a stronger grip on the market, the Pre-emption Act (Wet voorkeursrecht gemeenten). This is a formal

institution that gives an advantage to the municipalities by giving them the right to buy the land before it can be offered to market parties in certain situations.

Just owning land is not enough to start the development of the site. If it is designated as a natural or agricultural territory in the zoning plan, development is not allowed. The municipalities can decide to change the zoning plan. In fact, they must revise their zoning plans every 10 years. The municipalities do not have complete freedom. They have to act within the boundaries set by the provincial and national plans. Also, the European level is getting increasingly important, mostly with regulations which deal with nature conservation. An example are the Natura 2000 areas, where building is prohibited. So, all the higher governments had formal tools to influence the local build environment within a municipality. All the limitations set by various governmental levels have to be considered.

Also, the procedures to conclude and alter the official zoning plans are regulated by law, with fixed steps and possibilities for participation and objections. Interested parties have the right to see the proposed zoning plan and they can express their opinions. The fixed procedures are to serve the public interest and to protect individuals but they also result in lengthy processes before coming to a final irrevocable version. Market parties can request a deviation from the zoning plan (de Wildt, Keers et al., 2013). This goes with strict procedures to safeguard the interests of other stakeholders and to take care of the public interest.

### **Real estate development phase**

Formal institutions are also present in the realisation phase of the real estate. It has nothing to do with the design and the kind of dwellings that can or cannot be realised, since the quality assurance is already taken care of in the planning phase. The formal institutions in this phase are more general and deal with the quality of the construction and safety of the construction site.

The minimum quality and environmental standards for new residential development are set by law in the Building Code (Bouwbesluit). The Building Code regulates the health and safety conditions, usability, energy efficiency and environmental aspects of new and renovated buildings. Those standards are set by the national government, but municipalities can decide to put additional requirements or increase the national minimum standards. Those additional requirements can cover matters like minimum sizes of the living spaces, but they often also increase the standards to reach (nearly) energy neutral dwellings.

### **Proposed institutional change before the crisis**

The changed market circumstances, but also the changing society challenged the actual formal institutions. As Hajer and Zonneveld (2000) stated: "The network society poses structural challenges to the potential for a purely land-control oriented strategic planning." The legally binding zoning plans should be supplemented by more society-based plan making, instead of administrative (Hajer & Zonneveld, 2000). Furthermore, there is a large coordinative burden of plan making across three government levels. This should be solved by granting more autonomy to the local governments (Hajer & Zonneveld, 2000).

Market imperfections in the development of dwellings are analysed in a study of de Wildt, Keers et al. (2005) commissioned by the responsible ministry, with the goal to find solutions for the decreasing building output before the crisis. Residential development comes with long and complex procedures and there are many non-flexible agreements between market parties and the local authorities, in comparison with the development of offices (de Wildt, Keers et al., 2005). They advised several policy measures. The advice was based on an analysis where they took the development process of offices as a comparable, but better-functioning market, as an alternative structure. Most of the advice is the opposite of the Vinex policy, which was leading during that time. The first recommendation was to create overcapacity in the zoning plans (de Wildt, Keers et al., 2005), while

the Vinex policy created scarcity. Secondly, the attention should shift from a few large locations to many small locations (de Wildt, Keers et al., 2005). Furthermore, procedures and regulation should be reduced and simplified, and the time needed for the negotiation process should be decreased by more flexible residential development plans (de Wildt, Keers et al., 2005). The last advice of de Wildt, Keers et al. (2005) is to increase the competition by involving more market parties and to have a larger focus on self-built dwellings. In that situation, the future owners commission their own building processes.

This layer has a huge influence on the other layers, since the emerged governance structures have to fit within the juridical context and act according to official procedures. Furthermore, the Resource Allocation and Employment decisions are also made within the legal framework.

### 5.4. Embeddedness

The Embeddedness layer deals with the norms, values and cultural institutions in the chain of residential real estate development. Institutions in this layer are generally changing slowly, according to Williamson (1998). But the unique favourable circumstances in the decade prior to the crisis provoked certainly a cultural shift in the sector. Housing prices were rising and the cost of the construction increased in a much slower pace (Boelhouwer, 2005; Groetelaers, 2005). This means that more profit could be divided within the supply chain of the development. This increased profit reduced the need and motivation for innovation in the building sector.

### Land development phase

Since the Second World War housing provision has been an important political factor. Directing housing provision was mainly done by means of land policy on several governmental layers. The 1990s were a cultural turning point. The central government gave more space for the market in the task of housing provision. This means that most of the financial governmental support was abolished. This fitted within the market philosophy that was dominant during that time.

A large responsibility was given to the municipalities to reach the desired building outputs. It is a task which municipalities carried out for more than 50 years. The municipalities were used to being in control and had problems with giving up this task by giving more freedom and responsibility to the market parties.

Within the Dutch municipalities, there is a tradition of wanting to be in control of the spatial development within their territories (Buitelaar, 2007). This resulted in many municipalities that started to behave like market parties by applying active land policy. The municipalities that were challenged to rapidly increase development by the Vinex policy often wanted to control this growth by active land policy as well. They operated on the land market to increase their steering power. This active behaviour of the municipality was also driven by the positive economic development and the development of the building sector of the years before. Risks were not taken into account that much, since significant financial setbacks on the land market had not been experienced in the last decades by the involved actors.

A broad spectrum of public and private parties, including the responsible ministry, a collective of Dutch municipalities and several associations of the market parties, signed a treaty to institutionalize the residual value calculation method as the method to determine land prices (ECORYS-Vastgoed, 2006; Kuiper, de Reus et al., 2001). However, a large majority of the municipalities was not working according to the treaty four years after signing it. Almost 30 percent of the municipalities were not even aware of the content of the treaty (ECORYS-Vastgoed, 2006). Despite the previously mentioned observations parties were mostly working somehow in accordance with the treaty (ECORYS-Vastgoed, 2006). The residual value method was considered more and more as the

standard method to value the land. This method was embedded in the land development sector over the years.

There was certainly a large cultural shift among the buyers of owner-occupied dwellings too. This shift was driven by the increasing housing prices and general positive economic development. Dwellings were not seen solely as a living space for the family, but also as an investment, since the value was increasing rapidly. Getting a mortgage to finance the dwelling became the standard.

### Real estate Development phase

The real estate development sector can be described as conservative, since it are mostly working according to fixed patterns and innovation goes slowly (Interview: Dekker, 2017; Interview: Meijers, 2017). Innovation in the sector is mostly driven by fulfilling governmental regulation or due to distress caused by market situations.

Another important influencer of the Embeddedness layer was the national policy in the decade before the crisis. The introduction of financial advantages, such as the mortgage interest rate tax deduction, and a focus on the increase of owner-occupied dwelling output, resulted in a culture in which most of the citizens were willing to own their own dwelling. The tradition of buying a dwelling, instead of renting, started as an economic consideration, so in the resource allocation layer, but is nurtured into the culture in over time.

Shifting patterns are also part of the culture. In the Netherlands, it is common to move from dwelling to dwelling a number of times during a lifetime. The Dutch would rather look for a more spacious or better dwelling than modifying their current dwelling to fit their desires and needs. Because of that, the new construction was mainly focused on the higher end of the market since the Dutch housing market is based on housing chains, where people move to a higher quality dwelling, resulting in the sale of their lower quality dwelling (van der Schaar, 2006). This leads to available dwellings in the lower end of the market, when the upper end of the market is supplemented.

Due to the increasing demand and real estate prices, risks were not considered that much by the actors in the development process. Most of the involved parties experienced the last decade with hassle free sales processes of all of their projects, since there was a high demand. They start to take the market situation for granted after years of growth. This was reinforced by a restricted supply of building land; this lack of plan capacity gave more certainty to the projects that were carried out. After years of good experiences, risks that related to the development of real estate were almost forgotten; ambitions sky-rocketed and targets were set very high.

This layer has a direct influence on all the other layers. Cultural norms and values play an important role in the evaluation, design, enforcement and compliance of the law. A clear example is the tradition to use the residual value calculation to determine land prices. This is a tradition that is formally institutionalized in the policy of many municipalities. Governance structures and decisions about Resource Allocation and Employment are also influenced by the norms and values of this Embeddedness layer.

### 5.5. Case T=0: Gouden Griffelbuurt

Land development for housing provision is something that happens at the local level and within the local context. The different institutions that are described in the previous sections of this chapter are rather general and do not offer sufficient insights into how the institutions are shaping the process at the local level. This section illustrates the practice at the local level with a first case study.

A project is chosen, the Gouden Griffel, where the lead for the land development, as well as for the real estate development was taken by market parties. This was not common practice at that time, since the municipalities mostly took a more active role in the land development. The choice to

## The Market for Owner-Occupied Dwellings After the Crisis

analyse this project was made to make comparisons to cases after the crisis more suitable, since those are also directed by market parties. Furthermore, most of the municipalities are aiming nowadays for a more passive approach towards land development. With this in mind, it makes more sense to learn lessons from a case where facilitating land policy was used rather than a case where the municipality was actively involved.

The Gouden Griffel is a Vinex development project in the municipality of Berkel en Rodenrijs, which later merged with other municipalities into the municipality of Lansingerland. The municipality is located between The Hague and Rotterdam, a region with a high demand for housing. Large parts of the municipality were assigned as Vinex locations by the national government to fulfil the high demand for new housing in the Netherlands.

One of the largest projects within the municipality was the development of the Gouden Buurten. The Gouden Griffel is the first phase of this project and is located on the west side of the existing village of Berkel (see Figure 16). Over 500 dwellings were built in this first subproject. These were predominantly owner-occupied dwellings which represented a share of 73 percent of the total developed residential units. The entire physical construction took place in the period between January 2004 and January 2007, so the project was finished before the financial and real estate crises. In this section, the case is described according to the layers of Williamson. The Embeddedness layer is discussed first, followed by the Institutional Environment, the Governance layer and the Resource Allocation and Employment layer. After that, there is for a discussion on the transaction costs that were involved in this project. This chapter ends with a conclusion on how this case fits into the general description that is given in the previous sections of this chapter.

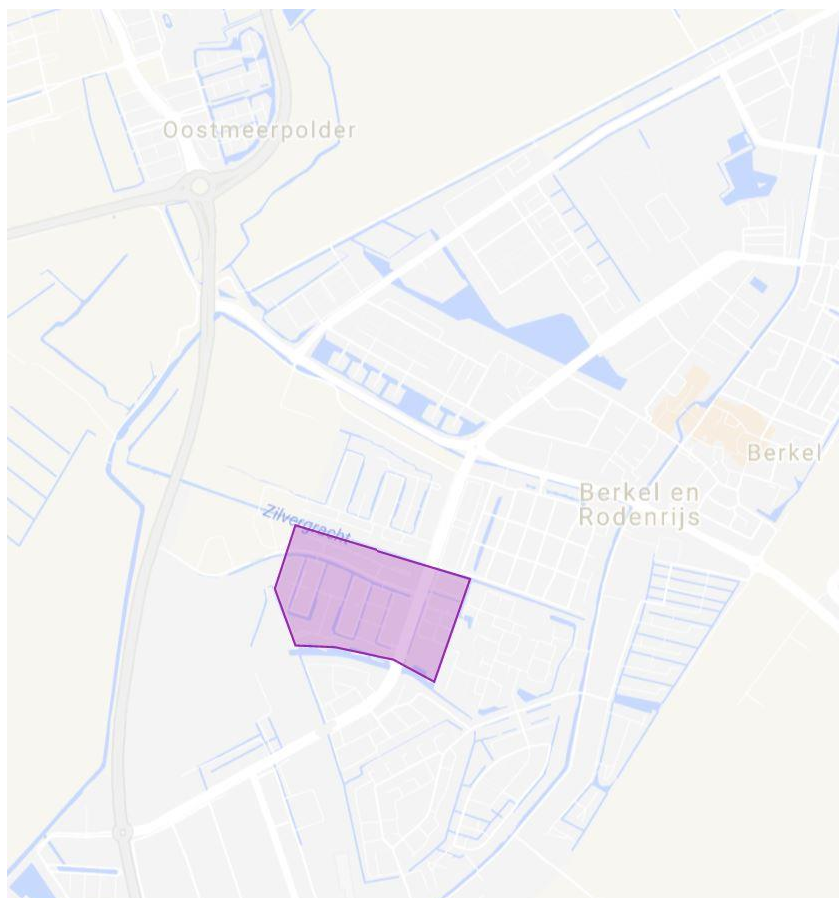


Figure 16: Geographical location of the Gouden Griffelbuurt

### The four layers of Williamson

#### Embeddedness

The development of the Gouden Griffel took place in an embedded framework that emerged from history and general norms, values and culture. This embedded context shaped the behaviour of the actors in the project. As described in chapter 5.4 there was a desire by many municipalities to stay in control. This desire was also present within the municipality of Lansingerland. Within this municipality was a tradition of being in control of the spatial development. The huge amount of new residential units that had to be realised according to the Vinex document reinforced the desire to be in control, because the huge construction task should be given proper guidance (Interview: Zevenbergen & den Heeten, 2017). Financial risks were underestimated, due to the favourable economic situation of that time.

#### Institutional Environment

How the planning and development took place in Lansingerland was for a large part determined by national regulations. The general top-down approach was also present in the case of the Gouden Griffel. The zoning plans and environmental visions had to be aligned to the plans of the higher governmental layers. It was necessary to go through all the formal procedures. Moreover, the real estate development had to be in line with the national building codes and fulfil all of their requirements too.

Lansingerland was one of the municipalities that was assigned as Vinex area. This made the Vinex policy document very relevant for the development of the Gouden Griffel. This policy document was developed by making formal agreements between the national government, the provincial governments and the municipalities. Visions had to be drafted and zoning plans had to be altered by the municipality to enable the development of the Gouden Griffel.

#### Governance

The governance structure of the Gouden Griffel was complex, as it is in almost all development processes. There were many different actors involved in the process, which were all selected based on different assessment criteria. The organisational structure of the development of the Gouden Griffel is included in Appendix 3: Organisation Structures of the Cases. *Amvest* and *Kavel Vastgoed* both had land positions in the area, and this was a reason to start the dialogue to figure out if there was a basis for cooperation. Convinced of each other's qualities and capacities, *Amvest* and *Kavel Vastgoed* were teaming up in a 100 percent private joint-venture. The joint-venture for the land development phase is *Ontwikkelcombinatie Westpolder/Bolwerk* and separate joint-ventures were founded for the real estate realization of the subprojects to reduce the overall risks of *Amvest* and *Kavel Vastgoed*.

In theory this private land development structure is the structure with the least municipal involvement, but in practice there was much cooperation between the municipality and the development combination (Interview: van Swam, 2017). The developers needed the municipality for alterations in the zoning plan and the building permits. The municipality needed the developers too, since they had a huge Vinex task to perform and the help of market parties was definitely needed to reach the desired target output (Interview: van Swam, 2017). The municipality was mainly dealing with public law tasks, like zoning plans and granting permits, but some development tasks with a more regional function were in the hands of the municipality too (Interview: van Swam, 2017).

*Sweco* and *Boskalis* were in charge of the physical works in the land development phase. They were selected by *Ontwikkelcombinatie Westpolder/Bolwerk* by means of a European tender. This was needed since the municipality was slightly involved by getting the land for the public facilities for a symbolic price (Interview: van Swam, 2017).

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The real estate development joint-venture of the Gouden Griffel selected *van Mierlo* and *ERA Contour* as construction firms. This was done by means of a request for a proposal that was sent out to different parties. The parties with the best price/quality ratio were selected by the developers. The choice of two parties instead of one was made to speed up the process and to be able to compare the prices of both firms (Interview: Wibier, 2017). The construction firms were contracting many subcontractors for different tasks within the building process.

A decision had been made about segregation between the three different real estate agents. They all had a different target group. One of the agents was focused on Lansingerland (*van Dullink*), one on the Rotterdam region (*Ooms*) and the last one on The Hague region (*Nelisse*). This strategy increased the reach of potential customers to sell the dwellings.

### Resource Allocation and Employment

The market circumstances were favourable during that time, this made it relatively easy to sell all the dwellings. People were willing to invest in their dwellings, since it was relatively easy to get a mortgage and the conditions of the mortgage were favourable. Furthermore, there was a general expectation that the real estate prices would rise anyway. The location of the Gouden Griffel was also an important factor that people were willing to buy property in this project (Interview: Zevenbergen & den Heeten, 2017), since it is close to The Hague and Rotterdam and well connected to those cities with public transportation connections.

The supply of building materials was sometimes meeting the boundaries of the production capacity in the industry. The boundaries of the available workforce were met sometimes as well. This was caused by the fact that construction took place on large scale at many different sites simultaneously. This did not result in large issues, since it could be covered by planning ahead and finding substitutes for certain materials (Interview: Paalvast, 2017).

### Transaction Costs and efficiency

The complexity of all the parties that are involved within the development process is described in previous section and graphical represented in Appendix 3: Organisation Structures of the Cases. Many different transactions which result in transaction costs are involved to enable the cooperation between all the involved parties. The involved transaction costs are ranging from planning until reinforcing the contracts. Examples of those costs are: preparing, organising and assessing a request for proposals to find the best partner, negotiations and drafting the contracts. Buitelaar (2004) indicated already that the complexity of the real estate development chain makes it impossible to quantify all the transaction costs to do quantitative analyses. This complexity is also visible in the case of the Gouden Griffel, due to many different relationships and the shift of tasks to subcontractors.

Chapter 9 shows how the institutions changed after the crisis in comparable cases and which influence this have on the governance structures and the involved transaction costs.



Figure 17: Impression of the Gouden Griffelbuurt

### Conclusion

The governance structure in the land development phase was quite unique at that time, because of the more passive position of the municipality in this project. This makes the case interesting, as this is the preferred strategy of many municipalities at the moment. Most municipalities controlled the land use by active land policy in the majority of the projects. This was also the case within the municipality of Lansingerland (Interview: Zevenbergen & den Heeten, 2017), but the municipality had a more facilitating role in this project. The project is developed according to the concession model. The commercial developers took the lead, but were always working in close cooperation with the municipality. This means that most of risks and responsibilities were carried by the developers during the entire process from planning until the delivery of the real estate. Partners in the development process were mostly selected on a strategic way.



## 6. Changes during the real estate crisis

The last real estate crisis had a huge influence on the housing production and building industry. The weaknesses of the Dutch, internationally acknowledged planning system were revealed by the crisis (Buitelaar & Bregman, 2016). The large scale of the land-development projects and interconnectedness between the actors created a closely intertwined system, meaning that a shock in one part of the system has fundamental influences on the entire system (Buitelaar & Bregman, 2016). This chapter elaborates on the institutional changes that were caused by the crisis, accelerated by the crisis or occurred independently of the crisis in the same period. This chapter is based on the knowledge developed during the desk research and will be verified for the local context in chapter 9.

The structure of this chapter is based on Williamson's four-layer framework. The first section describes the institutional change in the Resource Allocation and Employment layer. The second section gives a description about the changes and challenges in the Governance layer of the model. The third section covers changes in the Institutional Environment and the final section (6.4) the changes in the Embeddedness layer.

### 6.1. The reactions and results of market forces and changes in the resource allocation

This section deals with the change that is experienced in the Resource Allocation and Employment layer during the crisis. The crisis was definitely a large challenge for most of the parties involved in the residential real estate sector. Some market parties were successful in adapting in several ways, like making budget cuts or finding different markets. Other market parties did not manage to survive this difficult time for the construction sector.

#### Residential real estate market

The market of new owner-occupied dwellings is very much connected to the general owner-occupied market, due to the fact that it is a stock market where the new supply has a minimum impact on the total market. This section provides a description of the development of the owner-occupied market of the existing stock.

The number of dwellings sold decreased from the beginning of the crisis in 2008 (See Figure 18). Home buyers were used to the rising real estate prices, but the increase of the residential real estate value changed in a value decrease from 2008 on (See Figure 19). This resulted in a pro-cyclical reaction of almost all the involved parties. The investment motive of buying real estate disappeared, which resulted in even fewer transactions and lower real estate prices.

Home buyers did not want to move anymore, for three reasons. The first reason is that the investment aspect of moving to a better dwelling disappeared. Secondly, they preferred to wait for further price decrease in case they wanted to move to a better dwelling. The last reason is that it was financially not feasible to move to another dwelling for many owner-occupiers. The mortgage that they had on their property was higher than the value of the property, due to the value decrease. This means that they do not have surplus value on their dwelling, which was often used in the past for moving up in the housing chain.

## The Market for Owner-Occupied Dwellings After the Crisis

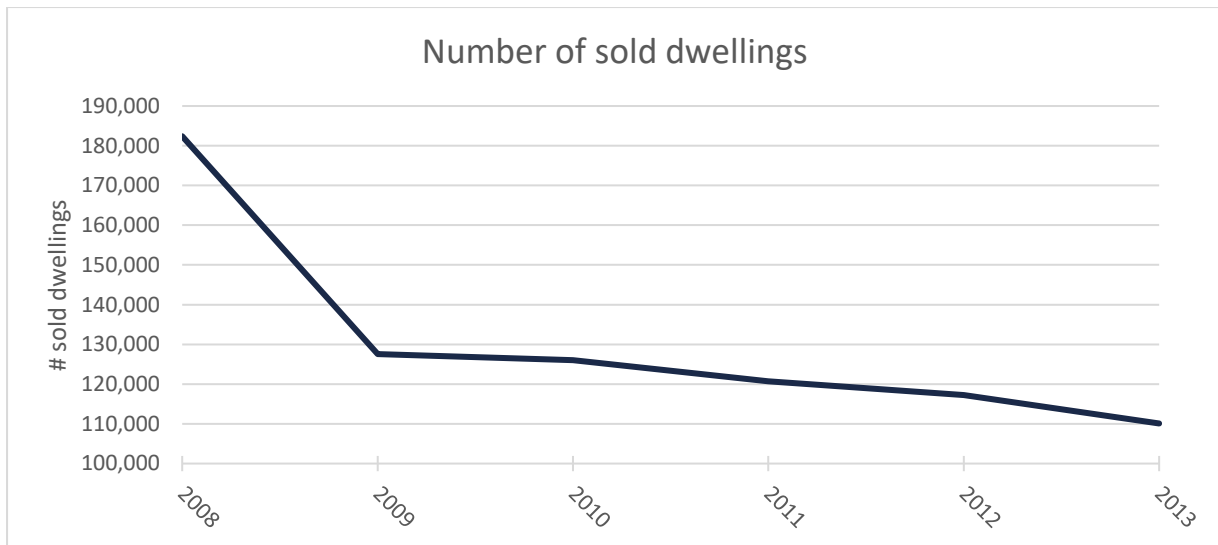


Figure 18: Number of sold dwellings during the crisis (Kadaster, 2018)

The financial institutions reacted in a pro-cyclical manner, too. They tightened their own policies for the mortgages partly voluntarily and partly because of national regulations. This means that it became harder for home buyers to take a mortgage and the loan-to-value possibilities were tightened too. This is a very pro-cyclical reaction of the regulators and financial institutions which depressed the market even more (Boelhouwer, 2016).

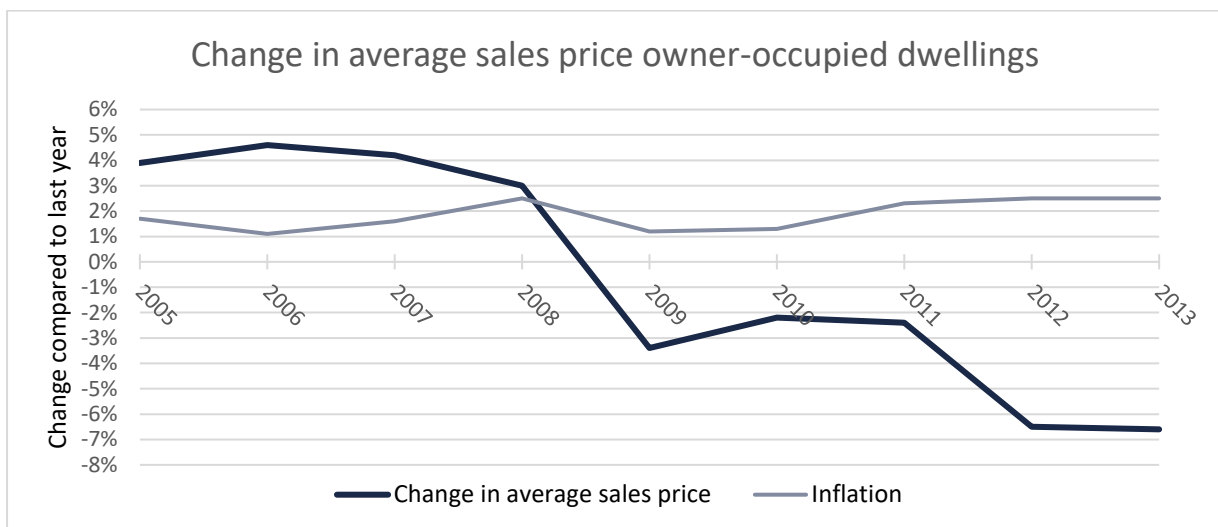


Figure 19: Development of the sales price of dwellings (Statistics Netherlands [CBS], 2018a)

### Land development phase

The price of building land decreased enormously during the crisis, since most of the land values were determined by the residual value method. Developers and municipalities with land positions who had acquired land before the crisis had to devalue their investments. Many projects were paused and waiting for better times. Another strategy was to develop smaller pieces of land in a more organic way. Supporting self-commissioning was an often-used strategy in the cases where the land was owned by the municipality. The future owners of the dwelling buy a plot from the municipality and are in the lead of the real estate development themselves in cases of self-commissioning. This makes them less dependent on developers backed by investors.

### Real estate Development phase

The lack of demand and the decline in sales prices of new dwellings during the crisis resulted in serious challenges for the enterprises and the people who were active in the entire supply chain of the building sector. The building output had declined already in the years prior to the crisis but dropped further after 2010 (See Figure 20). The shortages of building materials and workforce that were experienced prior to the crisis quickly changed into an oversupply. The situation where the suppliers and labours could add a 'scarcity surcharge' to their fees, changed to a situation where they had to give discounts and sometimes even worked and supplied below cost level (negative scarcity surcharge) in 2010 (de Wildt, Keers et al., 2013). The amount of work decreased rapidly. Some enterprises became bankrupt and others had to cut the workforce (Interview: Dekker, 2017). The workers who had to leave the enterprises sometimes became active in the sector as self-employed workers but went often to other sectors too.

The crisis resulted not just in a decrease in the needed manpower, but also in a decline in the demand for building supplies and equipment. This further resulted in a crisis for the companies further down in the supply chain. The same mechanisms were experienced for the developers and construction firms. The number of workers was too high for the demand and people found jobs in different sectors. Production lines and sometimes entire factories were closed (Interview: Dekker, 2017).

Some of the used building materials are location specific (de Wildt, Keers et al., 2013). In different regions, they use different building methods and materials. An example is the Scandinavian countries, where wood is a common material but in the Netherlands, bricks are very important for the industry. Surviving suppliers sometimes found different markets like the UK, where they could sell a part of their overproduction (Interview: Dekker, 2017).

The dynamic Dutch market made it possible to supplement the upper end of the market with high quality dwellings. This resulted in moving chains, which made also transactions at the lower end of the market possible. However, due to the lacking demand for higher quality dwellings during the crisis, the transactions at the upper end of the market ceased, which also stopped the movement in the chain on the lower end of the market.

The planned real estate with a focus on the higher end of the market was in many cases rethought by the developers and often also renegotiated with the municipality by the ongoing projects. The dwellings in the expensive segment made space for more affordable starter dwellings and rental dwellings, since fewer movements are required.

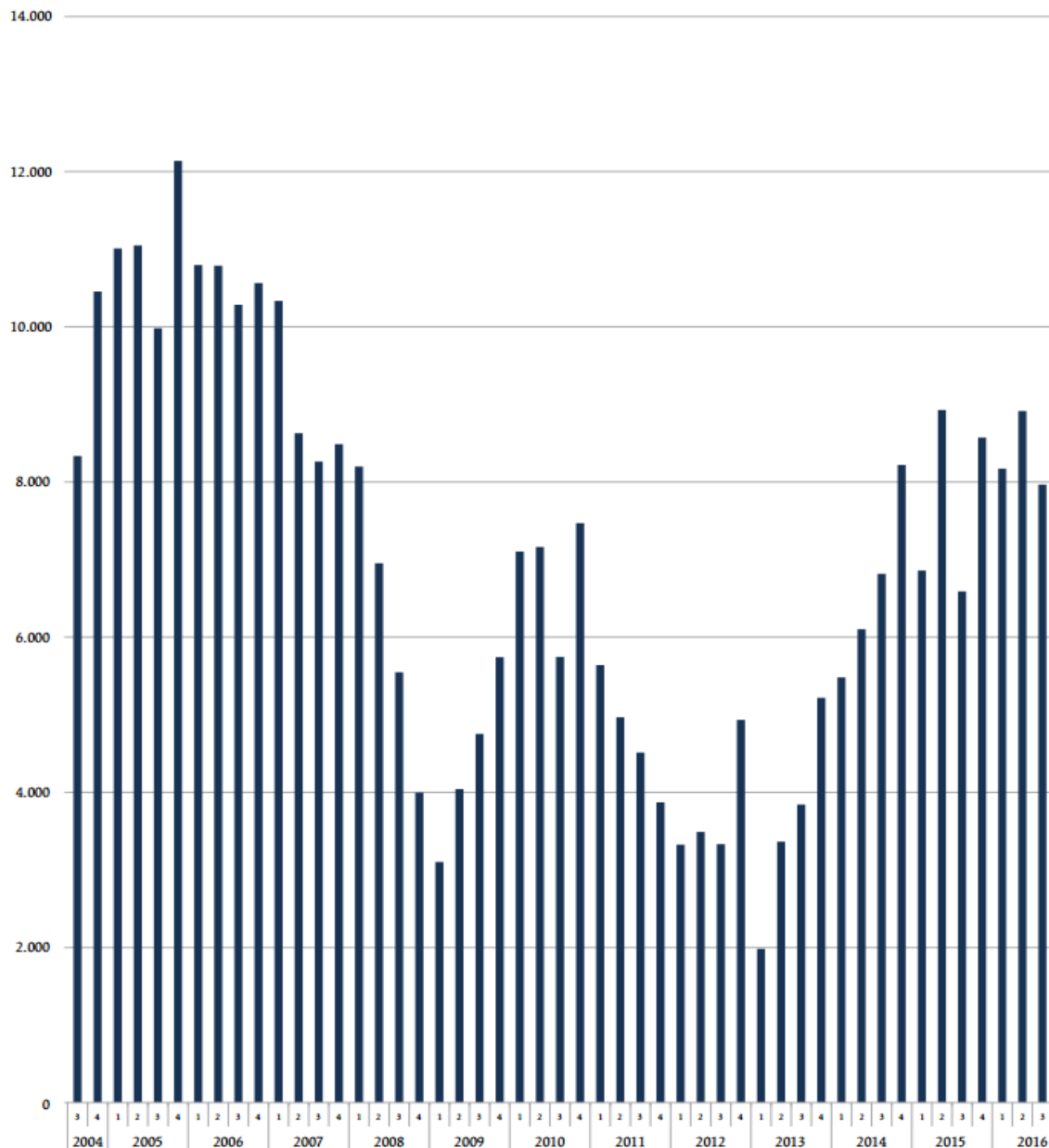


Figure 20: New constructed dwellings (van der Heijden, Dol et al., 2017)

### 6.2. Changes in the governance structures

The governance structures on the land market and the construction market changed during the crisis. The crisis showed that some governance structures are more resistant to change than others. Projects that were based on more organic growth instead of huge projects with developers were more able to adjust to the changing market circumstances (de Zeeuw, 2011). Working with open ended plans, smaller and more involved private parties and a government with a facilitating role rather than an active one creates a system which is more flexible and resistant to change (Buitelaar & Bregman, 2016). Another advantage is that organic growth results in a more balanced population distribution.

#### Land development phase

The largest change is experienced at the land market, where municipalities stopped the risky active land policy, for the most part, and changed to a more passive and facilitating role (Interview: Rommelse, 2017). The withdrawal of the active and initiating role of the local governments means

that this role should be taken over by market parties. During the crisis, it was not the most attractive time for the developers to take over this active role from the municipality.

Some market parties bought land positions from the municipality, despite the fact it was not an appealing time for most of the parties in the real estate development sector. Municipalities were often willing to cooperate with developers who were willing to continue in the crisis. This made the negotiation position of the developers, who were still willing and financially strong enough to continue with the development, stronger.

The national government announced housing provision as a responsibility of the local government, since they are better positioned to provide guidelines and policies for the local context (Schultz van Haegen, 2015). The tasks of the Ministry of Housing, Spatial Planning and the Environment (VROM) were divided among other ministries and VROM disappeared in 2010 because of the withdrawal of the national government in housing provision. The national government now takes the responsibility of providing a toolbox for municipalities, which gives them the power to steer spatial development with active and with passive land policy (Schultz van Haegen, 2015).

### Real estate Development phase

The governance structures in the real estate development phase were changing, too. Many companies experienced a decline in productive hours, due to the lack of projects. Different strategies or combinations were used to survive the crisis. Some construction firms tried to team up with all the actors in the supply chain to cut costs together and stay competitive in the market. With this strategy, they all tried to get a share in the small number of projects that the market had to offer.

Another strategy and necessity was to cut the workforce. Some of the employees stayed within the firms but became active on a self-employed basis, often with a reduction in earnings. A part of the workforce got externalised from the firm. This reduced the costs and risks for the construction firms and subcontractors and gave more flexibility to those parties.

### Transaction Costs

The transaction costs changed due to the changed market situations and shifts in the governance structures. Relatively more transaction costs were incurred by construction firms and subcontractors in the construction phase. Construction firms and subcontractors had difficulties in finding enough work. More active acquisition was needed to get projects granted. A large share of the workforce left the construction firms and continued as self-employed workers. This increased the transaction costs too, since they have to negotiate contracts on a project basis. On the other hand, the transaction costs for the developer were reduced, because it was relatively easy to find a construction firm that was willing to construct for an affordable price.

Also, the fact that workforce shifted from employees to self-employed people increased the transaction costs. Negotiation and contracts were needed between all the self-employed workers and the firms.

### 6.3. Changes in the Institutional Environment

The Institutional Environment changed as a reaction to the market circumstances too. The financial requirements for banks became stricter to prevent bankruptcy. Also, the requirements for mortgages were tightened, which reduced the financial possibilities for potential home buyers. This was a very pro-cyclical reaction from the government and financial institutions which depressed the market even further (Boelhouwer, 2016).

Dutch legislation dealing with land development and construction changed a lot during the crisis and in its aftermath. Most of the change was already in progress before the crisis. The aim of the new

## The Market for Owner-Occupied Dwellings After the Crisis

regulation is to give more tools to municipalities to steer the development and to recover costs for the plan-making and to develop the public space. The new legislation also contains an attempt to reduce the bottleneck of the long and complex procedures that were experienced by the market parties already before the crisis. However, the regulation did not change fundamentally, and the base principals are still the same. A plan should be still according to the zoning plan and building permits must be approved by the municipality (Interview: Rommelse, 2017).

Government at all levels has more difficulties in influencing, steering and supervising the actions of the market parties (Groetelaers, 2005). The Pre-emption Act (Wet voorkeursrecht gemeenten) and the new Spatial Planning Act (Wro) were introduced and modified in an attempt to provide better tools for the municipality to steer the urban development. The Pre-emption Act (Wet voorkeursrecht gemeenten), which enables municipalities to indicate plots of third parties which should be offered for sale to them first, before it can offer the land to market parties, was revised in 2008 and 2010 as a reaction on the changed market circumstances. The act is altered as a reaction to the changed market circumstances, but those are basically the changing market circumstances as before the crisis. The goal of the act is to strengthen the position of the (local) government on the land market. That is very useful for a government with an active land policy, but most municipalities tried to reach their policy goals during the crisis with means other than participating on the land market. The Pre-emption Act was revised for the first time in 2008, which also enabled the provinces and the national government, as well as to the municipalities, to establish a pre-emption on a plot. The establishment procedure is also simplified with a lower burden for the concerning government as a result. The act was changed for the second time in 2010, by further simplification of the procedures. Due to this change, the Act should fit better to the practice by shifting the power concerning the ability to give exemptions from the provincial government to the local government.

The second large change in the Institutional Environment was the new Spatial Planning Act (Wro), which was introduced in 2008. This Act gave more freedom to the municipalities. The National and provincial government still had to produce and publish visions. However, the visions were not binding, but they could enforce policy by means of an Orders in Council (AMvB) (van der Heijden, Groetelaers et al., 2014). Intervention on the national and provincial level can just be justified if national or provincial issues are at stake, according to the new Spatial Planning Act of 2008.

The Land Development Act (GreX-wet) was implemented in 2008 and is part of the Spatial Planning Act (Wro). This act is a reaction on the changing roles within the land development process since the implementation of Vinex (van den Berg, 2011). It makes it possible to charge the developers for costs that the municipality incurs for plan-making, infrastructure and other public facilities. The recovery of the plan making costs of the municipality was before the introduction of the Land Development Act was only possible if the developer was willing to cooperate in a private agreement with the municipality. Guidelines for the costs that can be charged from the developer by the municipality are drafted later and were officially implemented on the first of April 2017 (Rauwers & Kon, 2017; Schultz van Haegen, 2017).

The institutional context did not just change in favour of the municipalities, but the national politics also responded to the struggles with the long and complex procedures that were experienced by market parties. An attempt to make the request of permits easier is done by the introduction of the Act on General Provisions in Environmental Law (Wabo), which is implemented in 2010. This resulted in one instead of multiple (more or less 25) permits required for development projects (van den Berg, 2011). This means that permit applicants need to go to one desk and go through one procedure instead of multiple procedures with sometimes conflicting outcomes.

## The Market for Owner-Occupied Dwellings After the Crisis

As a reaction on the crisis of 2008 the Dutch government came up with the Crisis and Recovery Act (Chw) in 2010. The goal of this act was to increase the output of dwellings. An important adjustment in this act is the fact that 'reparation' by shortcomings is allowed. Before the introduction of this Act, the entire procedure had to start again from the beginning. Restrictions of the Environmental Impact Assessment (EIA) became also a bit looser. The idea behind this act was to stimulate development by reducing the complexity and the lead time of the development process.

The national government was using next to regulations also other tools to steer the development in the desired direction. There were always directives (verstedelijkingsnota's) from the national government and agreements (verstedelijkingsafspraken) between national and lower governments about the desired building outputs, where and how to realise those targets and goals. The last documents of the national government are published during the crisis, with the goal to improve the market and increase the confidence and trust by potential buyers. The national government never made these clear guidelines for the context with enough trust and confidence in the market after the crisis. After the actual policy and agreements failed during the crisis and the target outputs were not reached the national government did not come up with new national guidelines for the period after the crisis.

An increasing awareness and concern on environmental matter resulted in the policy of the national government of 'the ladder of sustainable development'. This means that the need for new development should be motivated. Also, a proof is needed that the demand cannot be satisfied within the existing urban area in case that the development is planned on a greenfield. Unique of this policy is that it is an institutionalization of a cultural institution. The idea is that we should take care of our country and the planet. Almost all the other policies have been introduced as a reaction on market forces and demand.

The Institutional Environment changed with the goal to offer better tools to the municipalities to control the development and to simplify procedures to make development procedures faster and make development more attractive for market parties.

### 6.4. Changes in the Embeddedness layer

Williamson (1998) described this layer as relatively stable, but indicated that massive discontent like a crisis can cause a sharp break with the existing institutions in this layer or establishing new institutions. This happened with several embedded institutions during the real estate crisis. The changes in the Embeddedness layer that emerged during the crisis are covered in this section.

#### Land development phase

Even though the reform of the policy of the national government in 1990 was already focussed on giving more responsibility to the market parties, the municipalities stayed very much involved and wanted to be in control of the land development. They felt responsible for all the new development in their territory. The crisis showed that this culture of control and involvement had also a large downside, the financial risk. Due to those new insights, a culture shift took place. Municipalities now dare to take more distance by having a more passive and facilitating role in land development.

This awareness of the risks by developers and financial institutions also increased due to the crisis. Developers are relatively careful with scaling up the production and financial institutions demand the developers to bring own funds into the projects as well as a condition for financing a project.

### **Real estate Development phase**

A relatively large share of the new constructed dwellings was always constructed in the higher segment. The philosophy was that adding dwellings at the top of the market will start a chain of movements of several people moving to a qualitative higher dwelling. However, these dynamics are not working if there is no demand for high quality dwellings at the top of the market. The crisis showed the risks of this approach in economic downturn. This resulted in another approach where development took place over several segments of the housing market.



## 7. The situation after the real estate crisis

The crisis has been over for some years and the market circumstances for the housing market and the real estate development sector are looking favourable again. This chapter discusses the institutional changes that have been experienced after the crisis in the development sector for owner-occupied dwellings according to the layers of Williamson.

### 7.1. The market, Resource Allocation and Employment

It is likely that the demand for new dwellings will increase in the coming decades, since the number of inhabitants in the Netherlands will increase in the coming years and the number of households will grow even faster. A growth of 310,000 households is expected in the period 2017-2022 (Capital Value, 2017). The Environmental Assessment Agency of the Netherlands is even indicating a need of 1,000,000 new dwellings by 2030 (van Breukelen, 2017; Vermeulen, 2017). The tightness on the market for dwellings has already been increasing since 2013 (Boumeester, 2017). Despite this potential of the favourable demographic development, increasing tightness and rising prices, the construction of new dwellings is far below the desired level.

#### Residential real estate market

The development of the real estate market has a large influence on the real estate development sector. The number of dwellings sold is increasing since 2013 (Figure 21) and the prices of dwellings have been increasing faster than the inflation rate since 2014 (Figure 22). The increasing prices and the tightened financing conditions result in stagnation in the housing chain and the market. Due to the increase of the residential real estate prices the market will become inaccessible for first-time buyers, if the housing stock will not be supplemented by new constructions, according to van Breukelen (2017). Buitelaar called this a wrong assumption, since the housing market is a stock market and the price of new dwellings is based on the price in the market of the existing dwellings and not the other way around (Bayer, 2017). However, the production of new dwellings influences the prices in the long term by compensating the supply side for the growing demand.

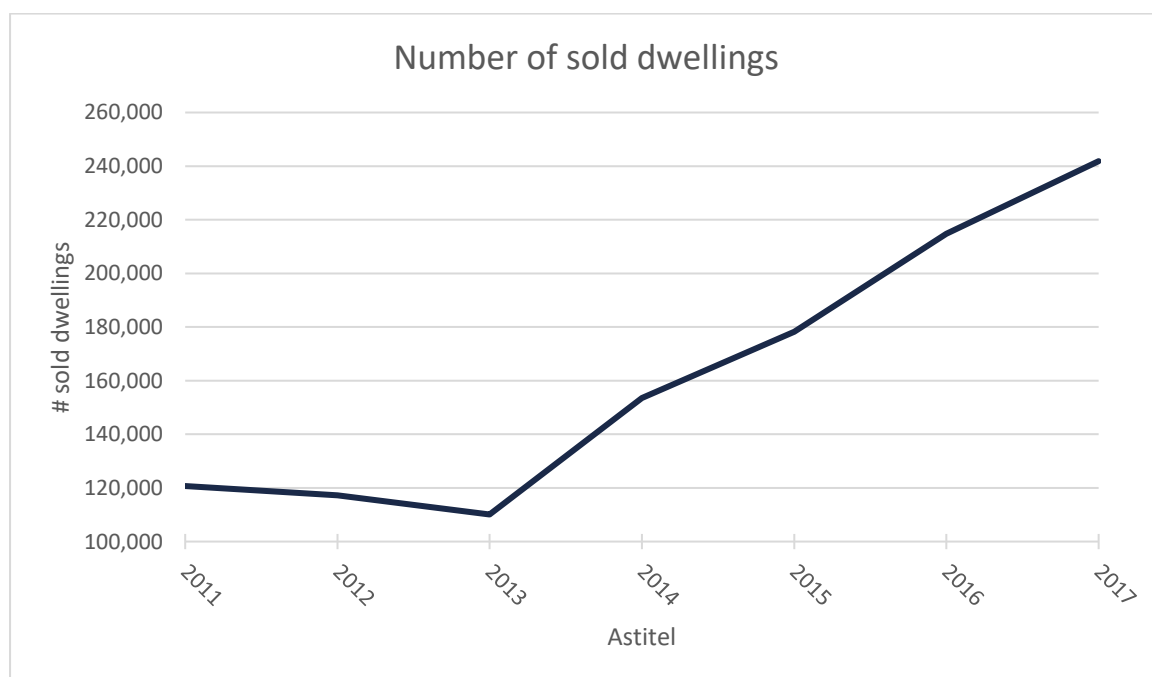


Figure 21: Number of sold dwellings after the crisis (Kadaster, 2018)

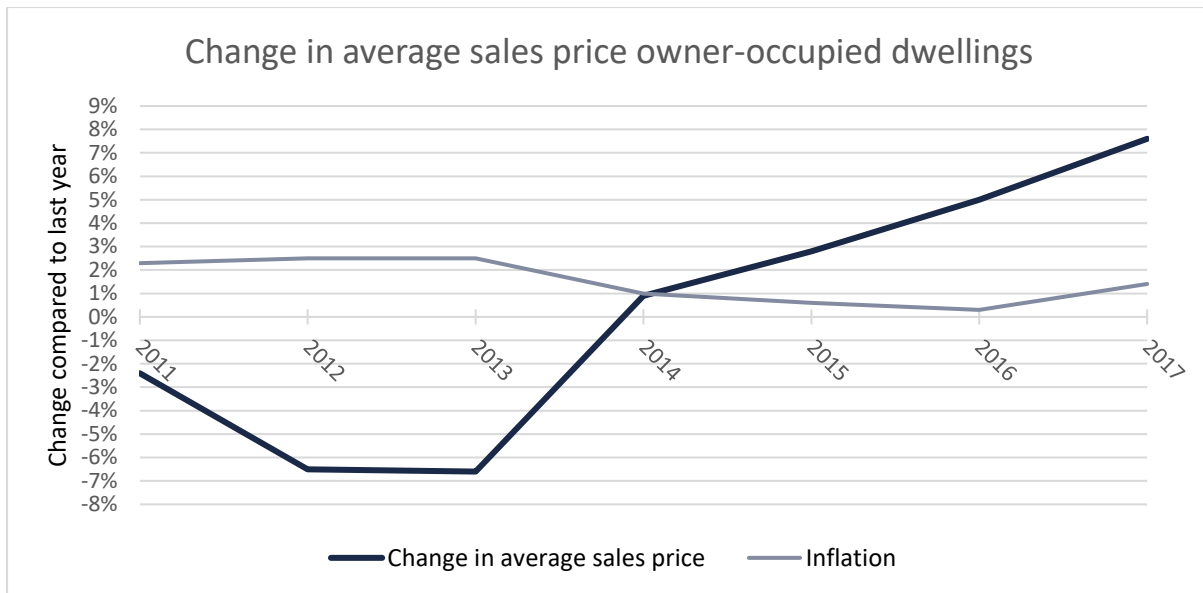


Figure 22: Development of the sales price of dwellings (Statistics Netherlands [CBS], 2018a)

### Land development phase

The availability of locations for residential real estate development is a problem. There is a stagnation in the number of new produced dwellings, due to this lack of sites with a large capacity for new residential development (van Breukelen, 2017). Sites that were already planned for development prior to the crisis should be taken off the shelf and prioritised, according to the association of developers NEPROM (van Breukelen, 2017).

This lack of available sites has several reasons. The reasons are connected to all the institutional layers of Williamson. Parties do not come up with initiatives, since new balances in the governance structures should be found, due to the increased awareness of the risks of land development projects by all the parties. Formal institutions shifted the attention of the public parties to, mostly smaller, redevelopment projects within the existing urban areas, instead of large greenfield development (the ladder of sustainable development). Furthermore, there is also a cultural shift going on, whereby the initiative should come from the market.

### Real estate Development phase

The entire situation of downscaling the production and cuts to the workforce turned 180 degrees when the crisis was over. The demand started to increase over the entire supply chain and the developers and construction companies started trying to upscale production. Several bottlenecks are experienced by upscaling the production, like the availability of a sufficient number of qualified employees and shortages of building supplies. This results in challenges in the production, but triggers also innovation, like the use of prefabricated materials, since less workforce is required at the construction site.

Construction firms and subcontractors are trying to hire new personnel to scale up the production, but due to several reasons it is difficult to find skilled employees. First of all, many people went to other sectors during the crisis. They are not all willing to come back to the construction sector. Secondly, there is a problem with making young people enthusiastic to get employed in the building sector, since it is hard physical work. Finally, many people with experience in the sector, who lost their job during the crisis prefer to work on self-employed basis and choose their work from project to project.

## The Market for Owner-Occupied Dwellings After the Crisis

The combination between a higher demand for construction workers and a lack of available workforce results in an upward trend in the hourly rates of self-employed workers (NOS, 2017a) and in more vacancies in the construction sector (Figure 23).

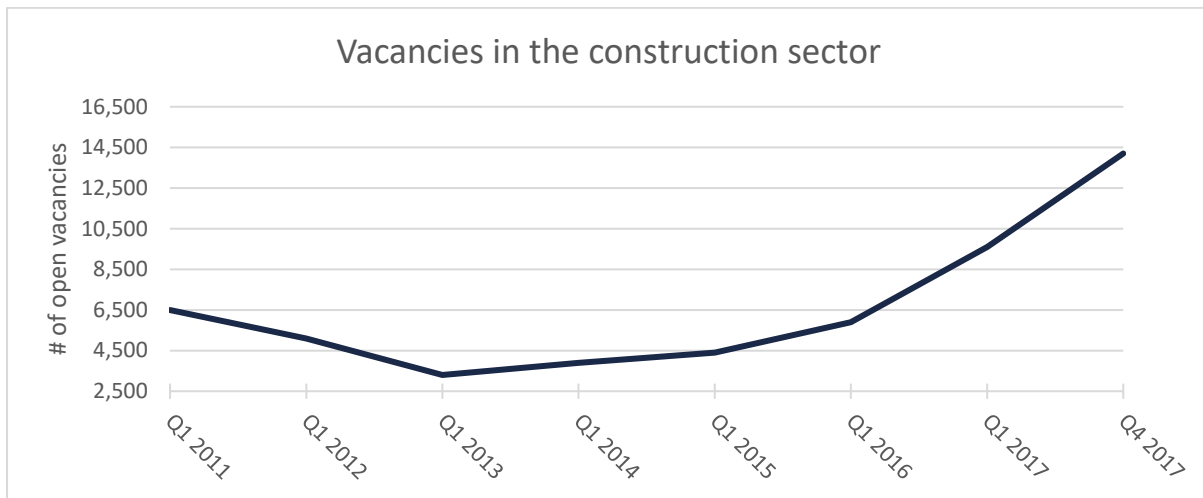


Figure 23: Number of open vacancies in the construction sector in the Netherlands (Statistics Netherlands [CBS], 2018b)

The supply of building materials and the availability of equipment is a bottleneck, next to the lack of the availability of the workforce. Projects are, for example, getting delayed due to the delivery time of foundation piles (Interview: Dekker, 2017; NOS, 2017b). The supplying industry is a bit more careful with upscaling the production. Many production lines were closed down during the crisis and it takes a while before manufacturers will scale up again, since they want more certainty about the continuity of the growth and a recovery of the price levels of their goods (Interview: Dekker, 2017). This can be partly solved by planning and looking further ahead.

It is important that the market parties find solutions in upscaling the building capacity, since they are already facing their limits of the available man power, building supplies and equipment (Bayer, 2017). This means that it will be hard to reach the desired building output, even when the plan capacity will be increased.

### 7.2. Governance

The crisis gave new insights to all the involved parties in terms of risks and uncertainty. This resulted in changes in the governance structures in the land development phase. A shift in governance structures is also experienced in the real estate development phase.

#### Land development phase

Not all the parties involved in the development process agree with this passive attitude of the national government. The national government needs to get more actively involved in spatial development and housing provision by making agreements with the local governments and providing subsidies, according to van Breukelen (2017) of the NEPRON (association of developers).

It is not just the national government that distanced itself from the responsibility of land development, but the municipalities also changed to a more passive policy for land development with the financial consequences of the crisis in mind. Tenders are increasingly used by municipalities to select the developer for the pieces of land that are still owned by the municipality. There are several reasons for the use of this method. A tender improves the transparency of the selection of a market party (Interview: Rommelse, 2017; Jager, 2017a). Secondly, it is seen as the tool to get the best out of the market (Jager, 2017a). And the last reason is the lack of knowledge of the client; and a tender makes use of the knowledge of the other parties (Jager, 2017a).

## The Market for Owner-Occupied Dwellings After the Crisis

More initiative of market parties is required, due to the withdrawal of the government. However, the market parties are experiencing bottlenecks, due to the inactivity of the government. The ladder of sustainable development should concentrate new development within existing urban areas. These are sites where more stakeholders are involved.

### Real estate Development phase

The relation between the actors in the real estate development phase changed as well. More work than before gets subcontracted to other parties, since the required workforce is not available within the company. This is caused by the fact that many companies decreased in size during the crisis. Many construction firms are hiring self-employed people on project basis. This is for three important reasons. The first one is that market parties have problems in finding enough suitable construction workers. The second reason is connected to the first reason; the self-employed persons often do not want to work for an employer anymore, and plan to stay self-employed (EIB, 2016). They can earn more while self-employed and they can select the best projects, since there is enough work. The self-employed people are, in general, positive about the future and they are expecting more market growth in the coming years (EIB, 2016). This increases the problem of finding suitable personnel for the construction firms. The last reason for more self-employed people at the construction sites is that some construction firms choose consciously to work with self-employed instead of hiring new personal, since it gives more flexibility to their organisation, a decision made with the recent crisis in mind. The trend of the growth in the number of self-employed workers in the construction sector is visible in Figure 24 (EIB, 2016).

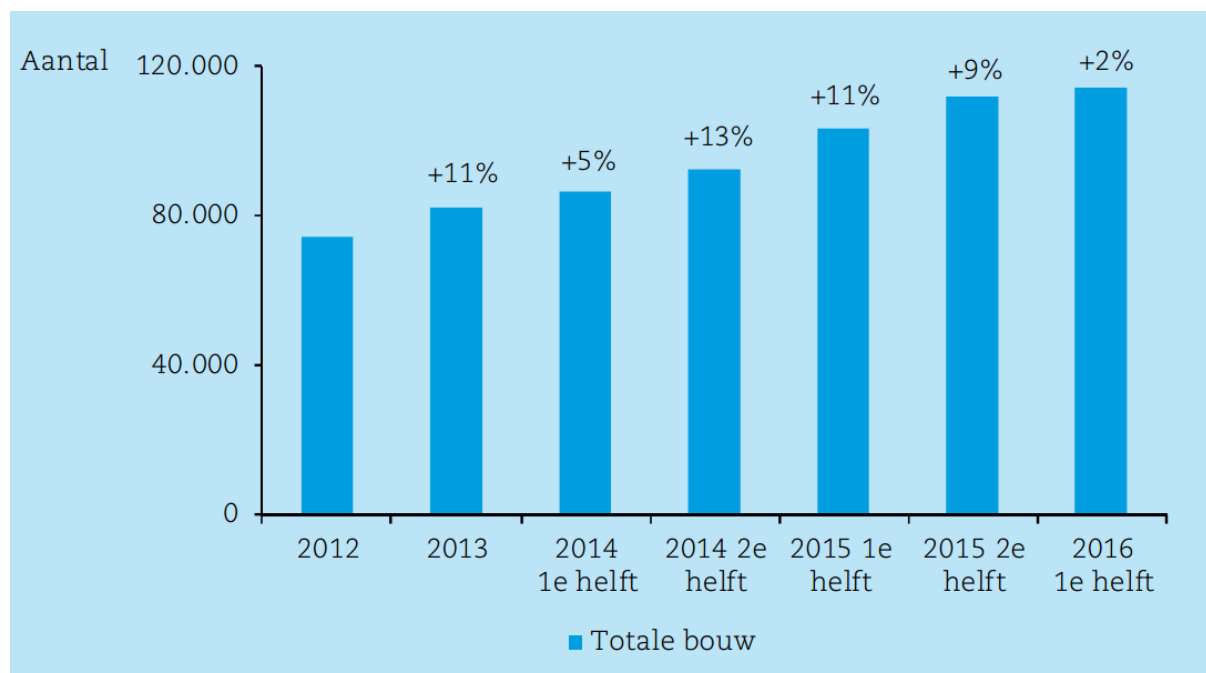


Figure 24: Number of self-employed people in the construction sector (EIB, 2016)

Construction firms are trying to upscale their number of construction workers, but they have difficulties in finding suitable personnel. The tight labour market and the lack of available self-employed workers makes it important for construction firms to create conditions that the required people choose to collaborate with the firm. This new development of the importance of partners makes relations a very important concept. Cooperating with fixed partners in the chain is a practice that is becoming more and more usual (Interview: Dekker, 2017; Interview: Meijers, 2017).

## The Market for Owner-Occupied Dwellings After the Crisis

If construction firms and self-employed persons have to select a project, they are not only selecting it on the basis of the possible profit, but also the social aspects and the reliability of the project owner are of great importance. In the second quarter of 2016, about 40 percent of the self-employed workers indicated that clients were paying late or not at all. This is already an improvement on the second quarter of the year before, when almost 80 percent of self-employed workers experienced problems with the payment of their invoices (EIB, 2016).

### Transaction Costs

The shifts in the governance structures result in different transaction costs, compared to before and during the crisis. Market parties are expected to take the initiative, but the absence of clearly indicated locations which should be developed makes it harder for market parties to come up with concrete plans. There is a threshold for market parties to invest in the planning of a site which might get rejected by the municipality as a desired project. The suitable locations were indicated by the national government in the decade prior to the crisis, the Vinex areas.

The ladder for sustainable development forces a look first, at the possibilities within the urban areas, before new greenfield locations are allowed to be developed. More transaction costs are involved by development on those locations within the existing urban areas. There are more stakeholders, with a wide range of different interests, involved. This makes the development processes more complex, lengthy, and costly.

The trend of organising tenders and competitions has a large influence on the transaction costs in the land development phase. The transaction costs of a tender are very high. First of all, the municipality has to organize the tender, which demands much time of civil servants. The candidate contractors spend their resources on calculating the costs for a project, even though it is quite uncertain if they can execute it. More and more market parties are not willing to contribute in the tenders anymore, or are just calculating for tenders, in which they are making more changes to win, with a limited number of competitors (Interview: Paalvast, 2017; Jager, 2017a).

Transaction costs did also change in the real estate development phase. There is more power on the side of the construction workers, due to the scarcity on the labour market. This makes it, for some construction firms, a more time-consuming task to select or even find the required workforce for the projects. The fact that a larger percentage of the workforce is self-employed increases the transaction costs, too. Contracts have to be negotiated and drafted between the construction firms and the subcontractor or the self-employed workers.

### 7.3. Institutional Environment

The first attempt to simplify the formal procedures is done in Act on General Provisions in Environmental Law (Wabo), which come into force in 2010. This change in legislation integrated all the different procedures of the permission process into one procedure. The national government is continuing to simplify the legislation. The next step is that the Spatial Planning Act (Wro) will be replaced by the new Environmental Act (Omgevingswet). This new act will provide a more integrated framework, which should support market initiatives better than the old act. Also, economic aspects are included in the assessment of the initiatives. The lead time of the procedures will be shortened from 26 to a maximum of 8 weeks. The preparation of the new act does not go without setbacks. The planning was that the new act had to get into force at the first of July 2019, but this was originally delayed for an undetermined time (Hendriksma, 2017) and later the first of January 2021 was mentioned as the starting date of the implementation of the Act. Economic aspects are planned to hold an important position within the new act. However, there seems to be to less involvement of the

Ministry of Economic Affairs in the implementation of the new integrated environmental policy (Jager, 2017b).

The national government indicated in 2015 that it wanted to improve the tools for a passive land policy for the municipalities (Schultz van Haegen, 2015), but the regulation that came into force on the 1<sup>st</sup> of April 2017 limits the possibilities for municipalities to recover the costs they make for the planning process. This results in more certainty for market parties, since they can make a better estimation of the cost beforehand (Schultz van Haegen, 2017).

More change in the legislation is expected in the coming years. Municipal visions and zoning plans are becoming more integrated with other regulations in an environmental plan and vision (Omgevingsplan & omgevingsvisie). Initiatives from market parties will be more supported and lead times for the permits will be significantly decreased.

The tighter restrictions for the financial institutes for lending out money, which are introduced during the real estate crisis are still in place. This makes less financial means available for investments in development projects, even though there is enough demand for new projects and profit can be made.

### **7.4. Embeddedness**

The new shifted responsibilities and power relations in the governance structures, and the changed circumstances resulted in a cultural shift. This shift is most prevalent in the land development sector, since the local government had a large role in this part of the process. The culture in the real estate development sector did change slightly too, due to greater awareness of the risks and the importance of relations.

#### **Land development phase**

The national government is withdrawing from involvement in the housing production and the municipalities are responsible for taking it over, without agreements, targets or financial support from the central government.

Politics plays an important role in the land development phase, since it decides which land is available for development and which not. The decision of appointing more land for development is partly based on expectations and prognoses of further demographic growth, but environmental aspects play an important role too.

Two schools of thought have emerged regarding the future of the housing market. The first group of researchers and politicians claims that there is a huge problem which will grow larger and larger if that nothing will be changed. The supply is way behind the demand. Newspapers, magazines and reports from the sector pay a lot of attention to it and are claim that the building output should be raised.

The other way of thinking is that the demand will decrease in future years, so we should be careful about developing more real estate, since building more will just create problems for the future. This thinking would rather deal with some shortages in the short term. Transformation of the existing housing stock and transforming non-dwelling real estate into housing should be enough to cover the demand in the long run.

Market parties and municipalities became more aware of the risk due to their experiences of the last crisis. Phasing is getting a more prominent role in the planning, which makes the new projects more organic compared to before the crisis.

### Real estate Development phase

The shift of decentralisation and a market orientated land development sector is still ongoing. The plans that are announced for the new Environmental Act show that market initiatives will be stimulated, and economic aspects will play a more prominent role.

Awareness of the risks created a culture shift at the market parties as well. They were used to operating in a market that was growing each year, which resulted in great ambitions which resulted in all the consequences that are experienced during the crisis. The crisis has shown that demand can decrease, and real estate prices can decline instead of just rising. There is more risk awareness at the moment. This is for example reflected in more caution in the supplying industry by re-opening production lines, which were closed during the crisis.

The awareness of relations changed due to the crisis. The crisis showed how much the different parties in the production chain are dependent on each other. They needed to cooperate to survive. This will result, in a time of a tight labour market, in less opportunistic behaviour by subcontractors and self-employed workers towards the construction firms who helped them during the crisis.

### 8. Trends in the institutions

The previous 3 chapters (5, 6 and 7) elaborate about the institutional situation before, during and after the crisis. The main findings and trends are discussed in this chapter as a summary of the previous three chapters. This is, like in previous chapters, done in the different layers of Williamson's model. Table 1, at the end of this chapter, gives an overview of all the findings. The following chapter (9), discusses if the trends which are described and visible at macro-level, are also present at the local level. The trends will be explained by an analysis with the four-layer model in chapter 10.

#### 8.1. Embeddedness

Williamson describes this layer as relatively stable (Williamson, 1998) and this is also visible in the production chain of owner-occupied real estate. The market changed drastically in recent decades, but the institutions in the Embeddedness layer did not change significantly, but altered slowly in a more liberal direction. There are three different institutions in this Embeddedness layer that slowly shifted in the last few decades. The first one is the perception of responsibility of the government. Secondly, there is the perception about the product 'residential real estate' of the homeowners. Thirdly, there was a shift to more organic development, instead of large real estate projects, but this might be better explained by the market situation, rather than a cultural shift and it could revert back to what it was in the coming years.

The perception of the importance of direct governmental interventions in real estate development changed over time. In 1990, it was decided that the development should be more market-orientated, but the central government was still very active in setting goals and providing guidelines until 2008. The focus on decentralisation also pushed the task for housing provision to the local, municipality level. Many municipalities were active on the land market to have more power to steer the development in the desired direction. The crisis showed the risks of this approach and created awareness and support by many municipalities to leave the land market and make it a task for the private parties.

The most important change in recent times is that home buyers are starting to see their property as an investment, instead of just a consumption good. This development explains the behaviour in the last number of decades a lot. The demand for dwellings increases in times when the prices are increasing, since there is a good return on the investment. The high demand makes the prices of real estate rise even more and so does the demand again. It creates a bubble based on the expectation of further growth. This same mechanism, which is caused by the idea of having a property as investment, rather than a consumption good, worked the other way around during the crisis. That resulted in a downturn in transactions and a drop in the real estate prices. This principle is reinforced by the financing possibilities offered by the financial institutions and the fact that a loan for real estate investment is seen as common.

The fact that most of the new real estate development takes place in projects which are managed by developers and investors is a tradition in the Netherlands. The crisis opened possibilities for smaller scale projects and self-commissioning (organic growth). The production shifted slowly from a supply driven production into the direction of a demand driven production, but today, the majority of the new development is still constructed on project basis by developers and large construction firms. The fact that the national government is no longer assigning large areas for development might support the more organic development. It is still too early to claim that this is a structural change, which belongs in this layer, or that it is mainly caused by the current market situation.



### 8.2. Institutional Environment

The responsibilities and tasks of the different government layers are formally institutionalised. Those formal institutions shape the procedures and the flexibility of the available plan capacity. The plan capacity is the number of dwellings that can be realised on the land that is assigned by the municipalities as building land.

The Spatial Planning Act (WRO) was active until 2008. Every different governmental layer was obligated to draw and publish plans and visions. *The Planologische kernbeslissingen* at national level, the *streekplannen* at the level of the provinces and the *structuurplannen* were published by the municipalities. The plans of the local government had to fit within the plans sketched at the higher governmental layers. The national government had clear targets for the housing output. *The Planologische kernbeslissingen* were the tools for the national government to divide the targeted building output across the different regions of the Netherlands.

This top down approach changed with the introduction of the new Spatial Planning Act (Wro) in 2008. All the governmental layers shared their visions (*Structuurvisie*) as policy documents. Also, maps of the desired spatial planning were published at all levels; *bestemmingsplannen* of the municipality and *inpassingsplannen* of the national government and provinces. This might look still top down on paper, but the large change was that the municipalities were no longer forced to take over all the requirements that were sketched by the higher governments. The municipalities got more responsibilities. Furthermore, the municipalities were given the possibility to alter from the documents set by the higher governments. Those documents were not binding for the development of the plans for the municipalities anymore. The *bestemmingsplannen* of the municipalities are still binding for citizens and private parties for the development within the municipality. The national government stopped dividing the targeted building output over the different regions in the Netherlands with this tool. This shift gave more possibilities for the municipalities to decide their own desired building outputs and the locations to realise it.

Another important shift in the Institutional Environment is the attempt to improve the legislation by shorter lead times for procedures and simplifying the procedures and legislation. The new Act on General Provisions in Environmental Law (Wabo), which was implemented in 2010, consolidated 25 separate permits, which had all been required for development projects, into one single permit. This means that permit applicants need only to go to one desk and go through a single procedure instead of multiple.

The Crisis and Recovery Act (Chw), which was introduced in 2010, had the goal of increasing the output of dwellings. An important adjustment in this act is the fact that 'reparation' by shortcomings is allowed and can speed up the process. Restrictions of the Environmental Impact Assessment (EIA) became also a bit looser. The Crisis and Recovery Act (Chw) should reduce the complexity and the lead time of the development process.

The process of decentralising, simplifying, the integrating different acts and shortening the lead times is still ongoing. The new Environmental Act (Omgevingswet) will replace the Spatial Planning Act and 25 other acts, which are important for the development. This will simplify the legislation and make the planning procedures more efficient. The introduction of this new act was planned in 2019, but has been postponed to 2021 since more time is needed for proper drafting and implementation of the law.

A last interesting observation is that financial institutions are bound to stricter rules. This means that they have less financial means available for the great investments in land and real estate development projects. Also, the mortgage conditions were less strict in the favourable time before the crisis. Mortgages of 106 percent of the real estate value (Loan-to-value) were possible. The risk of this

became clear in the crisis when people were not able to pay the monthly fees of their mortgages anymore while, at the same time, the values of the real estate were dropping. This brought financial challenges for many households. Requirements for the financial institutions were made, which tightened the mortgage conditions in a graduated manner to a maximum Loan-to-value of 100 percent to prevent financial issues for home buyers in the future. This change in regulation makes the market for owner-occupied dwellings less accessible for certain groups, like first-time buyers and people with lower incomes. This might cause a drop in the demand side of the market. This reduction in mortgage possibilities increased the procyclical reaction in the market during the crisis.

### 8.3. Governance

The national government has been shifting the responsibility and tasks for housing provision to the local governments over the last few decades. The fact that the Ministry of Housing, Spatial Planning and the Environment (VROM) disappeared in 2010 is a clear example of the withdrawal of the national government in this matter. Municipalities approach this responsibility mostly by acting actively on the land market. This resulted in financial setbacks for many municipalities during the crisis. Most of the municipalities rethought their approach and decided that they should steer the development in a less risky way. They want a larger involvement and more initiatives from market parties in the land development phase.

Some municipalities own still some land. They aim to get the most out of the market for the development of these sites. Also, transparency is very important within the public domain. This makes competitions and tenders an ideal tool to select a partner. However, there are many transaction costs involved in setting up this competition, on both sides, the participating parties and the municipality. This gives some friction in the efficiency, and candidates are not always willing to participate in those tenders in favourable times when there are enough projects to do.

Market parties are generally willing to take the activities of the municipality over, but they are facing problems. According to the market parties, there are too few sites designated by the municipalities that are suitable for development. The municipalities are also expecting the market parties to play an active role in coming up with suitable ideas for locations to add to the plan capacity. However, market parties are not directed or supported in finding the locations by any of the governmental layers, which makes an investment in research and planning of sites an uncertain project. Market parties are demanding action from the government in simplifying the legislation and helping to indicate suitable sites for development (van Breukelen, 2017).

The unfulfilled expectations of both the market parties and the municipalities are resulting in 'Wait-and-see' behaviour. This causes problems in creating alliances that could enable new large-scale development. Those alliances are needed to upscale the building outputs to fulfil the high demand and relieve the pressure on the market.

The power relations in the real estate development governance structures are dependent on the market development. Shortages of some building supplies and scarcity in the labour market cause bottlenecks in times of a high demand for residential real estate. The opposite, overcapacity, was the case in the crisis, when the demand for real estate was low. This made it easy for construction firms to subcontract activities for reasonable prices. However, they also had to hone their prices to get projects from the developers during the crisis.

### 8.4. Resource Allocation and Employment

Bottlenecks in the availability of some building supplies and a lack of available labour force were experienced in the period prior to the crisis, due to the high demand for newly constructed dwellings.

## The Market for Owner-Occupied Dwellings After the Crisis

The crisis resulted in a plunge in the demand for real estate, which also affected the building output of dwellings. The market for labour and building supplies changed from a tight market into a market of overcapacity. The lack of customers and the dropping prices resulted in a decreased production capacity over the entire supply chain. This reduction in capacity was caused by several measures taken by the actors involved in the residential building construction; like a decrease in the number of employees, or some construction firms stopping their activities and some factory lines or entire factories closing due to the lack of demand.

Now, the crisis is over, and the demand has reached a high level again. Several development projects that were planned prior to the crisis are being considered again and new projects have been started. Construction firms are experiencing bottlenecks in production again, even though the building output is not at the same level as it was pre-crisis. It is expected that it will take some time to increase the production capacity after it was scaled down during the crisis, but it will take longer than anticipated, according to the existing literature (de Wildt, Keers et al., 2005).

There is again a tight market for construction workers and some building supplies. This gives a lot of power to the supply industry and the construction workers. There is enough work, but too small a workforce. Companies over the entire supply chain are trying to increase the number of employees. Opportunistic behaviour has them demanding high prices and picking the best projects and companies. The power balances in the negotiation changed drastically during and after the crisis.

The competition shifted in the past from the construction market to the land market. There might arise a situation in the future that the competition moves to the labour and building supply market. The developers and main construction firms which can make alliances with subcontractors and suppliers are the ones which are still able to produce new dwellings.

## The Market for Owner-Occupied Dwellings After the Crisis

	Prior to the crisis	During the crisis	After the crisis
<p><b>Embeddedness</b></p> <p>Dwellings are an investment</p> <p>Government feels less responsible; the market should coordinate</p>	<p>Dwellings are seen as an investment instead of just a consumption good</p> <p>Financial means from third-parties for the purchase of real estate is considered as normal in the production process.</p>	<p>Market orientated thinking continues at the national government, but now also municipalities dare to step out of the land market and leave it to the market parties.</p>	<p>Market orientated thinking still continues at all layers of government.</p>
<p><b>Institutional Environment</b></p> <p>Decentralisation of responsibilities &amp; Integrating and simplifying the legislation and procedures</p>	<p>Government was very much top-down structured</p> <p>Policies stimulated the development industry by subsidies, but also by offering a framework of favourable mortgage conditions.</p>	<p>Decentralisation gave more responsibilities to the municipalities.</p> <p>Simplifying regulations is being prioritised, to stimulate the building sector in the crisis time.</p>	<p>The national government does not have a clear vision on housing production and supply.</p> <p>Simplification of the regulations and procedures and a reduction of the lead time is ongoing.</p>
<p><b>Governance</b></p> <p>Municipality: Less active role &amp; More transparency in selection process</p> <p>Market parties: Power balances between parties are dependent on scarcity</p>	<p>Prominent role of the central government in assigning targets to regions</p> <p>An important active role of the municipality in the land development phase on local level.</p>	<p>Central government is withdrawing, and municipalities are also more careful.</p> <p>A large share of the employees in the building sector became self-employed.</p>	<p>‘Wait-and-see’ behaviour at the land market from both sides. Municipalities want initiatives from the market parties and are willing to facilitate them. Market parties are demanding guidelines and directions from the municipalities</p> <p>Competitions and tenders are used to select partners.</p> <p>Relations are important, due to scarcity.</p>
<p><b>Resource Allocation and Employment</b></p> <p>Capacity problems and price increases in case of improving market situations</p>	<p>Production capacity problems in the real estate development phase, due to shortages.</p>	<p>Over capacity over the entire production chain, due to a strong decreasing demand. Actors are downscaling the production capacity.</p> <p>Many workers lose jobs and become self-employed or became employed in other sectors.</p>	<p>Plan capacity problems in the land development phase.</p> <p>Production capacity problems in the real estate development phase in the entire supply chain are even larger than before the crisis.</p>

Table 1: Summary of the institutional trends

### 9. Case studies: Actual governance structures in local context

This chapter aims to verify if the institutional trends and other findings which are present on the macro-level, described in previous chapters, are also present at the micro-level. The verification is done by two case studies which present the situation in the local context. The information is gathered by means of semi-structured interviews. Both cases are located in the municipality of Lansingerland to make them better comparable as explained in chapter 4. Furthermore, the pre-crisis case which is described in the last section of chapter 5 is located in the same municipality.

The cases studies are important to show that the general trends in institutional change are also notable at the local level. This would mean that the changes are affecting the local production of new dwellings. A more local perspective makes the institutional change more concrete and provides insight in the interaction between the different layers of Williamson in the real world.

The first important notion is that most of the municipalities changed from an active to a more passive and facilitative land policy after the crisis. This is also the case for the municipality of Lansingerland. Before the crisis they were very active on the land market, aiming to be in control of the development. The financial setbacks that were experienced during the crisis made them reflect on their active policy. The land policy changed from active into 'passive, unless' (Interview: Zevenbergen & den Heeten, 2017).

In general, there are two ways to control the new development from a passive position. The first possibility is with a private agreement. This is negotiated and signed voluntarily between market party and municipality. This method is used in 95 percent of the cases (de Zeeuw, 2017). The second tool is the new Land Development Act which the municipality can use to control the development and to recapture the costs that are made for the planning process and public facilities. This method is considered to be too complex, and is hard to apply in situations with an organic development process or in cases with multiple landowners (de Zeeuw, 2017).

The next two sections are discussing two cases in Lansingerland. The first case, Gouden Podium (Figure 25), is a residential development project which is the result of a voluntary agreement between the involved developers and the municipality. The second case, discussed in section 9.2, is a project which is currently in development, and supported by the new Land Development Act (Figure 27). This chapter ends with a conclusion which discusses whether the general trends in institutional change are also visible in the local context or not.

#### 9.1. Case T=2a: Gouden Podium

The first 'post-crisis' case, T=2a, is a residential development project which is currently under construction in Berkel en Rodenrijs, one of the towns in the municipality of Lansingerland (Figure 25). This project is called Gouden Podium. It is a sub project of the Gouden Buurten. The development permission was granted by the municipality by means of a private voluntary agreement between the developer and the municipality. It was already planned before the crisis that the municipality would facilitate this development by enabling and adjusting the zoning plan and by controlling the development with a private agreement. The huge Vinex challenge of the municipality, combined with the fact that the two developers already owned most of the land made this the best option for all the parties involved. The agreement was signed in December 2015 and will result in 400 new dwellings. The construction of the real estate started officially on the 25<sup>th</sup> of May 2016 (Municipality of Lansingerland, 2017).



Figure 25: Geographical location of Gouden Podium

The development of residential real estate is a complex system with many involved actors as described in the previous chapters. This is certainly also the case in the development of the Gouden Podium. There are many actors involved in the different phases of the development process. In Appendix 3: Organisation Structures of the Cases, there is a graphical representation of all the involved parties included in it.

Kavel Vastgoed and Amvest are developing the site together. They cooperate in a joint-venture (Ontwikkelingscombinatie Westpolder/Bolwerk C.V./B.V.) for the land development phase and in another joint-venture (Gouden Buurten C.V./B.V.) for the real estate development phase. The first plans were already drafted before the crisis, but the phasing was postponed due to the lack of demand for owner-occupied dwellings during the crisis. The developers were financially able to wait for better times and did not have a need to change the housing programme to a more affordable segment of the market. Many other developers were changing their programme to lower sectors or gave discounts to the buyers of the dwellings to reach the targeted sales rates during the crisis.

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However, some of the elements of the agreement between the developers and the municipality were renegotiated after the crisis. The development of this project got priority due to the current growing demand for dwellings in the region. Kavel Vastgoed was still selecting the construction firm by means of a tender. In this case, Riz Bouw was chosen as the construction firm for the construction of the Gouden Podium.

The crisis had an influence on the development process of this project. The development is not only delayed, but this project is also suffering from the current scarcities in the building sector which were caused by the crisis. Subcontractors are not willing to make long term agreements with the construction firms, since they want to decide from project to project which project they undertake. The subcontractors are in this position due to the sufficient amount of work available to them (Interview: Paalvast, 2017; Interview: van Swam, 2017).

The largest change in the structure of the alliance is made in the sales process. Three different real estate agencies were selling the dwellings on the market before the crisis. There was a need for a real estate agent that was working exclusively for the new development in the Gouden Buurten, to prevent the real estate agents from putting more effort in selling dwellings of other developers with higher margins (Interview: van Swam, 2017). Another advantage is that an exclusive agent offers the possibility of giving more attention to potential home buyers. The exclusive real estate agent is, according to the contract, not allowed to deal with projects of other customers, but the developers are allowed to sell their dwellings via other agents. One of the previous real estate agents is kept as a back-up.

The crisis resulted in a need for an exclusive real estate agent and a drastic decrease in production capacity. The maximum production capacities are met on several aspects in this project, now that the market is favourable again. There are shortages of workforce, materials, and machines. This increases the delivery times and prices. Good planning to deal with those issues is becoming more important.

Compared to before the crisis, the actors, governance structures, transactions and transaction costs have changed. The largest change, in this case, took place in the real estate development phase and not in the land development phase. The agreement for the land development was already signed before the crisis and was renegotiated regarding some financial aspects, but the share in responsibilities and the involved parties did not change. So, the governance structure stayed the same. The quest for control over development, the relationship between the public and the private sector, attitudes towards transaction costs and legal styles: flexibility, certainty and accountability are described by Buitelaar (2007) as important factors which influence the transaction costs. The municipality was willing to control this development in a facilitating manner, instead of with an active land policy, due to the huge Vinex challenge which the municipality of Lansingerland had in times of signing the agreement.

There is more change experienced in the governance structure of the real estate development phase compared to the land development phase. The governance structure is more complex compared to before the crisis. There are more self-employed workers involved in the process. Parties are more careful with long term contracts, since prices are increasing fast due to the scarcity (Interview: Weerd, 2017). Asset specificity, Uncertainty, Frequency, Number of actors are mentioned by Williamson and many others as important factors which influence the transaction costs. The uncertainty about the availability of materials and the price development, and the number of involved actors in the process are the largest changes which increased the transaction costs compared to before the crisis.

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The transaction costs decreased in other parts of the process. A clear example is the ease in selling the developed dwellings at the market today with high demand and a short supply. The real estate agent stopped their advertising this project, since the demand for the dwellings is so high that everything will be sold in a short period of time, even without the use of advertisements (Interview: Wibier, 2017).

There are some remarkable institutional differences in this post-crisis development project, compared to the stereotype pre-crisis case of the Gouden Griffelbuurt and the general situation back then. The Embeddedness layer is described by Williamson as the most stable layer. This is also the case in the building industry. The neoliberal thinking of the national governments continues. The actors behaved less riskily and opportunistically during the crisis. But it seems like actors are falling back in their old patterns in the real estate development process now that the crisis is over. In the case of this development project, the municipality had already planned before the crisis to have a facilitating role, instead of an active role. For now, all the municipalities are still a bit reluctant in taking risks, but it might be a matter of time that they also fall back in their old patterns.

The Institutional Environment is changing slowly to a more integrated and simple system. This change was accelerated by the crisis, but did not have an impact on this project. New tools like the Crisis and Recovery Act and the Land Development Act are not being used in the process of this development project.

The governance structure was already designed before the crisis in a way most of the municipalities would want it now, after the crisis, namely with a passive position for the municipality. So, the structure of the land development phase of this project did not have to change much due to the crisis. The governance structure in the real estate development is changed more significantly, because of the crisis. Scarcity changed the power balances and more actors are involved in the process, due to the large portion of self-employed workers in the sector.

The Resource Allocation and Employment layer is dominated by the scarcity caused by the downscaling of the production capacities in the entire supply chain of the building sector. This layer is described by Williamson as dynamic. This does not seem to be the case in the building industry. The market has already been recovering for years, but the production capacities have not yet increased for many building materials. This results in longer delivery times and increased prices. Also, the scarcity of the labour market causes increases in the labour prices and gives power in the negotiations to the subcontractors and self-employed workers.





Figure 26: Impression of the construction site of Gouden Podium

The municipality has a facilitating role in the process of the Gouden Podium and is not responsible for the land development. This is the usual practice since the crisis. Also, other general observations are present in this case, such as the fact that bottlenecks are experienced in the real estate development phase. Some building supplies have long delivery times, which make a good planning essential. The prices of those scarce building materials are rising (Interview: Paalvast, 2017). Scarcity is also present at the labour market. The same bricklayers charged 20 percent less for their work in an earlier phase of the Gouden Podium than they do for the coming phase (Interview: Paalvast, 2017). The larger share of self-employed workers and the fact that subcontractors and self-employed workers do not want to sign long-term agreements increases the number of involved actors and the uncertainty. Because of that, the transaction costs are rising too.

The changes which are described at national level in the land development phase are not visible in this project. This is partly caused by the fact that the contracts were signed before the crisis, which had fixed the governance structures already. The governance structure was already a structure with a facilitating role for the municipality, instead of a passive role; the way most municipalities want it after the crisis. There was no need to change the structure significant in the land development phase of this project.

However, the national trends in the real estate development phase are clearly visible in this phase. Governance structures became more complex, due to the fact that smaller and more parties became involved. Subcontractors and self-employed workers became more powerful, since there is a scarcity in the labour force, which results in higher labour prices. Also, the fact that the maximum capacities are met in the building materials industries is relevant in this case, just like at the macro-level.

### 9.2. Case T=2b: Meerpolder

The second example of a residential development project that is constructed after the crisis is also located in the town Berkel en Rodenrijs within the municipality Lansingerland (Figure 27). There are some remarkable differences in the development, compared to the Gouden Podium and the pre-crisis situation. First of all, the municipality decided to use the new planning control tool, the Land Development Plan, introduced by the Land Development Act. This was because the land was not owned by the municipality, and attempts to reach agreements with some of the landowners failed (Municipality of Lansingerland, 2016). Recovery of the municipality's planning costs is ensured by means of the Land Development Plan. This plan provides also the tool for the municipality to influence the housing programme, location, and phasing of the project to assure the quality of the new development. Several relatively small separate sites, within the Meerpolder area, are indicated in the Land Development plan (Figure 27).

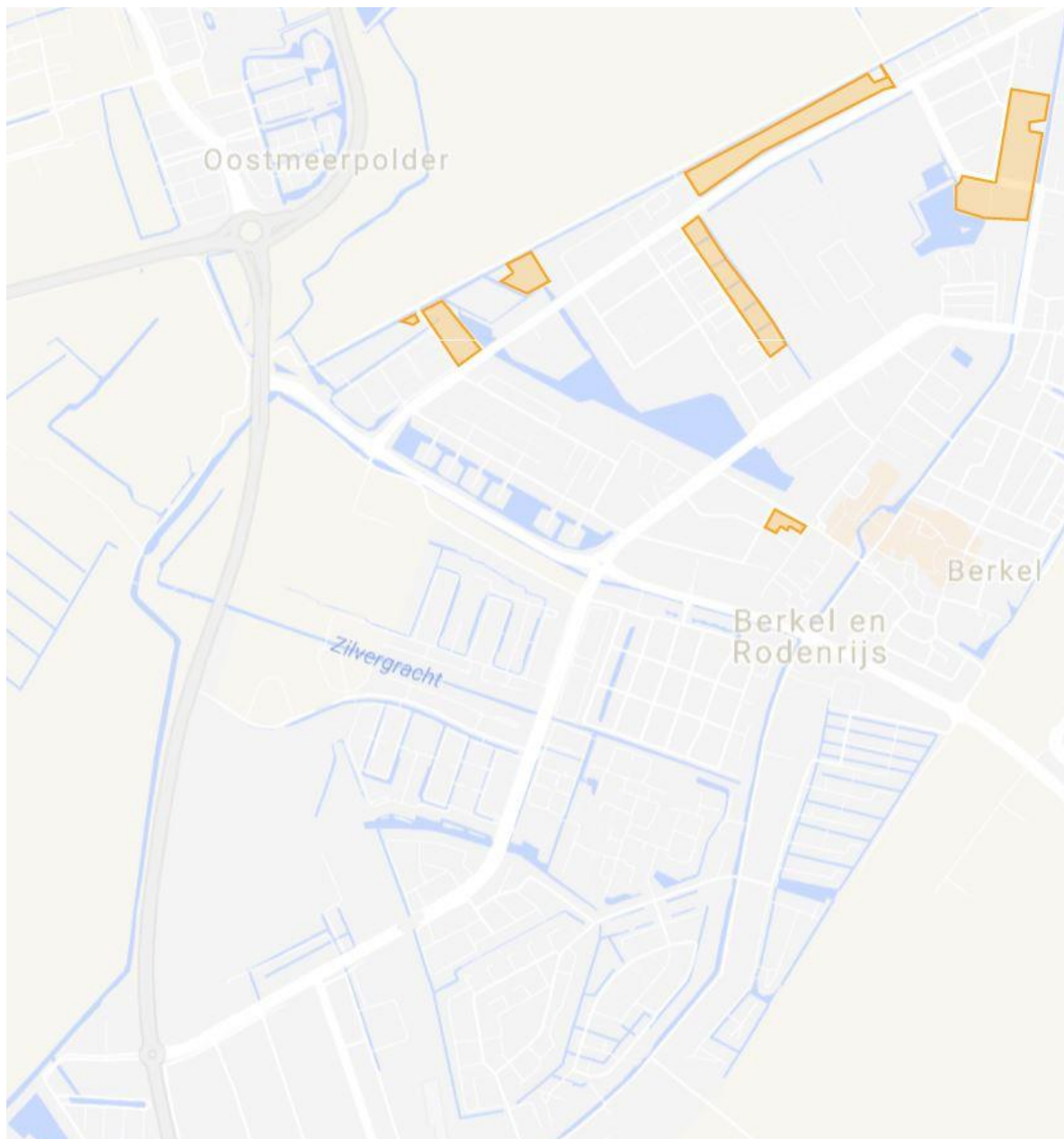


Figure 27: Geographical location of Meerpolder

This thesis analyses the development of one of the sites within the plan. This is the rectangular piece of land, which is located at the top of Figure 27, between the Oostmeerlaan and Meerweg. The first half of this site has been developed and the development of the second half is in progress. The land was owned by the municipality and sold to van der Lecq en Droogers, a construction firm with a small development department. The vision about phasing, housing programme and planning cost recovery that was drafted in the development plan was not fixed. The municipality aimed for a programme where several types of dwellings, like detached, semi-detached and terraced houses were aimed at this site, according to the plan (Municipality of Lansingerland, 2016).

However, this programme and the calculated planning costs were negotiable in practice. Van der Lecq en Droogers got permission to develop semi-detached dwellings on the entire site, instead of the other types. Also, the price for the land was the result of a negotiation process, instead of the price defined in the development plan (Interview: Droogers, 2017). However, this was the last time that van der Lecq en Droogers were able to make a direct deal with the municipality. The projects are now divided among the developers by competitions and tenders, due to the favourable market situation and the large interest of many parties to develop in the region (Interview: Droogers, 2017).

The real estate development phase has changed a lot in the past few years. Van der Lecq en Droogers have their own employees, which caused some challenges during the crisis. It was important to keep the staff productive. This was done by giving discounts on the dwellings, to make sure that the production could continue (Interview: Droogers, 2017). Now that the crisis is over, it is good to have employees, as the company is less dependent on self-employed workers. Other developers have experienced that the scarcity now makes it harder and more expensive to hire workforce. Van der Lecq and Droogers do not experience these difficulties in subcontracting workforce, due to the fact that they work mostly with their own employees and for work they need to subcontract, they have good social contacts with their partners. However, they do experience the increasing prices too. They work mostly with fixed partners, but sometimes prices of other companies are requested to check if the prices of the relational partner are still common market prices (Interview: Droogers, 2017). Good employment practices make employees willing to stay within the firm, but the relations with external partners are also of great importance (Interview: Droogers, 2017).

### 9.3. Conclusions

The previous two sections are describing two 'post-crisis' cases in the municipality of Lansingerland to verify if the general findings out of the previous chapters are also observed in the local context. The cases gave clear insights in the fact that some of the general trends are also visible in the local context. This is mainly for the situation in the real estate development phase, but some of the general findings of institution change in the land development phase are present too.

The national trend indicates that more responsibilities in the land market are being shifted to market parties. In the first case the contracts and agreements were already drafted before the crisis. The shift of responsibilities to the market parties is done by the municipality of Lansingerland by using the new Land Development Plan in the second case. However, the requirements that are given by the municipality in the Land Development Plan turn out to be more flexible than the tool is meant to be. This might be caused by the fact that the land was sold and the contracts were signed at the beginning of the recovery of the market, and at that time the municipality wanted development. During the time when the contracts were signed, the developer had a good negotiation position. This led to the Land Development Plan being overruled, and the costs that had to be paid decreased, and the housing programme could be changed.

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The institutional shifts in the construction phase are also noticed in both of the 'post-crisis' cases. Governance structures became more complex, due to the fact that smaller and more parties became involved. The prices for building materials are raising, as are delivery times, due to capacity problems. Subcontractors and self-employed workers became more powerful, since there is a scarcity in the labour force, which results in higher labour prices. Also, the fact that the maximum capacities are met in the building materials industries is experienced in both of the cases, like at the macro-level.

The shifts that are experienced at the national level are also clearly present at the local level in Lansingerland. Another interesting observation is that the Land Development Plan is not applied in the way that it should be. This tool out of the Institution Environment is prescribing fixed prices and housing programmes. The prices and programmes are fixed, but at the same time the market is volatile. This can make the prices and programmes are not conform to the market and development will not take place. The Resource Allocation and Employment layer is ways more dynamic. This makes this tool too slow in a fickle market and made the municipality decide to make a deal with the developer, without obeying the rules that are set by the Land Development Plan. This is a clear example of the friction between the layers, which is caused by the different speed of alteration.

## 10. Analysis of the institutional changes and the effect on the governance structures

Chapter 8 described the institutional changes over the last decade by means of a statistical comparative analysis. The institutions before (T=0), during (T=1) and after the real estate crisis (T=2) are mapped and compared. In chapter 9 it became clear that most of the trends in the institutional changes are also present in the local context of Lansingerland. This chapter aims to explain the institutional change and the lack of owner-occupied residential building output by institutional shifts in the other layers.

The different layers of the four-layer model are in reality fully interconnected (Williamson, 1998). With this notion a model is built (Figure 28), which is explained in the conceptual model section of chapter 4 of this thesis. This model is used to analyse and explain the institutional changes of the last decades which happened during the real estate crisis ( $\Delta 1$ ) and after the crisis ( $\Delta 2$ ).

This chapter starts in section 10.1 with an explanation of the building output and how this output can be influenced by the improvement of the process efficiency. Section 10.2 provides an intertemporal analysis of the trends between the layers of Williamson's model. Starting in the lowest, Resource Allocation and Employment layer, where the problem of a low owner-occupied residential building output is perceived to the higher layers, where the solutions might be found. Section 10.3 discusses the undesired effects of the institutional changes on the involved transaction costs and how this influences the governance structures in more detail. The most important findings in this chapter are summarised in the final section (10.4) of this chapter.

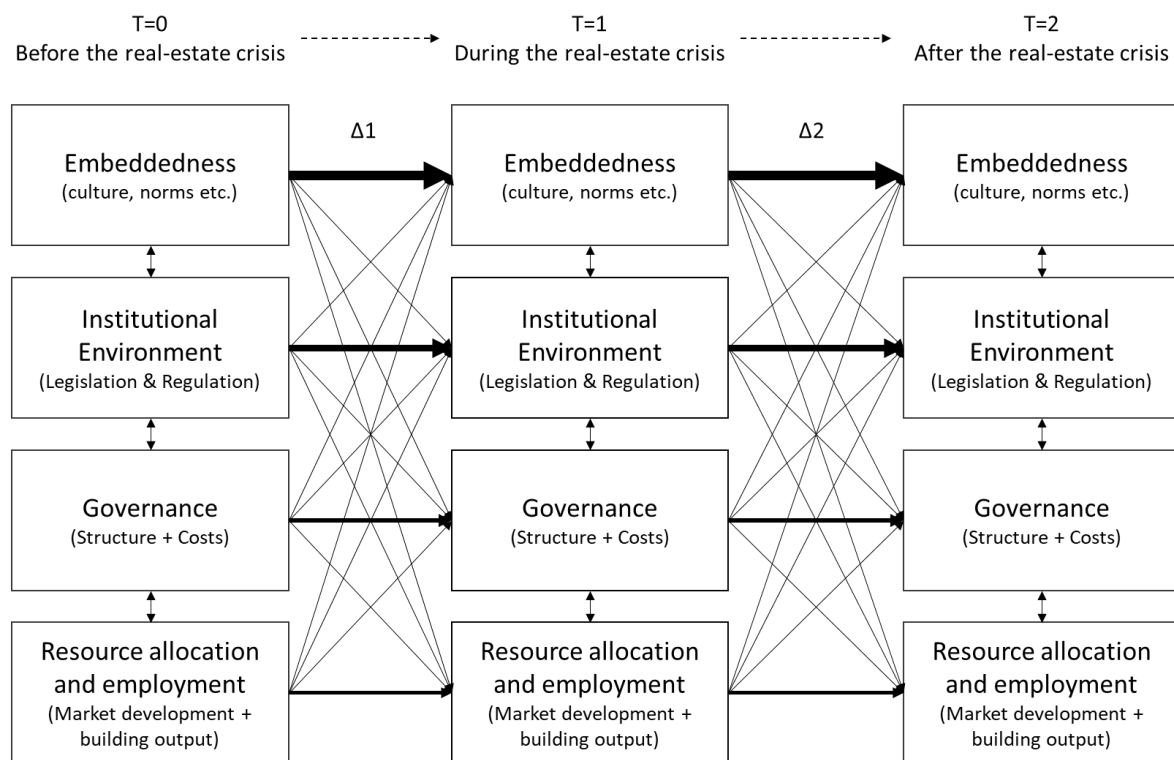


Figure 28: Intertemporal analysis of Williamson's four-layer model

### 10.1. Building output and process efficiency

The statement of this thesis is: It is problematic that the construction of new dwellings is poorly aligned to the demand for dwellings, which results in shortages of owner-occupied dwellings and pressure on the housing market. It seems that the problem will worsen in the coming years, due to the lack of new

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plans and requested building permits. North (1992) indicated that high transaction costs can prevent growth in the market. This might be an explanation for the question why the building output is not scaling up to a higher level at the moment. This section provides more insights into the interaction between the transaction costs that are involved to maintain the governance structure, process efficiency and finally the building output.

The way the collaboration between the different parties is arranged has an impact on the costs that are involved to support and maintain this structure. This is illustrated in Figure 29 with a blue arrow between the Governance structure and the Transaction Costs, since the governance structure has an effect on the total transaction costs that are incurred to support and maintain the structure. Transaction costs are increasing in complex projects with many involved parties and high risks, such as the development of owner-occupied dwellings. Negotiations and contracts are costly, but needed to divide the tasks, risks and profits between the parties involved in the alliance.

The efficiency of the governance structure can be measured with the Transaction Costs. The definition of Transaction Costs that is used in this thesis is: *All the costs that are made and time that is invested to develop and enforce the plans, contracts and agreements. This includes communication and research that is done in order to conclude those documents.* Those costs are in the development process of owner-occupied dwellings made by market parties as well as by governments. The lower the transaction costs of the governance structure, the more efficient the process. Governance structures with the lowest transaction costs are the structures that usually emerge. Figure 29 shows that the more complex governance structures is, the more transactions costs are involved, which ultimately results in a lower process efficiency.

Profit optimisation is the goal of most of the involved parties. Parties are allocating their workforce in the Resource Allocation and Employment layer to reach this goal. The profit should be higher than the costs that are incurred to support and maintain the structure in the Governance layer. There will not emerge a governance structure if the total of the transaction costs is higher than the profit that can be made with the collaboration between the parties. This is indicated by the dark blue arrow between the Governance layer and the Resource Allocation and Employment layer in Figure 29.

The building output is on one hand dependent on the number of alliances that are shaped, but it is also limited due to the market development. There will be less production when there is insufficient demand for new dwellings. This is what we experienced during the crisis, but that is definitely not the case today. In the development process of owner-occupied dwellings are many transaction costs involved. The inefficient process, with 'wait-and-see' behaviour from several important actors, makes it expensive for governance structures to emerge and might offer an explanation for the shortages of emerging alliances enabling development. Without sufficient alliances it is impossible to increase the building output, which offers an explanation for the lack of building output at the moment.

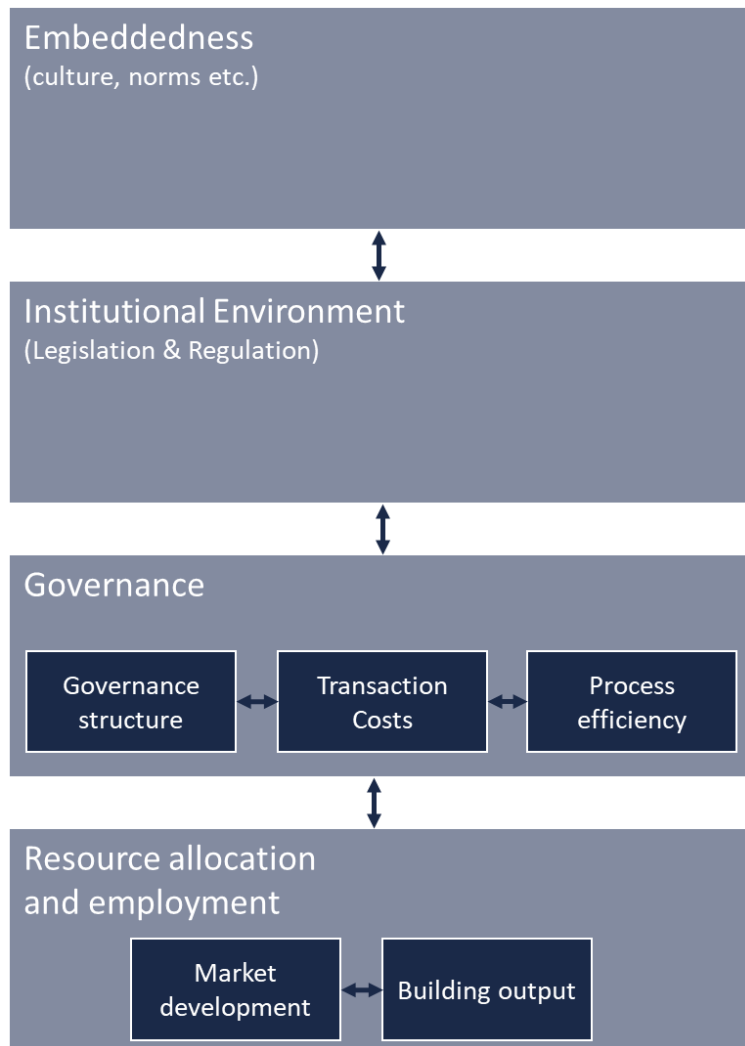


Figure 29: The effect of the governance structure on the building output

### 10.2. Analyses of the institutional trends and Williamson's assumptions

Williamson describes the Embeddedness layer as the most stable layer. Most of the institutions are exactly the same or slightly changed when they are analysed at a later moment in time. This is represented by the thickest arrow in Figure 28. The lower the layer is in the model, the more dynamic it is (North, 1991; Williamson, 1998). Williamson describes also that all the layers are fully interconnected. Those two observations about the interconnectedness of the different layers and the stability of the layers are also clearly visible in the development chain of new owner-occupied dwellings.

This chapter pays attention to the most important and dominant institutional changes and connections between the layers. Furthermore, there is attention paid to the friction in the creation of governance structures, which results in a lack of sufficient building output, which is clearly experienced since the end of the crisis. Those observations can be explained by the interconnectedness between the different layers and the differences in dynamics between them.

The following subsections provide an intertemporal analysis of the trends between the layers of Williamson's model. Starting in the lowest, the Resource Allocation and Employment layer, where the problem of a low owner-occupied residential building output is found, to the higher layers where the solutions might be found.

### Changes in the Resource Allocation and Employment layer which influenced other layers

Changes in the Institutional Environment to reduce the lending capacity was a very strong pro-cyclical answer to the changed market situation that was experienced in the Resource Allocation and Employment layer during the financial and real estate crisis. The government wanted to increase the stability of the financial sector by forcing the financial institutions to maintain safer financial balances, which resulted in less financial means available for investments in the land development and construction sectors compared to the situation before the crisis, while this sector is known for the high investment need in the initial phase. The lack of available financial resources resulted in a downward spiral, which is represented by the blue arrow from the Resource Allocation and Employment layer to the Institutional Environment layer in Figure 30. This change in the Institutional Environment had also a direct negative effect back to the Resource Allocation and Employment layer, which will be discussed in a later section of this chapter.

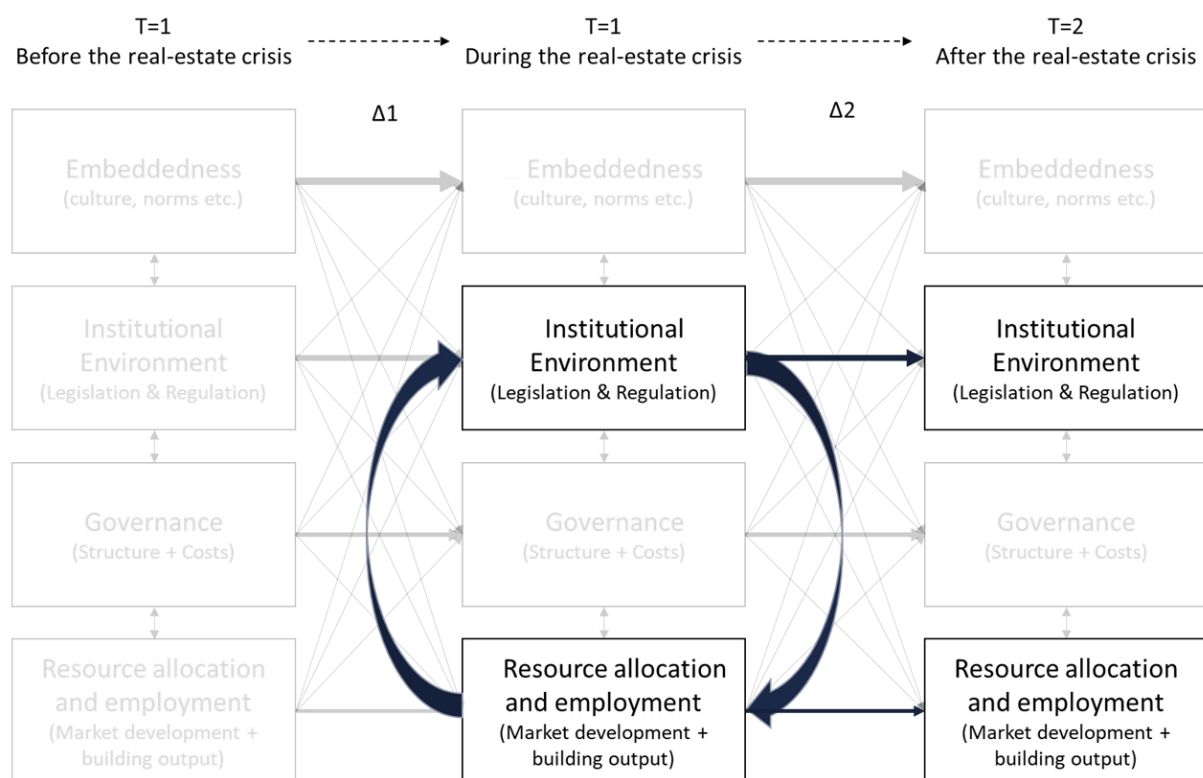


Figure 30: Reinforcement of downwards spiral during the crisis

Many employees in the real estate development sector lost their jobs due to the fast decreasing number of transactions during the crisis. Some workers stayed in the construction sector, but many people became employed in other sectors. The people who lost their job and stayed in the construction sector became self-employed workers, sometimes working on projects for the old employer and sometimes on new projects for other principals. This changed the relations and the transactions needed to maintain the governance structure. Contracts must be drafted on a project-basis to support the relations. This gives more flexibility to the workers compared to the situation before the crisis. Also, construction firms are more flexible in adjusting their capacities by contracting more or fewer self-employed workers. This flexibility from both sides comes with uncertainty too.

The market development in the Resource Allocation and Employment layer had a strong impact on the governance structures in the construction sector during and after the crisis. A lot of workers left the sector and also, a large share of the people who stayed in the construction sector became self-employed, which gave them more flexibility, which is beneficial to the self-employed



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workers now the market is favourable again. The increased flexibility and the lack of the available workers makes it hard for construction firms to have enough workforce to increase their capacity. There is a problem of the tight labour market and similar problems are experienced in the market for building materials. Production plants closed (partly) during the crisis. This results in problems finding reliable partners for the supply of building materials.

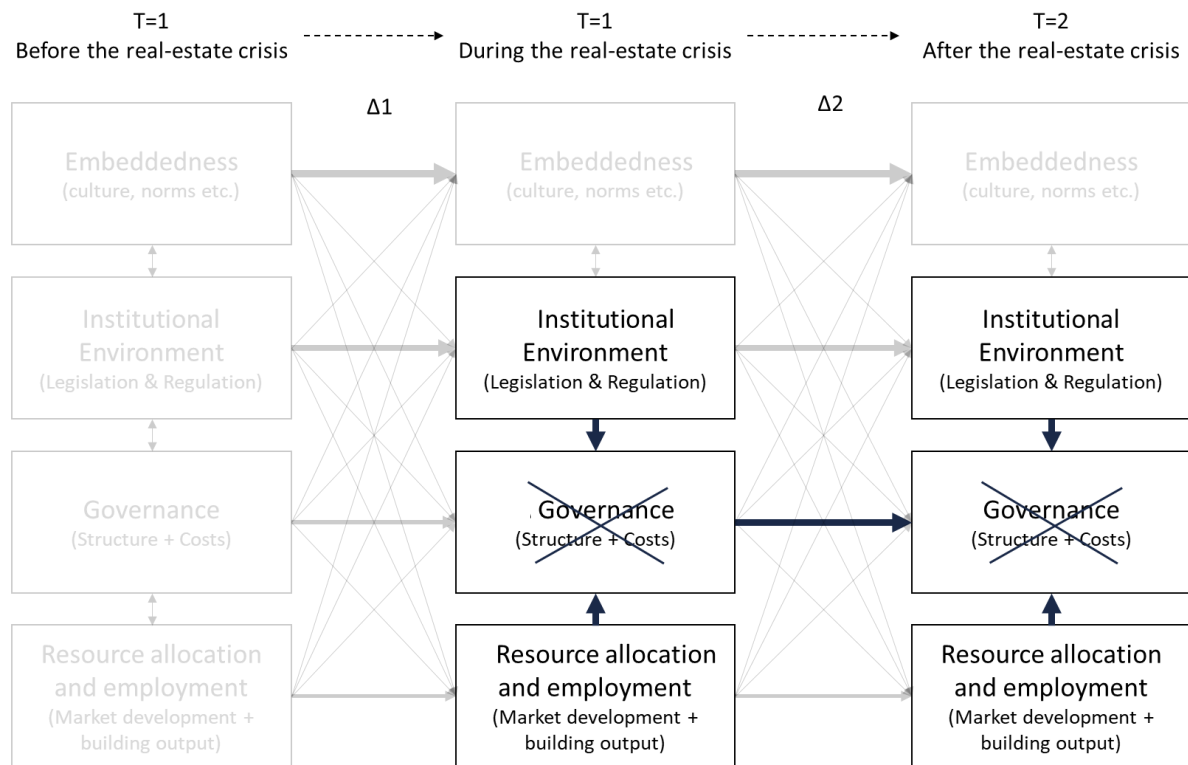


Figure 31: Influence of the Resource Allocation and Employment layer on the Governance layer

Figure 31 indicates, with a dark blue cross, that governance structures are not coming into being, due to the lack of available workforce and building materials after the crisis. Those incomplete arrangements are one of the bottlenecks which are caused by attempts to increase the number of transactions now the crisis is over. This bottleneck must be solved to make it easier to complete the alliances, and this will result in a situation where more transactions are possible and higher building output rates can be reached.

### Changes in the Governance layer which influenced other layers

It is not just the other layers which are influencing the Governance layer, but the reverse is also true. The changes in the governance structures have a large impact on the Institutional Environment and Resource Allocation and Employment layers.

Before the real estate crisis municipalities were often an important and active player at the land market, but the crisis made municipalities more reserved in taking an active role in land development. This introduced the need for new tools and regulations to give stronger positions to municipalities in steering development in a more passive and facilitative way. The change in governance structure was also observed by the central government which resulted in a new tool for municipalities in the Institutional Environment layer, which enables them to steer with a facilitating policy instead of an active one. The Land Development Plan and the adjustments in the Pre-emption Act are examples of those new tools in the Institutional Environment as a reaction on the changes in the Governance layer. Those additions to the existing Institutional Environment driven by the change

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in the Governance layer are represented with a blue arrow from the Governance layer in the crisis to the Institutional Environment after the crisis in Figure 32.

More and smaller parties emerged in the real estate development sector during and after the crisis, and many people in the sector became self-employed due to it. This resulted in a more complex network of involved actors. This change has had an influence on the Resource Allocation and Employment layer. The small parties and self-employed workers are more flexible to allocate their time and resources to the project they prefer. This increased the dynamics in the Resource Allocation and Employment layer, especially in favourable times, such as we experience today. This change is indicated with a blue arrow from the Governance layer in the crisis to the Resource Allocation and Employment layer after the crisis in Figure 32.

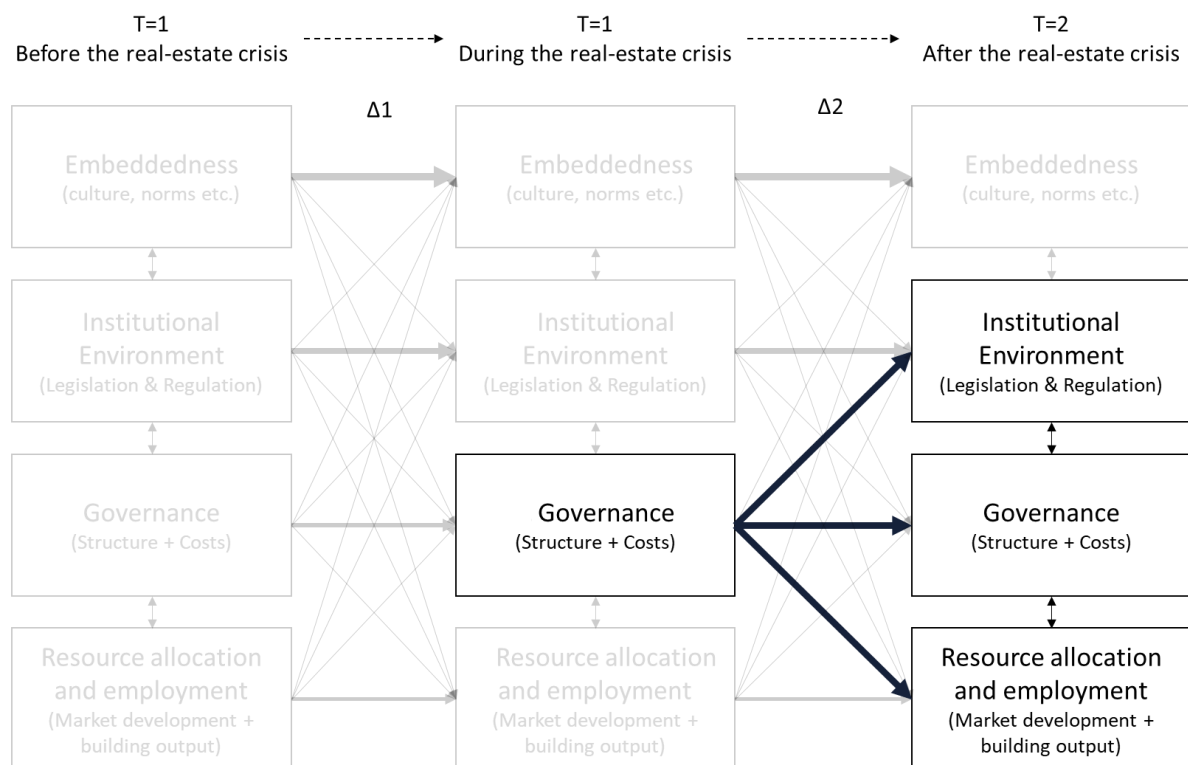


Figure 32: Influence of the Governance layer on the other layers

### Changes in the Institutional Environment layer which influenced other layers

The focus of the institutional change is a simplification of the legislation and procedures. This did not have a large impact on the institutions in the building sector during the crisis, since development was not attractive during the crisis, even with 'simpler rules'.

A change in the Institutional Environment, which did have an impact during the crisis, was the fact that the financial requirements for banks and mortgages were tightened during the crisis. Huge investments are needed in the beginning of a development project, but from that moment on banks had to maintain a safer balance and had to reduce the amount of money which was available to invest to third parties. This meant that fewer financial means were available to invest in development projects (Franzen, ten Have et al., 2017). Financial issues are also present at the end of the supply-chain, the transactions with the home owners. Their purpose power was reduced due to the stricter regulation and requirements for mortgages.

The reduction in the amount of available financial means in the initial phase of the project and the reduced purpose power of the potential buyers resulted in an even larger dip in the building

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output in the Resource Allocation and Employment layer during the crisis, and it has still a depressing effect. This effect is visible in Figure 30 and Figure 33.

Figure 30 shows with the blue arrows that the stricter mortgage requirements, which were introduced during the crisis, had an effect from the Institutional Environment on the Resource Allocation and Employment layer. Fewer people could get a mortgage which reduced the demand for new dwellings even more. The new policy for the mortgages was a very pro-cyclical reaction to the decreased demand.

The dark blue arrows in Figure 33, which are during (T=1) and after the crisis (T=2) directed from the Institutional Environment in the direction of the Governance layer indicate the effect of the stricter regulations on the financial market. This resulted in the withdrawal of investors in the land development and building projects, which made existing alliances break and made it harder to find investors to shape new alliances, which is indicated by a blue cross in the Governance layer in Figure 33. The incomplete arrangements result in fewer transactions, which pushes the building output down.

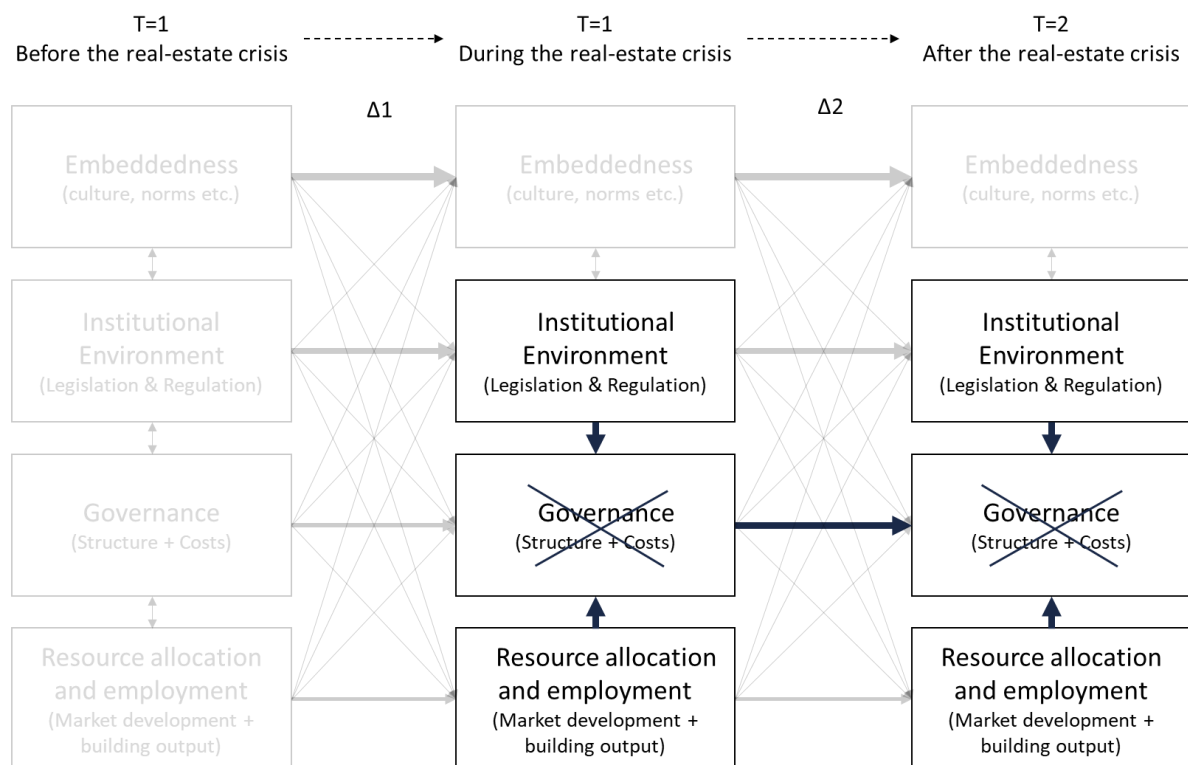


Figure 33: Influence of the Institutional Environment layer on the Governance layer

### Changes in the Embeddedness layer which influenced other layers

The embedded attitude of the central government which is focused on market-oriented thinking and deregulation slowly gets officially institutionalised by giving more autonomy and responsibilities to the municipalities in their planning processes, and by ending financial incentives for market parties to produce dwellings.

This cultural shift has already for years been clearly visible in the other layers too, by institutionalising this ideology. The Institutional Environment layer is focused on the simplification of the legislation to support market initiatives. This is a logical reaction on the neo-liberal thinking in the Embeddedness layer. Figure 34 shows with the diagonal dark blue arrows that the cultural shift slowly gets institutionalised in the Institutional Environment. During the crisis (T=1) is also a dark blue arrow directly to the Institutional Environment. This indicates the window of opportunity, which opened due to the crisis, for quick deregulation measures in the Institutional Environment (the Crisis and Recovery Act).

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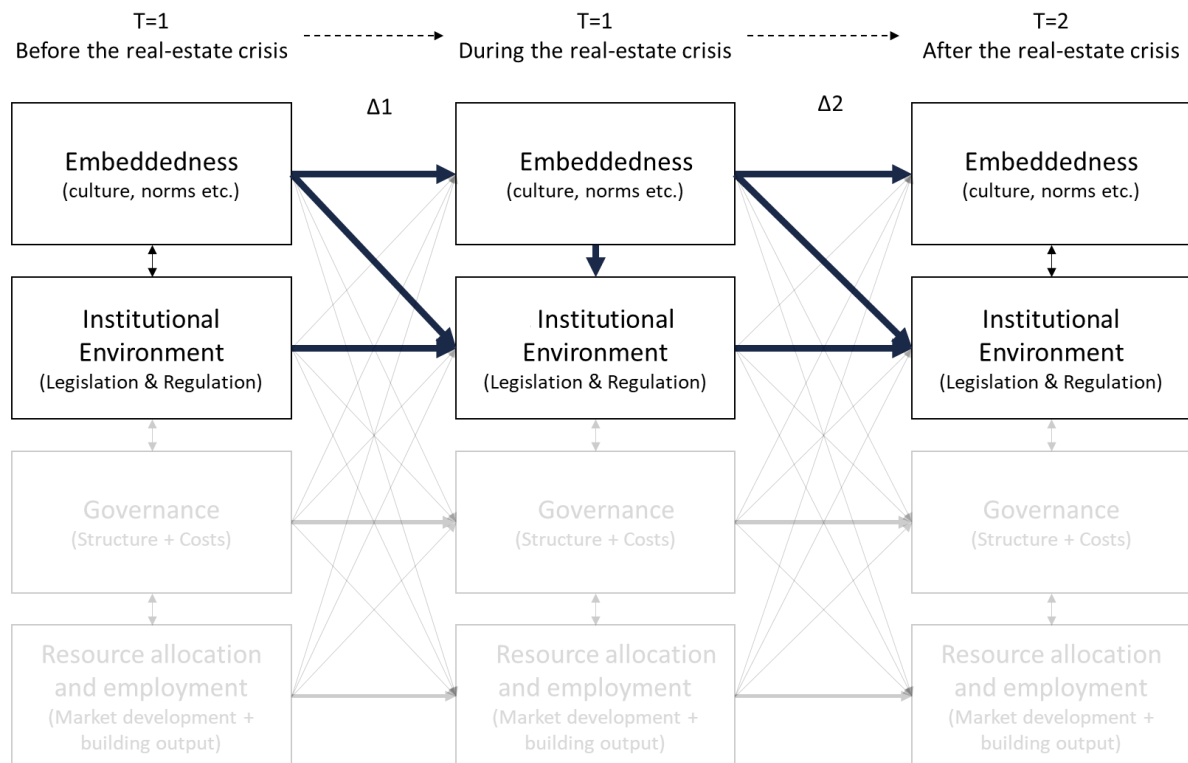


Figure 34: Influence of the Embeddedness layer on the Institutional Environment

This cultural shift had also logical consequences for the Governance layer, since the central government did not consider themselves a party in the development sector anymore. This resulted in 'not acting' of the central government after the crisis, for example, the withdrawal of the central government in setting the output targets for new dwellings and dividing those targets along the lower governments. The fact that the central government no longer felt responsible for the building output means that municipalities do not feel pressured anymore to produce a certain number of dwellings. The missing link where the central government was, turned out to be problematic after the crisis. In the years before the crisis it did not feel like a missing link, since the building production was still sufficient. Developers were willing to take financial risks even as the involved municipalities, since this paid out in with high profit margins. But alliances are not formed anymore and building outputs are staying behind. Now all the parties are unwilling to bear the risks, and there is no pressure or guidelines from the central government.

### Alteration speed of the institutional layers

The notion of Williamson that the higher the layer the more stable it is, is also visible in the case of housing production. The Embeddedness layer is shifting slowly in the last decades. Important trends are; market thinking of the central government and the continuing shift of more responsibilities to market parties and the local governments. This cultural shift started already in the 1990s, and the crisis was a window of opportunity for the central government to distance itself further from the housing market.

The institutions in the Institutional Environment are changing a bit faster than the institutions in the Embeddedness layer, which makes this layer slightly more dynamic. The dynamics in this layer are caused partly due to the institutionalisation of the changes in the Embeddedness layer, and partly as a reaction to solve shortcomings in the other, more dynamic layers of the model. Examples are enabling tools for municipalities to get stronger positions in the Governance layer, like the new Land Development Plan and the adjustment of the Pre-emption Act as a reaction to the Governance layer

and regulation to protect investors from bankruptcy as a reaction on the development in the Resource Allocation and Employment layer.

The crisis showed to all the involved parties the hazards of transactions in the development chain of real estate. Many costs that were made in the process were lost, due to the decreased demand for housing during the crisis, and many parties dealt with partners who became bankrupt. This changed the perception on transactions and the governance structures. The Governance layer and the Resource Allocation and Employment layer are dynamic and adapt easily to the actual market circumstances.

The ability of the Resource Allocation and Employment and the Governance layer to adapt to the actual market circumstances is certainly not the case for the Institutional Environment, which can result in barriers set by the higher institutional layers which cause inefficiency in the more dynamic lower layers. This results in friction between the different institutional layers. The lower layers find the boundaries set by higher layers in favourable times like we experience today.

An example of the friction between the different institutional layers is the Land Development Plan that is used in one of the cases in chapter 9, the development of *Meerpolder* in Lansingerland. The municipality fixed a housing programme and the prices which has to be paid for the land and the support of the development. The programmes and the prices were not market conform anymore on the moment that a developer wanted to develop. This resulted in a negotiation process, which resulted in the fact that the municipality put the Land Development Plan a side.

### **10.3. Effects of the institutional changes on the relations in the governance structures**

The previous section gave insight into the fact that there are problems in the governance structures, since alliances are often incomplete, which results in a lower building capacity, and thus, a lower building output. The problem of the lack of demand seems to be caused by the incomplete alliances. This section dives into the Governance layer to get more insights into the transaction costs and why the alliances are not being completed. This section discusses in more detail the changes in transactions and governance structures which were experienced during and after the real estate crisis, and how this influenced the capacity to create sufficient building output.

The analysis provides insights into how the governance structures in the land development phase are changed, driven by a slow shift in the Embeddedness layer and the very pro-cyclical policy adaption that was implemented, due to the risks that became clear during the crisis. The governance structure in the real estate development phase changed as well. More small companies and self-employed people became active in the sector, due to the outflow of employees during the crisis. This gives more flexibility to the construction workers and increased the number of contracts needed to enable the development.

This change in the governance structure resulted in more difficulties in finding the right alliances needed for the development. All the transaction costs which are incurred are lost in cases where no alliance is shaped and the project has to be cancelled. This makes investments in the beginning of a project risky. There are not many parties willing to take the risk of incurring transaction costs for an uncertain project. This reduces the number of initiatives and the potential building output, which is experienced today.

#### **Effects on the transactions**

The transaction costs in the planning and land development phase are dependent on several factors according to Buitelaar (2007), namely the quest for control over development by the government, the

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relationship between the public and the private sector, attitudes towards transaction costs and legal styles: flexibility, certainty and accountability.

Before the crisis, local governments used to take an active role in the planning phase and land market to influence and steer the development towards a desired output. There was a huge quest to be in control. This resulted in many risks and transaction costs on the side of the municipalities. Municipalities were willing to pay those high transaction costs, since they had the experience that they would be able to earn those costs back with the sales of their land. On the other hand, transaction costs were reduced on the side of the market parties, due to the clear guidelines and desires about which sites should be developed. This gave certainty to the market parties in the situation before the crisis. There was a clear division in roles between the public and the private parties. The legal style was not flexible, due to the detailed drafted plans and agreements. This inflexibility created a shutdown of the building process during the crisis, since agreements were fixed and based on the conditions of a favourable market. Profitable development during the crisis was often impossible within the conditions drafted in the contracts. This resulted in a decreasing building output and a decrease in land values.

During the crisis, the quest to be in control of the municipality decreased, since they knew that this comes with a price in times of a depressed market. The crisis showed that the municipalities were not always able to compensate the high transaction costs anymore by selling the land. This changed the attitude of municipalities towards bearing the risks in the transactions. Municipalities seem to be more flexible in their legal style than before. They are more open for initiatives from the market and willing to make the changes needed in the public law instruments to enable the development. Municipalities expected a more active role from market parties and a shift of the transaction costs and risk in the direction to the market parties. The withdrawal of the municipalities in the active role in the land development phase disturbed the relation between municipalities and market parties and this relation should be reinvented now the crisis is over (Franzen, ten Have et al., 2017).

Another issue is that the market parties are missing clear guidelines. In the time before the crisis, municipalities were clear about where development was desired, but those guidelines have not been given since the crisis. This makes a threshold to develop plans, since the chance that their ideas can be realised is relatively small, compared to the amount of transaction costs that already have to be made upfront for the development of those plans. Clear guidelines set by the municipalities can be seen as a precondition for market parties to come up with initiatives.

The fact that as well the municipalities as the market parties are both careful with making cost for the plans in the initial phase, for possible future transactions, results in difficulties with making the right alliances to make transactions possible. This difficulty in making the right alliance is also visible in the financing part of the alliances. Inventors also experienced the risks of the development industry during the crisis and are more careful. On top of that, the requirements for lending money have been tightened for the financial institutions, due to changes in the Institutional Environment layer. The risk aversion and the more difficult situation of finding financial partners after the crisis makes it more challenging to create development alliances today, even now the times are favourable again.

Later in the process, with the real estate development, there are mainly market parties involved. The change in the transaction hazards are discussed by the different transaction attributes, namely: asset specificity, uncertainty, frequency and number of actors.

The asset specificity did not change much due to the crisis. Most of the assets that are used for the construction of dwellings are standard, and not very specific. The reduced number of construction workers due to the crisis increased the need for more prefabricated elements. Those elements are also standardised and not very specific, but they become site-specific once they are

assembled at the construction site, even as much as the more traditional building materials that were used before the crisis.

Uncertainty: A large workforce was employed by the construction firms before the crisis. This made it possible to decrease the uncertainty about the availability of workforce. Another way to decrease the uncertainty is by having fixed agreements with partners. This gave certainty for both parties about prices and availability. Decreasing the risks was not just done by agreements between the parties involved in the construction process, but also by starting the physical construction of the project when a certain number of the dwellings were sold (Wolting, Bregman et al., 2006). The amount of uncertainty in the sector overall did not really change compared to before the crisis, but the awareness about the effect of a potential crisis did increase. This means that more flexibility is demanded in contracts, to deal with situations of a decreasing market. The fact that many people became self-employed during the crisis, increased the uncertainty of the availability of a sufficient workforce. Subcontractors are not willing to sign long term agreements, since they see a positive trend in the price they can ask for their services. They would rather select the projects that have the best benefits for them on a case-by-case basis. However, good relations with the sub-contractors and self-employed workers help a lot too, by making sure there is sufficient workforce.

The frequency of the same or comparable governance structures was high before the crisis, since most of the time the same partners were part of the alliances. This created mutual trust and learning effects. This made it possible that earlier agreements could be used as the basis for the negotiation and documentation of new agreements. This is more efficient than starting from scratch. Those learning effects reduced the transaction costs that are come with the governance structure. The fact that nowadays most of the alliances differ from project to project means that most of the agreements can only be used once. Negotiations and selecting the right partners is becoming a time consuming and costly process. Much transaction costs are involved due to new situation after the crisis.

Before the crisis, the market was dominated by large players, which could generate huge outputs. This made it possible to collaborate with just a select number of partners instead of many smaller partners. This created efficiency in the negotiation processes, and in drafting and reinforcing contracts, since it results in less documents. It is also easier to monitor the progress with a limited number of involved actors during the realisation phase. After the crisis, the number of involved actors has increased, since parties became smaller during the crisis and a lot of workforce became self-employed. More parties are needed to ensure the desired building outputs, because of the post-crisis reduction in parties' sizes. Moreover, the large parties prefer a more organic-like development to reduce the risks, which results in more transactions. This means that more negotiation processes and contracts are needed to support the governance structure. Also, the management of reinforcing the contracts and monitoring the progress is becoming a more complex task.

### **Effects on the governance structures**

It is not just the amount of transaction costs that has increased compared to the situation before the real estate crisis, but the governance structures themselves changed too. The first reason that changed the governance structure is the fact that financial institutions were not willing and sometimes were even not able, due to the tightened regulation, to take large risks in development projects anymore. This did not change the governance structures in itself, but decreased the number of feasible alliances to make the development projects possible. The difficulty in financing the projects and the lack of market demand made many alliances and existing agreements fail during the crisis, and not enough of new initiatives with feasible alliances were started up afterwards.

The second reason which changed the governance structure is the withdrawal of the central government. The municipalities became more autonomous. It became the task of the municipality to

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decide how much new development was desired, instead of a centrally organised assessment of the number of required dwellings and a distribution over the different regions. Municipalities became more autonomous during the crisis, which is still the case today. It is even possible that competition might arise between different municipalities, since coordination is not present at a higher level. Figure 35 shows that an adaptation to a system with more autonomous actions goes in the direction of a more market-like system instead of a hierarchy. The degree of freedom which the municipalities received from the central government resulted in more autonomous actions. Those autonomous actions of the municipalities are resulting in a shift from a hierarchy to a network or more market-like system, which could also result in competition between the different municipalities.

Chapter 2.3. introduced the model of Jolink and Niesten which explains that hierarchical structures can be seen as islands in a network of market transactions (Jolink & Niesten, 2008). The more that cooperation happens between the actors, the more the governance structure transforms into a firm, so a hierarchical structure (Jolink & Niesten, 2008). In cases where the coordination adapts to more individualistic and autonomous actions, the governance structure gets the characteristics of a market (See Figure 35). Figure 35 shows that institutional changes, in all the layers of Williamson's model, had an influence on the Governance layer during the crisis.

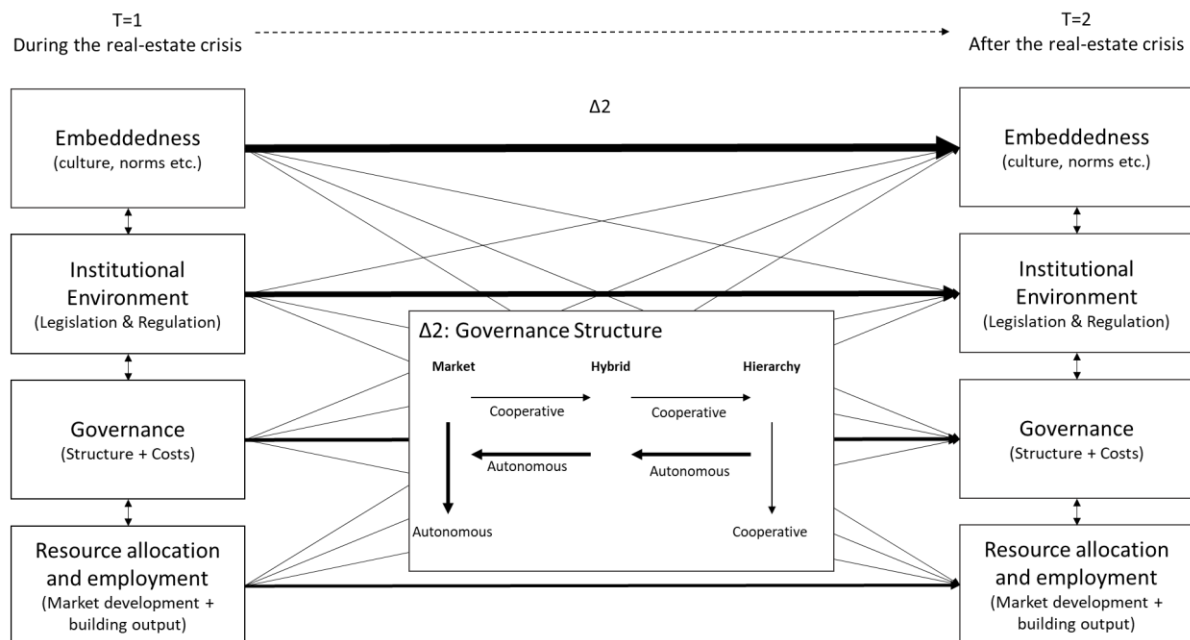


Figure 35: Intertemporal analysis of the change in governance structure after the crisis. Based on the model of Jolink and Niesten (2008).

The largest driver for institutional change in the Governance layer in the construction market after the crisis was caused by a shift in the Resource Allocation and Employment layer. Many companies became bankrupt and factories closed (partly). This reduced the number of individual actors active on the market on the one hand but increased the number of small companies on the other. This results in the fact that maximum capacities are met in the favourable market today. This increased the effort that developers and construction companies must input to get the desired amount of building materials and workforce. Many workers became self-employed and small companies emerged due to the outflow of employees in the firms active in the development of real estate. This did not have a large impact on the structure during the crisis, since the self-employed construction workers were often working for the same company as where they were hired before. Now that the market is favourable again they can benefit from their flexibility which they have by being self-employed. During the crisis the governance structure was still hierarchical, due to the fact that many people were



working as a self-employed for the same company as they were hired before. The structure was also still hierarchical in cases where they found different principals, due to the lack of available work.

The governance structures which emerged during the crisis, with many small companies and self-employed workers, results in a situation where the workers are more flexible in choosing the work they want now that the market is favourable. The power is not hierarchical anymore, since there is enough work and too small a workforce available. This gave more freedom to self-employed workers and small companies, which results in more autonomous actions. The governance structure in the real estate development phase changed, with more autonomous action of the individual workers, also in the direction of a network/market structure instead of a hierarchy (see Figure 35).

### 10.4. Conclusions

The neo-classical economic theories assume a perfectly functioning market, without intervention. They look mainly at the institutions of the Resource Allocation and Employment layer. This framework is not wide enough to explain all the dynamics in the development chain of owner-occupied dwellings. The four-layer model of Williamson offers a good framework to analyse the institutions in the development chain of owner-occupied dwellings. Many observations that are given by Williamson are also present in the building sector, like the fact that the Embeddedness layer is relatively stable and that the lower the layer is, the less resistant to change it is. The interconnectivity between the layers is also clearly present in the construction sector.

The fact that the building supply became a task of the local governments resulted in more autonomous actions of the municipalities. This movement made the governance structure more a market-like governance structure. This adaptation of the governance structure from a hierarchy towards a market is not just visible in the planning and land development phase, but after the crisis also in the real estate construction phase. Due to the large share of small companies and self-employed construction workers. Those changes in the governance structures have an impact on the total amount of transaction costs and the efficiency of the system. In other cases, it was harder to find the right alliances for the real estate development, due to financing problems, a lack of initiative or unwillingness of parties to bear the risks in the project. This reduced the number of emerging alliances.

There are, since the crisis, more difficulties experienced in forming alliances to make the land development possible. This is partly caused by the withdrawal of municipalities. In the past, they incurred many transaction costs in the initial phase of a project. They also used to bear a large share of the risks during the land development phase. This task is not taken over enough by the market parties at the moment, since the guidelines of the municipality are not sufficiently clear, making investments in the planning phase risky. This results in wait-and-see behaviour from the market parties. Another important partner required in an alliance is an investor to bring in financial means. The investors are more risk aware since the crisis and they are now also bound to stricter financial requirements. Also, construction firms do not have adequate capacity to run all the projects. The project cannot continue in cases where one of the required partners is not found or when the parties cannot reach an agreement about who bears the costs and risks. All the transaction costs that are incurred by a discontinued project will not be earned back and are spilled. This is very inefficient.

Parties in the real estate development phase are now smaller compared to before the crisis and because of that, there are also more firms involved. Construction companies are sub-contracting more and working with more self-employed construction workers. This results in more negotiation processes about the conditions of cooperation in the governance structure. The fees of the self-employed workers are more flexible than the people working for the company. This increased the risk of to less labour force and rising labour costs. The increased number of transactions due to the fact that more parties are involved, in combination with the higher risks on the labour costs are increasing the transaction costs and reducing the process efficiency of the Governance structure after the crisis.

### 11. Conclusion

This chapter aims to answer the main research question: How can improvements of the governance structures enable a better-functioning market for newly built owner-occupied dwellings? First, all the sub-questions will be answered to collect the data needed to answer subsequently the main research question. All the questions are answered in the first section of this chapter.

Several recommendations are given in the second section. Those recommendations suggest institutional change in the governance structure and in the Institutional Environment. Also, recommendations are given for further research next to the recommendations for institutional change in the second half of section 11.2. Section 11.3 provides a summary of the thesis, starting with a concise explanation about the problematic situation, followed by the analysis, and ending with the important findings and conclusions and a suggestion how the building output can be increased by supporting the governance structures. The last section of this chapter (11.4) contains the reflection and discussion, which deals with the relevance of this thesis and the limitations of the method and the scope of the research. There is also attention paid to the ways in which the research conducted and the outcomes of this thesis could be improved.

#### 11.1. Answers to the research questions

This section answers all the sub-questions one by one. After that, the main research question will be answered with the knowledge that is gained by the answers of the sub-questions.

##### 1. How can Williamson's four-layer model be used to explain the institutional change of the last decade?

The four-layer model of Williamson turned out to be very useful in explaining the institutional change of the last decade. It adds more complexity to the neo-classical approach. The neo-classical approach, where supply and demand reach a balanced equilibrium does not seem to be the case for the market of newly constructed dwellings. The complexity that comes with the four-layer model of Williamson seems to be very useful in explaining the situation in the residential real estate production market at the moment.

Most of the general notions of Williamson about the four-layer model seem to be valid for the complex development of residential real estate too. Williamson claims for example that the higher the layer is, the more stable the institutions are within the layer. It is also clearly the case in the development sector. Another important general observation about the model of Williamson, which is also present in the housing construction market, is that the layers are interconnected. Changes in one layer influence the institutions of other layers too. This offers an explanation for the institutional change which is experienced in the period during and after the real estate crisis.

The fact that the layers have different alteration speeds on one hand and are connected on the other hand causes friction between the layers. The institutions in the Resource Allocation and Employment layer are constantly changing to optimise the use of the available resources with the aim of profit maximalisation, while the Institutional Environment is relatively stable. An example of friction between the layers is experienced in the case of the development of *Meerpolder* in Lansingerland. The municipality made use of the new Land Development Plan. This plan fixed the prices for the land and housing programme which had to be developed on the site. However, the prices were no longer realistic, due to the worse market circumstances during the crisis. Even as the housing programme needed an update to become appealing to the market. In this case the Institutional Environment (Land

Development Plan) is in conflict with the Resource Allocation and Employment layer (the market conform price). In this case it was simply solved by neglecting the Land Development Plan.

Another example, this time in the favourable time since the crisis, is the fact that financial institutions are bound to rules about their balances. This means that fewer financial means are available for investment, even though the times are favourable for investment in residential real estate development.

### **2. Which kinds of institutions are present in the construction process of owner-occupied dwellings?**

The construction process of owner-occupied dwellings is a complex bundle of different markets. It is impossible to identify all the institutions in place, but there are some institutions found which are very characteristic of the Dutch newly built owner-occupied housing market and the construction process of those dwellings. Those institutions can be divided according to the layers of Williamson to get a better understanding about the origin and the dynamics of the institutions. This division in layers, which is done for the most important institutions for the situation before, during and after the crisis is given in chapters 5, 6, 7 and 8. Those chapters give an overview of how the institutions changed over time. A slow change to market orientated thinking and deregulation is visible in the Embeddedness layer of the government and this is slowly formally institutionalised in legislation. Legislation and guidelines were also adapted as a response to market development in a very pro-cyclical manner, which caused an even larger decrease in the demand for new dwellings during the crisis. The institutions in the lowest two layers, the Governance layer and the Resource Allocation and Employment layer change faster and are more dependent on the actual market situation.

### **3. What is the impact of the crisis on the institutions in place?**

The crisis had a large effect on many of the institutions in place. The decrease in demand and the poor financial conditions of many financial institutions had an impact on the institutions in all the different layers of Williamson's model.

The Embeddedness layer, focused on deregulation, was already slowly influencing the Institutional Environment before the crisis, but the crisis was a window of opportunity for the central government to distance itself further from the housing construction market via deregulation. Municipalities which were often very much involved in the land market were also withdrawing from the market, due to the financial drawbacks they experienced. This means that the relation between (local) government and the market has to be reinvented (Franzen, ten Have et al., 2017).

The notion of the risks involved in the development market are not just seen by the municipalities, but they are also seen by all the involved parties in the construction process. This makes all the parties more careful and less willing to make transaction costs in cases where they are not certain that they can recover the costs in a later phase of the project.

Another huge impact of the real estate crisis on the institutions in place is the fact that investors were bound to stricter rules for lending out money, as a measure in the Institutional Environment, as a pro-cyclical reaction to the crisis. This gives challenges in financing new development projects. Financial partners are needed in development alliances, since residential real estate development requires huge upfront investments.

Also, in the market for the real estate construction is substantial institutional change experienced due to the crisis. Many people went to other sectors for employment or became self-employed within the construction sector. Factories closed production lines or sometimes even closed

entirely. This decreased the total production capacity and resulted in different and more complex governance structures, which are still visible today. Construction firms are subcontracting more and working with many self-employed workers. This makes the number of involved parties larger and the governance structures more complex.

The governance structures changed significantly. This was due to the increased risk aversion of the municipalities and the reduction in financing capacity of the financial institutions in the initial phase of a project and, in the construction phase, due to the increased amount of parties involved in the process, caused by the large share of small firms and self-employed workers.

#### **4. What do the actual governance structures look like in the construction process of owner-occupied dwellings?**

The first issue with the governance structures at the moment is that in many cases, the alliances are incomplete. There are many necessary parties involved in the development sector. Finding a party willing and able to invest in the initial phase of a project seems to be a problem at the moment. This is partly caused by the risk awareness of the financial institutions, but also due to stricter regulations for the financial institutions that are set in the Institutional Environment. Without financial backing, the alliance is incomplete, and development is not possible. This decreases the building capacity and the building output.

Another important change in the governance structure of the land development process is the fact that municipalities are less willing to take risks by acting active on the land market compared to the situation before the crisis. Market parties have to take over the land development process according to the municipalities. Market parties are not as proactive as desired by the municipality since they see the risks too, and are not willing to invest in uncertain projects. The lack of clear guidelines, in combination with the risk aversion of the involved parties makes it so fewer initiatives are taken and that many alliances do not manage to get all the required parties involved to complete the governance structure for the development of real estate.

It is harder to form alliances in the Governance layer, due to the reduced number of large parties active on the market. Construction firms have to subcontract a lot of work, as they have an insufficient number of employees. A large share of the workers in the construction industry now works as self-employed workers. The fact that more parties are involved makes the governance structure more complex. Subcontracting and hiring self-employed workers increases the flexibility of the governance structure, but comes also with uncertainty about the availability and the price of the labour force. In the case *Gouden Podium* in the municipality of Lansingerland the availability of labour force was also problematic. Subcontractors are not willing to sign long-term contracts, due to the anticipated price increases, which are caused by the tight labour market. Price increases are already clearly experienced at the moment.

#### **5. Are the existing governance structures efficient?**

As explained in the answer of sub-question 4, many alliances are not coming into being, due to shortages of workforce or issues with finding partners to finance the project. This means that all the effort (transaction costs) that is made by trying to find the right alliance will not be repaid. This is very inefficient.

The structures are often more complex when alliances are coming into being. There are more parties involved compared to before the crisis and those parties are more risk aware, which increases the negotiation, contracting and coordination costs to support and maintain the governance structure.

This is less efficient, compared to the situation before the crisis, when a large share of development was undertaken by large construction firms, which were working with their own employees. The large share of self-employed workers and the fact that many works are subcontracted results in more flexibility in the governance structure, but also more uncertainty.

The tightness which results in difficulties is not just experienced at the labour market. The risk of rising prices for labour, supplies and materials in combination with longer waiting times to gather all those resources, which results in delays in the construction process, increase the risks of a project, which results in more transaction costs. The larger number of involved parties is also increasing the effort to keep the governance structure in place. All those changes in the Governance layer are increasing the transaction costs and are result in a less efficient governance structure.

The existing governance structures can be made more efficient, which will result in more feasible alliances. This will increase the production capacity of the owner-occupied real estate development sector. This is a precondition to realise a higher building output and fulfil the current demand for owner-occupied dwellings.

### **6. How can the production of owner-occupied dwellings be stimulated by more efficient governance structures?**

The current inefficiency of the governance structure is resulting in a lower building output than desired. Alliances are often incomplete which means that not all the required partners to execute can be found the project. This decreases the possible building output. It is important to stimulate market parties to complete the alliances.

The fact that the alliances are incomplete was partially caused by the restriction of the financial sector, which makes fewer financial resources available for the investments in development projects even though the crisis is over. Also, the increased risk awareness made municipalities step out of the land market, with the idea that market parties should take it over. However, the market parties have seen the risks too and are often not willing to initiate risky projects.

The last reason for incomplete alliances is the tightness on the labour and building supply market. The number of people employed in the development sector decreased during the crisis and a large part of the remaining labour force became self-employed. This creates challenges for construction firms to get enough of a labour force, since there is less capacity in general and the remaining workforce is more flexible being self-employed. Also, the capacity of the production of building materials decreased during the crisis, which caused a tight market in this favourable time for the development sector, leading to long delivery times and rising prices.

Incomplete alliances are very inefficient, due to the risk of not recovering the incurred transaction costs in a later phase of the project. This causes fewer initiatives from the market. A financial incentive or a significant reduction in transaction costs, especially in the initial phase of a project, should be built into the governance structure. This will make it more attractive for market parties to start initiatives and find alliances in the changed circumstances of today's society.

Finally, the main research question will be answered. The main research question of this thesis is: **How can improvements of the governance structures enable a better-functioning market for newly built owner-occupied dwellings?**

Different political streams do agree with the fact that the housing production should increase in the regions with pressure on the housing market. There are discussions how the housing stock should be supplemented, this can be by transformation and densification or greenfield development, but the

concern about the growing housing shortage in the short term is widely supported. The challenges today are different compared to the Vinex period, since a large share of the production should be realised within existing urban areas (Verheul, 2017). The increase in residential real estate prices already experienced makes it impossible for first-time buyers and the other financial weaker groups to buy property in the popular cities. In many cases is the rental sector not an option for those groups either, since there is a lack of dwellings available in the middle price segment of the rental market and the higher segment is also not affordable for those groups, while they do not fulfil the requirements for social housing. The central government did withdraw from this matter during the crisis, but the first signs of concern have been shown by the relevant minister. This has not yet led to concrete measures at the national level.

The discontinuity of the demand can be seen as a market failure. Due to the lack of demand during the crisis, capacities were scaled down over the entire development and supply chain of housing production. This results in a reduced capacity of the building output. The measures in the Institutional Environment (stricter regulation of the financial sector), caused on top of that a procyclical reaction. It is not particularly easy to increase the capacities, since all the parties are risk averse and have still the crisis in mind. On top of that, the system is closely intertwined and parties are waiting for other parties to move first, before they increase their capacities.

The transaction costs in the process have increased compared to the situation before the crisis, due to risks which became visible during the crisis, the changes in the governance structures and the adjustment of the Institutional Environment (Verheul, 2017). The increased transaction costs are caused by the increased risk awareness, stricter regulation of the financial sector, number of involved actors, tight labour and building material market and the flexibility of the involved parties. Different institutions result in more transaction costs and even incomplete alliances, which cause an imbalance between the demand and supply of owner-occupied dwellings (Figure 36). It is important that parties find solutions together to see how new efficient governance structures can be improved and optimised.

Market parties are demanding clearer guidelines about which locations can be developed, but the crisis also showed the need for flexible plans. The municipality should find efficient ways to give incentives to market parties to find alliances to enable development without high transaction costs in the initial phase of the project. Furthermore, the municipalities should find ways to reduce the amount of transaction costs and to recover their planning costs and the other costs they incur to enable a larger number of development projects.

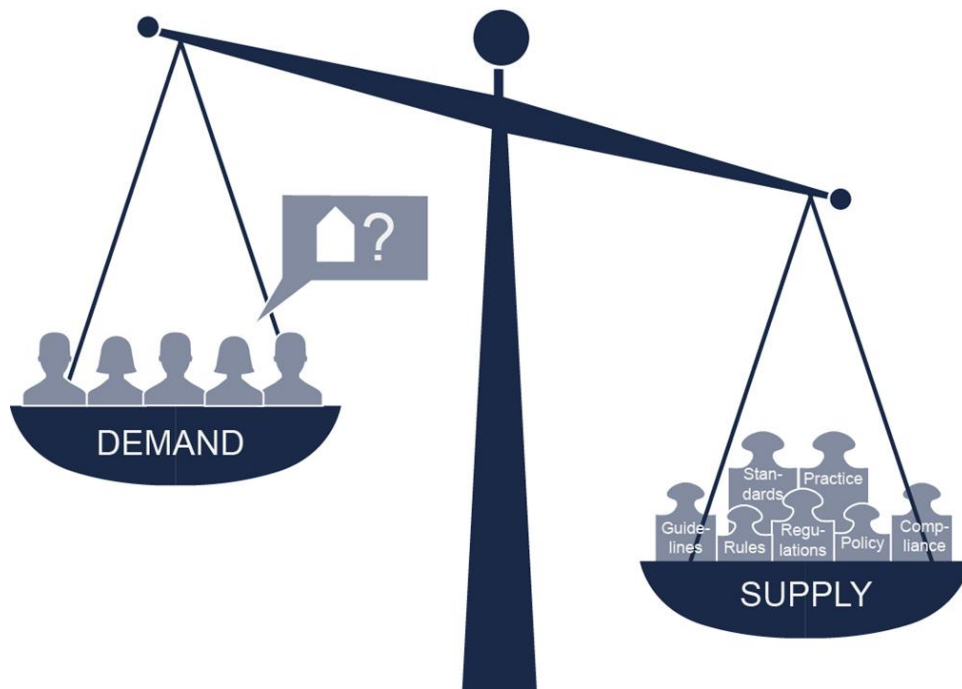


Figure 36: Institutions are disbalancing the market

The next section introduces concrete measures to increase the process efficiency by reducing the transaction costs. This should result in more completed alliances and boost the output of newly built owner-occupied dwellings.

### 12.2. Recommendations

This section covers the recommendations in response to the findings of this thesis. First of all, some policy recommendations are given. They are focused at institutional change at the governance level and in the Institutional Environment. In the second half of this section there is a focus on a recommendation for further research to gain more knowledge about the functioning of the residential real estate development sector and the mechanisms therein.

#### Policy recommendations

There seems to be common agreement by all the political parties that there are problems arising in the housing market. However, the focus is different from party to party. The more left-wing parties want to increase the social rent stock and keep housing in the cities available for all the income groups, while the liberal right parties want to focus on the owner-occupied dwellings in a free market. The social goals of the left-wing parties can also be reached by supplementing the owner-occupied housing stock, since this creates dynamics in the housing market. People who can afford it will take the step from a social dwelling to an owner-occupied dwelling, which also makes a social dwelling available for the right target group. The step from a social dwelling to an owner-occupied dwelling will become more difficult if no measures are taken and the residential real estate prices keep on rising due to the lack of supply. So, simply increasing the building output of owner-occupied dwellings contributes to the goals of a wide variety of political parties.

This thesis argues that the building output of owner-occupied dwellings can be increased by more efficient arrangements in the governance structures in the initial land development phase and in the construction phase. This change can be realised by direct intervention of (local) governments in the governance structure, but also by institutional change in the higher layers of Williamson's model.

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Several parties are still discovering their position in the new post-crisis circumstances. Municipalities are expecting more initiative from market parties, but the market parties see the risks in the initial phase too, which have even increased due to new legislation. An incentive to incur transaction costs at the beginning by finding the right alliance and check if the plans are approved by the municipality should be put into place. The uncertainty should be decreased for the market parties to support the initiatives they take for new development. The easiest measure to support initiatives which can be taken by the municipalities is offering clearer guidelines about which locations are desirable for (re)development, densification or expansions of the housing stock, and which locations are a waste of resources to invest in. This can be done by publishing clear guidelines and providing free consultations to market parties. This increases the likelihood that the time invested in the planning phase of a project does not get squandered due to a focus on the wrong locations. This helps the market parties to put their focus and resources into promising projects rather than wasting their resources on projects which will not be permitted anyways.

Furthermore, measures should be taken to decrease the number of incomplete alliances. The incompleteness is mostly caused by the lack of a financial partner in the alliance. Financial institutions are bound to stricter rules and are more risk aware, which decreases their lending capacity. The financial partner is essential since land development comes with many costs at the beginning of a residential real estate development project.

A solution to the financing problem in the beginning of a project could be decreasing the amount of costs at the beginning of the project. This can be done by more organic-like development. This might increase the total amount which should be invested in the end, since scale benefits will be missed, but it decreases the risks and offers the possibility to bring a large share of the costs to a later phase. More organic-like development can be used in projects with professional developers, but might also offer interesting opportunities for self-commissioning of the owner-occupiers. Municipalities can support this by giving developers better opportunities to phase the project. Municipalities have, for example, the possibility to sell the land in different phases to the developers in cases where development will take place on locations which are currently owned by the municipality.

Another measure that can be taken is offering loans with favourable conditions for investment in land development. This can be done by organising a revolving fund. Market parties should be able to withdrawal financial means from the fund to finance the initial phase of a development project. Only projects in areas that are indicated by the municipality should qualify for loans out of the fund, to ensure that development takes place in the desired areas. Market parties will pay back the borrowed financial means once the developed dwellings are sold at the market. A mortgage on the land itself can be taken as security to reduce the risk of not recuperating the money which has been loaned. The advantage of a revolving fund is that it just has be filled once and after that, it maintains itself. This fund can be filled with a combination of financial means from the central government and the local government. In the end they are both profiting from the development, due to higher property taxes and more income due to an increased number of inhabitants.

Another interesting topic is the fact that the manner in which municipalities are financed did not change over the last number of decades, despite the municipality getting much more responsibility due to the decentralisation operation of the central government (gemeenten.nu, 2017). Dutch municipalities are charging developers for the costs which are incurred within the municipality to enable a project. This can be very costly and decreases the interest of developers to execute the development projects. It is an interesting option to reconsider the financing model of the Dutch municipalities.



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A successful tool that is used in other countries is Tax Increment Financing (TIF) to finance the planning process and give subsidies for (re)development. This is a method to subsidise projects by the expected future property tax increase (Verheul, 2017). This method would not work in the Netherlands, since the increase in property tax income collected by the municipality by redevelopment project would be deducted from the allowance that the municipalities get from the national government.

Last but not least, the legal toolbox of municipalities should be rethought, since municipalities are withdrawing from the land market. The toolbox of the municipality to steer spatial development is mainly focused on an active land policy. The toolbox must be, and is planned to be supplemented with tools for a passive municipal policy, since the existing tools that can be used to steer and recover costs by a passive approach are too complex and ineffective. The Land Development Plan, enabled by the new Land Development Act, is considered by the municipalities as being very complicated and it is just used as a last tool to steer the development in case all the other tools have failed. The case study in Lansingerland also showed that the Land Development Plan for passive steering by the municipality is too inflexible by changed market circumstances. A flexible tool is needed to recover the costs that the municipality has to incur due to the new development of public facilities and internal costs.

### Recommendations for future research

In the crisis during the eighties the government acted anti-cyclically by changing a large share of the planned owner-occupied dwellings into dwellings for the rental market. This was different during the latest crisis; the introduced policies were very pro-cyclical policies, which resulted in an even larger dip in the market. Research about possible anti-cyclical government reactions is recommended to provide better insights for governments into strategies to decrease the effects of a possible future crisis in the housing construction market and support the continuity of the production.

Bottlenecks in the real estate development sectors are experienced due to the reduction in the capacity of the workforce and the production of materials during the crisis. People went to other sectors and factories closed. It would be interesting to dive further into this matter to find solutions to increase the production capacity of the construction sector. This counts for building supplies, materials, and labour force.

Another way to deal with the capacity problems is innovation. Further research to collect insights as to what innovations could compensate for the lack of available construction workers and materials could also yield interesting results. Prefabricated elements are already used more often in the sector to reduce the required workforce on the construction site, but is still relatively inflexible for specific adjustments in the construction. Also building materials might be able to be replaced for materials which are less scarce.

TIF is shortly announced in the policy recommendations since it is a successful tool in other countries. The success of this tool in other countries makes it an interesting tool to consider as a way of financing the transaction costs in the planning phase, among other things. However, the funding system of the Dutch municipalities should change in order to apply it in the Netherlands. More research is needed to see how the legislation should change to let TIF work in the Dutch context and about the advantages and disadvantages of adding TIF to the toolbox of the municipalities.

### 11.3 Summary

The Dutch housing market has been getting much attention in the media for some years. There is a shortage of owner-occupied dwellings and the production of new dwellings is not high enough to supplement the existing stock. This situation causes a significant rise in housing prices. The leading problem statement in this thesis is: It is problematic that the construction of new dwellings is poorly

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aligned to the demand for dwellings, which results in shortages of owner-occupied dwellings and pressure on the housing market. The neo-classical economic theories are too simplistic to describe the complex real estate development supply chain and fail to explain the situation at the moment. The reason for the lack of production can be found in the changed institutional settings of the last decade. The Dutch housing market for owner-occupied dwellings is analysed with the four-layer model of Williamson to get more insights in the institutional change. One important driver of the institutional change was the real estate crisis which started in 2008. Despite the crisis being over for years, it has clearly left a lasting mark.

The main research question that will be answered in this thesis is: How can improvements of the governance structures enable a better-functioning market for newly built owner-occupied dwellings? This question is answered by a comparative statistical analysis with the four-layer model of Williamson. The institutions before, during and after the real estate crisis are mapped. This information is analysed, which resulted in interesting observations about institutional trends and an explanation as to why alliances are not coming into being in the Governance layer.

The Embeddedness layer is generally relatively stable, and this is also visible in the development chain of real estate. The Institutional Environment layer is also quite stable and follows on one hand, the trend of a more market-oriented economy out of the Embeddedness layer and is, on the other hand, also influenced by more volatile institutions of the market development and the emerged governance structures. An important change is the stricter policies for mortgages, but investors are also bound to stricter rules in investing.

In general, the governance structure with the lowest amount of transaction costs will emerge, but changes are experienced in the Governance layer. The risks of real estate development which were experienced during the crisis, have not been forgotten by the parties involved yet. Risk aversion, together with the pro-cyclical policy of the national government, results in wait-and-see behaviour and makes it harder to find the right governance structures to enable new development. Without sufficient alliances there is a lack of production capacity to fulfil the market demand for new owner-occupied dwellings. These shortages in capacities are visible in the land development market, but capacity problems are also experienced in the real estate development phase.

The governance structure in the construction sector did change, too. Many people lost their jobs during the crisis and building material factories closed (partly). This influenced firstly, the maximum capacity in the Resource Allocation and Employment layer, but it also had an impact on the governance structures. More and smaller companies were involved in the process, which resulted in more transactions and a need for more contracts, in order to maintain the structure and to reduce the risks.

The Resource Allocation and Employment layer is changing constantly. The crisis decreased the available workforce and the overall production capacity. The decisions made by the involved actors are in this area. For example, projects for which they allocate their available workforce, their financial means, and equipment. This layer is strongly dependent on the actual available resources and the demand for new housing.

The general findings are also verified by means of a case study in Lansingerland. Institutional changes and bottlenecks that are described at national level seem to be the case at the local level too. Post-crisis, both are dealing with the involvement of more and smaller companies and self-employed

workers in the governance structures. Also, the bottlenecks in the capacities of building materials which is experienced at the national level is also present in the local context.

The fact that all the institutions out of the different layers are changing with different speeds causes frictions between the different layers. This is also clearly visible in the case in Lansingerland where the new Land Development Plan was placed on the side, due to the fact that it was not realistic in the actual market circumstances.

It turned out that the main characteristics of the institutions, described by Williamson, are also valid in the sector of residential real estate development. This accounts not only for the stability of the institutions in the different layers, but also for the notion that the different institutional layers are fully interconnected with each other. Changes in all the different layers caused a shift in the governance structures, which reduces the building output.

The transaction costs in the process are increased compared to the situation before the crisis, due to risks which became visible during the crisis and the change of the governance structures. The increased transaction costs are caused by the increased risk awareness, the number of involved actors and the flexibility of parties. It is important that parties are finding solutions together to see how new efficient governance structures can be improved and optimized. Market parties are demanding clearer guidelines about which locations can be developed, but the crisis also showed the need for flexible plans. The municipality should find efficient ways to give incentives to market parties to find alliances to enable development without a high transaction cost in the initial phase of the project. Furthermore, the municipalities should find ways to reduce the amount of transaction costs and to recover their planning and other costs to enable a larger number of development projects.

Development alliances did break during the crisis and have had more difficulties in emerging since, due to the increased risk awareness, the stricter rules in the financial sector as well as the attitude of the municipalities; it's now more facilitating, rather than being active in the land market. The Relations in the governance structures should be reinvented (Franzen, ten Have et al., 2017). This can be done by increasing the efficiency of the process by reducing the amount of transaction costs in the complex residential real estate development sector. Municipalities can also come up with other incentives for market parties to develop initiatives and form the alliances with other market parties, which are needed for development projects. Changes are needed to increase the number of feasible alliances and to give market parties incentives to make transaction costs early in the process. New ways of financing the costs in the initial phases of the projects, such as a revolving fund for market parties to finance the initial phase (Verheul, 2017). Municipalities can also help by reducing the risks for market parties and facilitate development by clearly indicating which locations are desired to develop and what kind of development is preferred.

### 11.4. Reflection and discussion

The four-layer model of Williamson was not earlier applied as a whole in literature which deals with the residential real estate development sector in the Netherlands. This is a new contribution to academic field. The development of real estate is influenced by a bundle of intertwined markets with many actors. It is possible to put Williamson's framework over this complex structure. Changes in the institutional layers have an influence on the other layers; this is a process that was mentioned by Williamson himself, but which is also clearly visible in the residential real estate development process. It turns out that the theory of Williamson is very useful in understanding and explaining the current

situation on the market for newly built owner-occupied dwellings. This acquired knowledge made it possible to answer the research questions of this thesis.

The gathering of information about the general trends and institutional change in the construction market of owner-occupied dwellings in the Netherlands is done with a variety of sources, ranging from academic papers, magazines, and newspapers to statistical data. The available and consulted data was sufficient to understand the general mechanisms, trends, and institutions.

However, the collected data for the cases comes from several sources and some of the sources are subjective, since the authors represent the needs of certain groups active in the development sector. This effect of subjective and biased information is reduced by using many different sources from different areas of the field and the information collected by actors was combined with academic evidence. However, the two cases are both in one municipality and are not representative for all the cases in the Netherlands. Even other cases in comparable growing regions might be different, due to other circumstances such as the local actors or different policies and focuses of the local municipality. The cases are mainly intended as an example to show the institutional setting and changes in the local context. The cases made clear that the general trends were also visible in the local context. This does not mean that the general trends and institutional change is experienced in all the regions of the Netherlands.

The combination of studying the literature and the validating the findings with two case studies in the local context of Lansingerland offers a sufficient and reliable foundation on which to come with the interesting recommendations to improve the building output and get the pressure out of the market, which are presented in the previous section.

There are several possibilities to improve the findings in this thesis. More involved parties could be interviewed with a larger geographical scope to get a better overview of the situation in the entire Netherlands, or at least the regions with an increasing number of households. Also, the collection of quantitative data by means of surveys conducted by many different actors could support the claims in the conclusion of this thesis. It would be also very interesting to do the same research some years in the future to see if all the involved parties found their new positions, responsibilities and tasks in the development process.

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- Interview: Zevenbergen, A. & den Heeten, I. (2017, March 31). Case Interview. See Appendix 2.4. (C. Bollemeijer, Interviewer)

# Appendices

### Appendix 1: Topic List Semi-Structured Interviews

A list with several topics was used during the interviews to structure the data gathering. Questions are added during the interview where elaboration or further information was required. Also, some questions were skipped, as they were previously answered earlier by the interviewee. The lists that are used during the interviews are in Appendices 1.1. and 1.2. The first topic list was used to gather information about the actual market conditions and verify the information described in the literature. The second topic list was aimed at gathering concrete information about the experiences of the involved parties, decisions they made, governance structures and transaction costs in the cases.

#### Appendix 1.1. Orientation Interviews

##### Market development

- Is the demand for owner-occupied dwellings still increasing?
- Are there still potential buyers delaying their decisions, since they consider the economic perspectives as poor?
- Is a decrease in the demand of owner-occupied dwellings expected?
- Do potential buyers have sufficient financial means to buy in the current market?
- Is the low mortgage interest rate an important factor for potential buyers to buy now?
- Do you see possibilities in the market to increase the production of owner-occupied dwellings?
- Is the quality of the building output in line with the demand in terms of single-family houses and multi-family houses?
- Do you expect an increase in the building output of owner-occupied dwellings in the near future?
- Do you have ideas how to accelerate the increase in building output?

##### Culture

- Have you experienced a culture shift in the building industry compared with the situation before the crisis?

##### Policy and legislation

- Are the tighter restrictions for mortgages influencing the buying behaviour of potential purchasers?
- Do you experience shortages in plan capacity?
  - If yes, where? (greenfield and/or urban infill locations)
- Do you experience the abundance of policy and legislation as a bottleneck?
- Do you experience a reduction of the regulation? (for example, due to the Crisis and Recovery Act (Chw))
- Regulations on which governmental layer are experienced as being the most of an obstacle?
- Do you find the protest and appeal possibilities of third parties to be a bottleneck?

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### Governance

- Did the cooperation between market parties and the municipalities change, compared to before the crisis?
- Did the cooperation between market parties change, compared to before the crisis?
- Do you have ideas on how to improve cooperation?
- Do you find the complexity or lead time of the decisions process to be a bottleneck?
- Do you find negotiation processes to be a bottleneck?
- Do you find inflexibility or the opposite, plan changes, as bottlenecks?
- Has the cooperation on the building site changed in recent years?

### Market

- Is there much competition in the selling of owner-occupied dwellings or is it relatively simple to sell them?
- Are the projects aligned with the needs of people in terms of sufficient parking space, green spaces and good accessibility?
- Are there shortages of workforce?
  - If yes, what kinds? (Market parties, Management, Construction workers, Public servants)
- Are there shortages of building materials?
- Does the building industry need to compete with different markets for workers and materials?

### Closing

- Are there important matters neglected in my questions; what might be important?



### Appendix 1.2. Case Interviews

#### Interviewee

- Short introduction: What is the responsibility of your organisation and you specifically?

#### General

- What do you think is the reason that the supply of new owner-occupied dwellings does not meet the demand in general?
- Did your role change during/after the crisis?
- Do you experience different attitudes from the municipality compared to before the crisis?
- Do you experience different attitudes from the market parties compared to before the crisis?
- Do you experience different attitudes from house buyers compared to before the crisis?
- The complex procedures and regulations were seen as large bottlenecks before the crisis. Are these still considered as bottlenecks?
- Shortages of employees and building materials were bottlenecks before the crisis. Is this experienced again/still?
- Are the Crisis and Recovery Act (Chw) and the coordination regulations in the new Spatial Planning Act (Wro) improvements?
- Is there enough plan capacity for the coming years?

#### Voluntary agreement

- The project was already planned before the crisis, have things changed since then?
- Was the project delayed by the crisis?
- Are there parts of the agreement which were renegotiated?
- Is the municipality more or less flexible, compared to before the crisis? (Procedures, Building programme)
- Did the required red tape increase or decrease?
- Are the same parties as in the beginning still involved?
- Did some task or responsibilities shift between parties?
- Can you elaborate a bit on the decision-making process? (why this location and how were partners selected?)
- Why cooperate in a joint venture? (OC Westpolder/Bolwerk->Kavel Vastgoed & Amvest)
- How many architecture offices are involved? (same as in the planning before the crisis?)
- How many construction firms are involved? (same as in the planning before the crisis?)

#### Land Development Act

- Would the development process be different if a voluntary agreement/the new Land Development Act would have been used?
- Would the responsibilities and cooperation still be the same between different parties?
- Is the same amount of time and resources still required for negotiation and planning in the land development phase?
- Is the same amount of time and resources still required for the development phase?

#### Future

- How do you see the future for the development of dwellings; are we going to have the same situation, with the same actors and responsibilities as before the crisis?

#### Closing

- Are there important matters neglected in my questions; what might be important?

## Appendix 2: Interview Summaries

This Appendix contains summaries of all the interviews conducted for this thesis.

### Appendix 2.1.

#### Interview 1: Meijers, Leendert (NVB Vereniging voor Ontwikkelaars & Bouwondernemers)

Interviewee: Leendert Meijers (Deputy Director)  
Organisation: NVB Vereniging voor Ontwikkelaars & Bouwondernemers  
Interviewer: Cor Bollemeijer  
Date: 8 February 2017  
Location: NVB office (Westeinde 28, Voorburg)

#### Description of the NVB

The *NVB* is a Dutch sector association for developers and construction firms. They represent the interest of their members by lobbying, legal services and market research. They are on one hand a link between the government and the market parties. On the other hand, they are a knowledge institute and stimulate research and inform and inspire their members.

#### Tasks of Leendert Meijers

Mr. Meijers is the Deputy Director of the *NVB*. He is responsible for energy matters and was involved in the *Lenteakkoord Energiezuinige Nieuwbouw* (Spring agreement energy-efficient construction) on behalf of the *NVB*. This agreement aims to build, from 2021 on, all the new dwellings nearly energy neutral. Also, the construction of new dwellings is part of his portfolio. His focus lies here on the improvement of the construction process of new dwellings. Next to those tasks he has also plenty of internal tasks within the *NVB*.

#### Summary of the interview

##### *Market development*

The demand for new dwellings is absolutely not the problem. This demand is at the same level as it was before the crisis in 2008. There is more demand than supply for the new projects. Developers do not have to be afraid that residential real estate will remain empty. During the last years, a lot of people postponed their decision to move to another dwelling, due to poor economic prospects and difficulties in getting a mortgage. Many of those people are now willing and ready to take the step and buy a new dwelling. The purchasing power decreased a bit, but got compensated by the very low mortgage rates, which determine the affordability. Because of this, it is still possible for many people to make great strides, especially the people who are leaving another dwelling behind. They can mostly sell their house and have a new mortgage with more favourable conditions.

There are too few available building sites at the moment. The plan capacity is too low, especially in North Holland and Utrecht. The plan capacity should be ways higher if we consider the demographic forecasts about the number of people and households made by Statistics Netherlands (CBS), which indicate significant increases until 2040/2050 in some regions. It is not just the lack of plan capacity, but also the reluctance of the municipalities in granting building permits, which causes tightness on the market. The pool of available newly built dwellings is getting empty this way. There are market parties that want to continue in a higher pace, but the municipalities are very reluctant to change zoning plans and to assign a residential function to plots. The fact that the ground is not assigned for residential purpose makes it impossible to request a building permit.

The process of changing the zoning plans can be started, but happens at the moment in dribs and drabs. The lack of plan capacity provided by the municipality might be caused by the crisis in which

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municipalities had to depreciate the value of their land positions and lost millions of euros. A lot of building projects were cancelled.

Before the crisis there was a qualitative mismatch between the demand of dwellings and the building output. There was an oversupply in apartments, but the unsold stock of that time is sold in the meantime. The output is 70 percent of single-family houses and 30 percent of apartments and this is aligned well to the demand. There is no qualitative mismatch. The construction starts nowadays after 70 to 80 percent is sold, this makes it also harder to get a qualitative mismatch. The problem is not the quality but solely the quantity.

This quantity will not increase automatically. It is important that municipalities and provinces become aware that there will be a demand that is not matching with the supply, so it is important to increase the building output. Otherwise a mismatch will result in skyrocket housing prices. This awareness should still arise by local policy makers. It is really important to bring parties together. Today, we live in a network society, so collaboration is the key. Demographers and professionals who have knowledge about the market, like real estate agents, but also social housing associations, public servants and developers are needed. All together they can show how the market looks like, identify the expected development and make a demand-supply analysis. With this information, they can decide how many new dwellings should be added to the market. They can also talk about possible locations and other aspects, but after that everybody should do his own tasks again.

### *Culture*

There is a conservative culture in the building sector. People do not like change, but due to the crisis there is a transition going on. The financial constructions are changing, the processes are changing and even the products are changing. This will also result in a need for people to change, so in a social change. So, the culture is changing on the moment. It is important that people get more respect for each other. Everybody is doing his own things and sometimes forgets about the final product. Like a plasterer who fills up a power socket or a construction worker stepping on the ventilation ducts. Everybody should feel responsible for the final product. This is getting already better since the crisis, partly because the collaboration in the production chain improved. The parties are collaborating with more fixed partners and they allow each other to make profit. There are also more checks in the industry. This starts already in the preparation phase, but also random sample checks during the construction and when the dwellings are finalized. The quality assurance system is developed during the last years.

### *Policy and legislation*

The restrictions for mortgages are tighter than before, this should in principle have an influence on the purchasing power of people especially for first-time buyers. Till now the effect was not really large, because of the low mortgage rate at the moment, but when the mortgage rate increases, it will have an influence.

The tighter restrictions to enter the social rental market do not have a visible influence on the owner-occupied market, but it is not unthinkable that this will be visible in the future. The private rental sector offers not a lot of dwellings in the middle segment and the rent prices are quite high. It is possible to buy a dwelling for the same price.

Long legal procedures were seen as a bottleneck before the crisis and are still considered as a bottleneck. It takes on average 7 to 8 years from the first ideas till the actual construction is finished due to the legal procedures. This lead time is getting a bit less, due to more flexibility, but 3 to 5 years can still be considered as normal. There are also signals of requirements in urban planning, architecture and/or aesthetics that are perceived as a bottleneck, this is for sure not on top of the list with bottlenecks, but rather annoying. Sometimes there are also additional requirements from

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municipalities, like that the buildings have to be nearly energy neutral already. This makes the dwellings substantial more expensive. In this case, it is better to make it one level playing field and have the same requirements everywhere. This is already the case in Overijssel for example. But municipalities should be careful not to create different requirements, while the neighbour municipalities do not have them.

Laws and regulations about environment, water and archaeology and EIA are complicated, they are procedures every project should go through, but this is not more work and time consuming than 10 years ago. It might be a bit easier on a greenfield. But greenfield development is mostly just accepted if there are no possibilities within the built-up area. Within the built environment there are more rules. They try to make rules simpler instead of more complicated and also the politics are in favour of that, but there is still enough to do in simplifying.

### *Governance*

It is the choice of the developer to work with fixed construction firms and suppliers or to contract a new one every time. There is a tendency that companies work more with fixed partners and suppliers and that they make agreements about profit margins. This makes the quotes and contacts a bit easier. This is an economical choice of the company and does not count for all the developers. There are also developers which do the construction internally, as they have a construction department themselves.

The collaboration between market parties and municipalities can be improved by starting a dialogue. Market parties are seen as organisations with the aim to make profit and also civil servants have their own goals. They should come up with a more shared vision. This is possible if they talk more to each other and share fundamental data. They should not see each other directly as opponents. This is a bit in their perception how they should treat each other. In some municipalities, this is already working really good and in other municipalities it looks like there are collisions right from the beginning. This is already a problem for a long time. Market parties should probably learn from it by playing a more informative and transparent role. The market parties do not need to hide their profits, but should on the other hand also show what they give. They can do this by explain what they are aiming to contribute to the spatial planning and the city. This approach makes it also easier to filter the good developers from the bad once. A councillor will turn enthusiastic if a developer comes up with a good plan of redeveloping a bad spot in the city and increases the liveability of the neighbourhood. The story is important for redevelopment in cities, but also for green sites. They might get permission as well if they come up with a good story why the greenfield location should be developed.

### *Market*

All the development projects have a lot of rules, this is not much more for residential real estate compared to the realisation of offices. EIA and other regulations are also needed for the development of offices. Especially nowadays they first check if empty offices can be renewed before new office will be build. Municipalities and also provinces are very reserved in appointing new areas for offices. The construction of offices compared with residential real estate is also not as profitable anymore, as it was in the past. In 2002 there was so much construction of offices, that it made a lot of office space remain empty today. The market was very hot back then and developers were using leverages with 30 percent own funds. The other costs were covered with investors. Nowadays it is ways harder to organize it with just 30 percent own money. The rates of return are not large in the construction sector if you take the large investment and long lead time into account.

Manpower is a point of attention. The workforce is limited in the construction sector. The workforce decreased by more or less 80,000 people during the crisis. This makes it hard to increase the production. This will be mainly problematic for the number of construction workers and not that

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much for the management of market parties and civil servants. The control task which the civil servants had in the past, is nowadays more a private task. Most likely a law will be adopted soon which makes the quality assurance entirely private. The real problem will be really about the construction workers. On the other hand, the building process is getting more and more standardized and automated. So, building is getting faster and less people are required, but we are in a transition phase so we still need the construction workers the coming years. So, the number of workers can be a bottleneck in increasing the building output.

There are already signals of scarcity of building materials, especially pile drivers and concrete materials, like the channel plates. This might occur with other materials and devices as well. Also, those suppliers decreased their production during the crisis and are increasing it now slowly. This can still cause some bottlenecks and push up the price.

Lead times should be decreased and we should look further ahead to avoid tightness on the market which will push up the prices. A too tight market with high prices will make the market inaccessible for many people and that is not what we want.

### Appendix 3.2.

#### Interview 2: Dekker, Jan (ABB Ontwikkeling)

Interviewee: Jan Dekker (Director Development)

Organisation: ABB Ontwikkeling

Interviewer: Cor Bollemeijer

Date: 23 March 2017

Location: Phone

#### Description of ABB Ontwikkeling

ABB is a broadly oriented developer. Sometimes they execute projects from land preparation phase until the delivery of the building units. In other projects, they are a link in the development chain. Next to the development pillar they have their own construction pillar. ABB offers development, construction, rebuilding, renovation and maintenance services. Most of the projects are in the residential sector or deal with shopping centres and transformations.

#### Summary of the interview

##### *Market development*

It is understandable that the supply of new dwellings after the crisis lacks behind the demand. Everybody wants to have a new dwelling now that the crisis is over and it takes a bit for the supplying industry to catch up with the demand, since developers and municipalities have cut the number of employees. Also, the number of developable sites, which are directly available is too low. At the moment, everybody is developing the relatively easy sites, the so called low hanging fruits. After this, the more complex sites, with higher land acquisition costs or sites with difficult land zoning issues, need to be developed. Those projects will have a longer lead time and might increase the gap between supply and demand even more. The demand is likely to increase, but the demand can also suddenly decrease by external factors like a terrorist attack or an increase in the mortgage interest rate.

The low interest rate works favourable for the affordability of dwellings. During the crisis a lot of people increased their savings, which works also in favour of the playability of a dwelling. The purchasing power by consumers differs per region, due to culture differences. In the cities people are willing to take high mortgages and at the more conservative country side people have in general more savings which makes the ability to finance a dwelling a lot easier.

It is hard to say what kind of dwellings people want. People, who are looking for a dwelling in the city, are mostly looking for apartments and they are getting build in the cities, but Jan Dekker disagrees with the idea that everybody wants to life in cities. There is a high demand for land-based dwellings in villages close to the cities, but those locations are scarce, since we do not have Vinex locations anymore.

##### *Culture*

The crisis was not just bad. It also caused innovation in the traditional rigid building sector. Building systems improved, so there is more quality delivered for the same price. The innovation also decreased the building time of a dwelling from more or less one year, before the crisis, to less than half a year. Everybody learnt from the crisis, but parties are also going back to the old patterns and that is quite concerning.

##### *Policy and legislation*

The change in policy and legislation of the last decades does not have a large impact. The regulatory pressure stayed at the same level. The Crisis and Recovery Act (Chw) and the coordination regulation in the new Spatial Planning Act (Wro) are improvements, but the number of rules stays high and makes

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the development process time consuming, especially if people object and appeal. Especially now more and more development is happening within the cities, so the number of objections and appeals is increasing, since there are more stakeholders, compared to a development project at a greenfield location. *ABB Ontwikkeling* makes mostly use of the coordination regulation for development projects within the city, so the environmental permission and the zoning plan procedures are in one request. This reduces the lead time.

The largest bottleneck to increase the building output are zoning plans. They are made by the municipality, but also the provinces have a word in the final plan and have to approve the municipal policy. There are shortages in the plan capacity within cities and on greenfield locations. In the large cities, there is a lot of demand for dwellings, but also people want to live around those cities. There is a huge need for new dwellings. The province of South-Holland indicated that they need a capacity of 230,000 dwellings. Depending on the growth of the households, there are between the 600,000 and 1.2 million more dwellings needed all over the Netherlands in 2040. That is a huge amount and a large and exiting challenge to locate them. At the moment, more locations are needed than there are actual available.

### *Governance*

There are no significant changes in the cooperation between market parties compared to the situation before the crisis. Everybody is dependent on each other and good communication is the key to success. However, on the building sites there are changes, due to innovation. More and more parts are prefabricated and almost every developer has a concept dwelling, which makes the quality better and the construction time shorter compared to before the crisis. There are more fixed chain partners in the production process. *ABB Ontwikkeling* works for all the plans with fixed partners. With those partners *ABB Ontwikkeling* makes plans for more years. This works extremely positive, since it reduces the failure costs and negotiation time and increases the quality of the dwellings. The process of contracting fixed partners is accelerated by the crisis.

The cooperation between the municipality and the developer changed in an attempt of the municipality to make things more transparent. More and more projects are awarded by means of competitions or tenders instead of giving the possibility to a market party to come with an initiative to the municipality and making it possible together.

### *Market*

There is lack of certain building materials like foundation piles and concrete elements. Some suppliers of building materials found new geographical markets, since the demand for their materials dropped during the crisis. For instance, a lot of bricks were shipped to the United Kingdom during the crisis and there is still a demand for bricks in the United Kingdom. Other brick and concrete factories closed down during the crisis, due to the low demand for their products. To re-open the factories would cost millions, so this is not easily done. This decrease in production capacity creates scarcity on the market and increases the prices.

Municipalities are hiring external workforces, this causes some problems, since they do not know the culture within the municipality and they miss the needed background information. This is a pattern, which is visible after every crisis, since municipalities have problems to upscale their workforces. This always causes some issues in the organisation. It is easier for market parties to upscale the workforce, since there are less rules. Also, market parties have shortages of good employees, like bricklayers, this is problematic for the market parties. The shortage of workforce is a combination between a quantitative shortage and a qualitative shortage.

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It is relatively easy to sell dwellings under these market circumstances, but the end users of the dwellings are more assertive and demanding than in the past. The flexibility and quality have to increase to meet the requirements of the end users.



### Appendix 3.3.

#### Interview 3: Rommelse, Matthijs (Municipality of Rotterdam)

Interviewee: Matthijs Rommelse (Building Coordinator)

Organisation: Municipality of Rotterdam

Interviewer: Cor Bollemeijer

Date: 30 March 2017

Location: Office of the development department (Wilhelminakade 179, Rotterdam)

#### Summary of the interview

##### *Market development*

There is a lot of demand for new dwellings in Rotterdam. The municipality of Rotterdam estimates that the demand side stays favourable until 2020. The municipality of Rotterdam expects a need of 3,000 till 4,000 units per year, but they also expect that the demand will decrease at a certain moment after 2020 to a level of 2,500 till 3,000 units. This can be caused by factors like an increase in the mortgage interest which makes home ownership less attractive, but also the rent in the average price category is getting more attractive.

There is a huge challenge for the municipality to bring the production of dwellings to the desired level. It is common after a crisis that it takes some more months to start all the needed procedures. Matthijs Rommelse does not see problems with the production in the long term within the municipality of Rotterdam, since they experience already an increase of the production.

The construction of 916 residential units started between January and the end of March and there are building permits granted for almost 5,000 residential units in Rotterdam. This is significant more than last year. There is a huge problem in the building production according to the newspapers, but Matthijs Rommelse sees that they make great progress considering the growth in the production, which the municipality already experiences. Matthijs Rommelse does not know how it is in other cities like Utrecht and Amsterdam, since the production there started already earlier. Maybe they still had projects where permissions were already granted before the crisis, in that case it is easier to start up. In Rotterdam, the production continued for a long time during the crisis, which resulted in the fact that the municipality does not have projects on the shelf which can be executed directly. There was a huge number of requests for environmental permissions for the construction of dwellings in December 2016, most of those projects will start this year.

##### *Policy and legislation*

The legislation did not change a lot. It is still the same procedure that a plan should be executed according to the zoning plan. If the plan is according to the zoning plan a building permission can be requested. If this permit is irrevocable the physical building process can start. This is the same as in the past. There was just more state control back then. The largest change in Rotterdam is that there are not a lot of greenfield locations anymore (30 percent). Most of the development is within the existing urban areas (70 percent). Within the urban areas are more interests, so there is a larger chance for objections and appeals.

The granting of a permit is a difficult process. There are several internal and external actors that have to approve, like the fire department and the aesthetics committee. The integration, so the number of actors who have to approve, will increase with the upcoming Environmental Act even more. This means that the role of the building inspector shifts from evaluating to advising. The large challenge for the municipality is to make the permit requests of the market parties complete, so that they can get approved by all the actors. Market parties often forget mandatory parts of the request. The municipality of Rotterdam tries to get the market parties in an earlier phase around the table and advises them. In the end the plans should still fulfil the building codes and zoning plan, like in the past.

## The Market for Owner-Occupied Dwellings After the Crisis

The plan capacity in Rotterdam is enough for the first four years. However, there is a shortage of 14,000 units in the desired plan capacity of 50,000 dwellings until 2040. There are a lot of developers who want to build at the moment, so care should be taken that they do not get an overcapacity.

### *Governance*

The role of the government changed, hence the role of the municipality. Mandates, accountability and accountancy tests are changed fundamentally during the crisis. Furthermore, social housing associations are not allowed to build free sector dwellings anymore. This makes things more complicated, since they were important partners of the municipality.

The municipality of Rotterdam does not have large land positions anymore, so they are less risk bearing as a municipality. The municipality had in the past more or the less 80 percent of the land positions, while market parties had the other 20 percent. This is nowadays the other way around, which caused a methodical change. This is something what can be seen by a lot of municipalities. In the past they had often their own municipal land development companies, but this changed in most of the cases to a service department of the municipality, which does not take too much risks. If the land is owned by the municipality it is easy to make a plan, change the zoning plan and execute the project. Nowadays, initiatives of market parties are assessed. Land positions were mostly used as a control instrument by the municipality and not that much as a mean to make profit.

Market parties are selected according to the policy of the municipality. This happens mostly by means of a tender in case the municipality has the land position. The requirements of the tender are different, depending on the location. A centrum location has different demands compared to a greenfield location. An assessment framework is set up to compare the different proposals. Financial aspects, quality, building programme and sustainability aspects are mostly playing an important role in the assessment. This selection process is different compared to the eighties. At that time, it was usual to contact a market party and do business together, but there is nowadays a large tendency to make things more transparent. This can be an open or a closed, tender depending on the project. Parties for a closed tender are selected on the ability to carry out the project. In practice, it is more likely that parties which are known by the municipality are invited to participate in the tender. It has advantages and disadvantages to work multiple times with the same developers. They know the way how the municipality works, this might be positive, but this can also result in strategic behaviour of the developer. New developers might also have a greater urge to prove themselves.

In most cases there are market parties who have the land positions, so than they basically choose the municipality instead of that the municipality choose them. The parties approach the municipality and they do an intake. In the intake they show the municipality what they want to develop or redevelop, where they want it and how they are planning to realize it. The municipality also wants to know how sure the market party is, since it will cost manpower for the municipality to continue with the process. The project's proposal will be assessed by all different disciplines and an advice will be given to the market party. This advice can be 'promising' or 'low probability of success'. If the advice is promising a project can continue and the market party should come up with a proposal for a zoning plan alteration. After this several procedures are possible. The procedure will be selected based on the case base on the efficiency and effectivity.

The initiative should come from market parties. They should find locations themselves in the city. The government will not come with new 'Vinex' locations anymore. However, municipalities can support market parties by communicating clearly on which places development is desired. The municipality has a 'City vision' and a 'Residential vision', but exact locations are mostly not clear.

## The Market for Owner-Occupied Dwellings After the Crisis

There are at the moment enough parties willing to develop. A lot of small developers emerged after the crisis. There are more parties as before the crisis. Some interior designers also pick up small scale transformation projects, like from shop to dwelling and small developers who were operating on building level are now developing building blocks. The square meter prices in Rotterdam increased a lot. This makes investments in Rotterdam more attractive.

The social side of the relationship between municipality and market parties changed a lot. It is important to avoid the appearance of favouritism. Relations are for the time spans of a project and not for longer term, due to the tenders. It is important that the government maintains the relations on another way. This could be done by a long-term agenda, where the vision of the municipality will be discussed with market parties.

Land prices are calculated with a normative residual value method. This method is based on the residual value method. This means that there is a lower bound and there are restrictions of what kind of costs can be deducted from the land price. It is for example allowed to construct multiple bathrooms, but just one can be deducted from the land price. This is how it goes in Rotterdam, but every municipality has its own policy regarding to this.

### *Market*

It is important to check the staffs' turnover rates. Municipalities decreased in size of personnel, but also market parties. Now the organizations are growing again. The direction is mostly still the same, but all the operational staff changed. The challenge is now to increase the building output with new people.

### Appendix 3.4.

#### Interview 4: Zevenbergen, Amke & den Heeten, Ingrid (Municipality of Lansingerland)

Interviewees: Amke Zevenbergen (Housing officer)  
Ingrid den Heeten (Team leader Projects, Land Management & Real estate)  
Organisation: Municipality of Lansingerland  
Interviewer: Cor Bollemeijer  
Date: 31 March 2017  
Location: Municipality hall (Tobias Asserlaan 1, Bergschenhoek)

#### Summary of the interview

##### *Market development*

The demand for new housing in general is high, but it depends also strongly on the location. Lansingerland is located on the better side of Rotterdam, in the centre of the metropole region, but the municipality has three different urban areas: Bleiswijk, Bergschenhoek and Berkel & Rodenrijs with all different characteristics. There are different housing markets within the municipality. Bleiswijk is more like a village and people out of the region do not have a strong demand for dwellings there, while Bergschenhoek and Berkel & Rodenrijs serve a more regional function, which results in a higher demand. It is important to keep this in mind and not to develop everywhere in the municipality, there are large differences.

##### *Policy and legislation*

The Land Development Act (Grex-wet) is working successful, but it is quite some work to make the plans. It is important to think upfront exactly what the municipality wants and you should make sure that everything is in it. This takes a lot of time. Furthermore, the financial part of the plan has to be revised every year. In practice, the first step is to make a private agreement with the developer instead of applying the Land Development Act directly.

The municipality does an intake with the developer for more complex projects. This makes it easier to estimate for the developer if the actual environmental permission will be granted. The application for the environmental permission goes within the municipality to several departments to assess the plan. This happens internal and the market parties do not have to deal with this like before the implementation of the Act on General Provisions in the Environmental Law (Wabo). The departments are now so intertwined that the deadlines are met and market parties do not suffer from an internal disagreement between departments.

The production of dwellings continued during the crisis with 300-350 dwellings a year and the planning is on the moment a production of 400 dwellings per year. This is quite a lot for a relative small municipality like Lansingerland. The focus was during the crisis on the ongoing projects and not on starting new projects, but most of those projects are now finished or nearly finished. There are still 5,500 dwellings in the plan capacity until 2030.

##### *Governance*

Since the 'Vinex' period the municipality Lansingerland worked with an active land policy. Berkel and Bergschenhoek got assigned as Vinex area. This meant that those two small villages had to double or triple in size. There was a political desire to keep the control over this growth. The municipality purchased a lot of land, but a lot of the land was already sold by market parties. The market parties were willing to negotiate with the municipality. This resulted in building claim models. The land owned by the municipality is till today not entirely developed. The building claims signed in the nineties are still present on many undeveloped sites. Those sites will still be developed according to the old agreements with the market parties. The municipality has still some pieces of land without building

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claims in Bleiswijk. They are not sure if it is a good idea to develop those, since there might be not enough demand for it and it has an impact on the existing village and housing stock in the village.

The crisis changed the mindset of the municipality. From 2012 they changed the active land policy into a 'passive, unless' policy. There are several reasons why the municipality wants to keep control in some projects. This can for example be a specific housing category or a transformation, which will not be done by market parties. In those cases, active land policy is still possible, but huge development projects and purchasing of large sites is in principle over. There is also more initiative of private parties. Before the crisis they rarely developed by themselves, but now the municipality of Lansingerland sees more and more initiatives. The projects of private parties are also getting larger, from a couple of dwellings in the past to projects of 50 dwellings nowadays. A private agreement is used as a tool to control the development and covers topics like costs, quality and building programme. It is volunteering for the market party to cooperate with the municipality and signing a private agreement, but if they do not sign it voluntarily the municipality can use the Land Development Act (Greex-wet) to steer the development and recover costs.

There are several ways of selecting market parties. This is done sometimes with a tender. In other cases, the municipality of Lansingerland does direct business with one party because they have certain capacities or they have good experience with them. Criteria of a tender are depending on the project. Sometimes the highest price is the main assessment criteria and in other cases the qualitative aspects are more important. With some market parties are already agreements signed, for example building claims, before the crisis. In that case they cannot select other market parties anymore.

The municipality works now with more market parties compared to before the crisis. Before the crisis there were some large parties with building claims. During the crisis, they were not very active, while smaller developers were still willing to construct. The smaller parties are mostly more creative and flexible to the desires of the target group. Those smaller parties stayed as players on the market. The crisis did result in good outcomes too. The quality of the buildings increased and slower development caused also a more balanced population structure and flexibility, due to the more organic growth. New development attracts a lot of young families, so they are overrepresented in large development projects.

The large developers are mostly working with fixed partners. If market parties are running a successful project together they mostly want to cooperate more often with each other.

### *Market*

The demand for construction increases too fast. There are shortages in the amount of workforce and materials. All the companies reduced the number of employees during the crisis and there is a delay to bring this back to the desired level.

### Appendix 3.5.

#### Interview 5: Wibier, Andy (Gouden Buurten information centre)

Interviewees: Andy Wibier (Real estate agent)

Organisation: Gouden Buurten information centre

Interviewer: Cor Bollemeijer

Date: 2 June 2017

Location: Gouden Buurten information centre (Westerpolderstraat 2G, Berkel en Rodenrijs)

#### Description of the Gouden Buurten information centre

This office sells all the dwellings that are developed in the Gouden Buurten by *Ontwikkelingscombinatie Westpolder/Bolwerk* a cooperation between *Amvest* and *Kavel Vastgoed*. This office is exclusively selling for the development of the Gouden Buurten.

#### Tasks of Andy Wibier

Andy Wibier is a real estate agent and works together with one colleague to sell all the developed dwellings in the Gouden Buurten.

#### Summary of the interview

##### *General*

There is more demand than supply at the moment. This is also a fact that is experienced in Lansingerland. A lot of demand is experienced, so the developers and the municipality prioritised the development of the Gouden Podium to put the dwellings faster on the market as a response to the high demand.

Buyers have a different attitude compared to before the crisis. They are willing to pay a lot for the dwellings. They are mainly looking at their monthly charges for the mortgage and these are low at the moment, due to the low mortgage interest rates.

Some building materials are already hard to obtain. This makes it important to plan more ahead to make sure that all the materials are available at the needed time. This means in practise that also the final customers have to make their decisions about the possible options earlier in the process. Also, the labour market for some craftsmen are tight, like bricklayers and tilers.

##### *Case*

*Kavel Vastgoed*, *Amvest* and the municipality are the parties which purchased land of the greenhouse farmers. The municipality used sometimes the Pre-emption Act (*Wet voorkeursrecht gemeenten*) to acquire the land of the farmers. The fact that all the parties had land positions made them cooperate with each other. The two commercial developers did that in the joint-venture *Ontwikkelingscombinatie Westpolder/Bolwerk* and they worked the plans out in close cooperation with the municipality.

One architect made the urban design and different architects the design of the individual buildings. For the Gouden Podium project is consciously chosen for another architect to get variation in the large scale development.

All the plans were already made before the crisis and most of it is actually kept quite the same over the time. Luckily the developers were financially strong enough to wait for better times and did not have to deviate to much from the initial plan by developing in the cheaper segment of the market.

The development was first delayed because of the negative market circumstances, but now prioritized due to the high demand of the moment. The demand is so high that advertisements are stopped for this project. An additional construction firm (*Riz Bouw*) is contracted next to the permanent construction partner (*Van Mierlo*) to speed up the process.

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The team of *van Dullink* (the real estate agent) decreased from 20 to 10 employees, due to the crisis. The developers wanted an agent that exclusively deals with the sales of the new dwellings in the Gouden Buurten. Andy Wibier decided to quit at *van Dullink* and start for my own, due to a further workforce cut by *van Dullink* and the request to work exclusively for the developers of the Gouden Buurten.

The development of the Gouden Podium will be done in different phases. The first phase is in the middle segment and is developed next to the industrial side. This row with houses will function as a buffer between the McDonald's and the industrial area on one side and the development in the higher end of the market on the other side.

Innovative solutions like prefab concrete are handy to speed up the building process. However, traditional building methods are preferred if it is possible, because it is more flexible. Especially in the higher segment this flexibility is desired by the final customers. It is not just shortage of some building materials, but also employees. Subcontractors and self-employed workforce are more often contracted by the construction firms compared to before the crisis.

Andy Wibier does not have information about the negotiation process between municipality and the developers in the early stage. Andy Wibier gets involved in the process at the moment that the first maps are drafted.

### *Future*

The building production has to increase given the high demand. The municipality is very active collaborating with developers to increase the building output in Lansingerland.

### Appendix 3.6.

#### Interview 6: van Swam, Peter (Kavel Vastgoed B.V.)

Interviewees: Peter van Swam (Manager Development)

Organisation: Kavel Vastgoed B.V.

Interviewer: Cor Bollemeijer

Date: 8 June 2017

Location: Office Kavel Vastgoed B.V. (Lange Kleiweg 50-N, Rijswijk)

#### Description of Kavel Vastgoed B.V.

*Kavel Vastgoed* is a privately funded developer, which is existing for 40 years now. The team is relatively small with seven employees. They develop mainly on the land positions, which they have acquired themselves in the province of South Holland. Their starting point is mostly the land position, which means that they also take a risk in the site preparation and land development phase. Lately they also participate quite successful in design competitions in order to develop sites.

#### Summary of the interview

##### *General*

Municipalities were late by taking possession of land positions after the announcement of the Vinex plans. Municipalities never had a monopoly in land development. Maybe they thought they had a strong position, but in reality, there were more parties able to buy and sell land. The position of the municipality on the land market was strengthened by the introduction of the Pre-emption Act (*Wet voorkeursrecht gemeenten*). *Kavel Vastgoed* developed already quite some successful projects on the basis of land positions before 1990. Market parties were often faster with obtaining the Vinex locations compared to municipalities. This resulted in a need for municipalities to make agreements with market parties. This is not necessary a negative result, since risks can be shared by helping each other.

The largest crisis in the real estate sector ever just passed. Peter van Swam thinks that there is a common agreement that this crisis was larger than any real estate crisis before. During the crisis there was a lack of confidence about the future economic situation of households. People got fired and consumer confidence was at a low point. People rather modified their existing dwelling a bit in this uncertain time.

The demand increased a lot in the last years, because of better prospects. Companies are hiring employees again and the consumer confidence is back. Another development is that the average household size is decreasing. This is a development, which results in more demand for dwellings. All the people who delayed their decision to buy a new dwelling are now willing to take that step. This started already two years ago on the lower end of the market and the increase in demand moved also to the higher end of the market. In almost all the segments (besides the highest) the flow and the amount of transactions increased. The existing stock of houses for sale decreased enormous in the last months.

The supply side of the market responds, but the output comes later. The development of new neighbourhoods is a long process with an extensive and complex planning phase. First an urban planner should be selected and he has to work out a plan. After that the individual dwellings need to be designed and constructive calculations have to be done. Financial calculations for the feasibility take also some time. It costs time to make good and intelligent plans. Procedures by the municipalities are taking place at the same time as all the planning and designing work. This procedures with long lead times for permits can also delay the output. If all the plans are ready and the permits are granted the civil works can start. This takes also some time. All together it is a trajectory of several years.



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There was a huge outflow of workforce in the construction sector, during the crisis. Municipalities had to shrink their departments, but also market parties needed to cut on employees. Those people went to other sectors. This is visible in the entire supply chain of the development process. The construction companies have for example problems in finding employees like bricklayers, but also some materials (window frames) are scarce. The high demand for materials and workforce are resulting in opportunistic behaviour and high prices. The production might increase in the future again, since a lot of production lines are still existing, but just closed. It might be that companies are waiting till they recover their financial losses of the crisis and wait till the prices are reaching an acceptable point or open a line when there is demand for the full capacity of the line. Those mechanisms of gain optimisation and strategic behaviour are everywhere in the supply chain.

Just before the crisis everybody could earn money with development by tying things together. This happened sometimes without much knowledge of real estate. The crisis filtered out the good developers from the bad ones. Developers who were not good in developing or took too much risk became bankrupt. *Kavel Vastgoed* is financed on a healthy way. They had before the crisis also the possibility to finance entire projects for 100 percent with a loan, but they decided to finance parts with own funds. Some developers worked for 100 percent with loans. During the crisis, the banks took over the lead, since it was also a banking crisis. But they act without having the required knowledge of real estate. The developers went bankrupt because of their own ambitions and risks they took to reach their ambitions. Risks were not that much taken into account, due to the growth in the sector of the last decennia.

Nowadays, own funds are needed to execute projects. This is also a development that is visible in the entire supply chain. Banks are less willing to bear too much risk and own funds are needed by developers, but there are also less possibilities for mortgages of home buyers. The mortgage market is being reorganized at the moment. This reorganisation of the mortgage market and the regulations have also influences on the planning of *Kavel Vastgoed*. *Kavel Vastgoed* wanted to put dwellings on the market and finalize the contracts before January, since new regulations got into force. This means that there is demand for dwellings in the end of that year, since they can still apply for the old conditions. On the other hand, *Kavel Vastgoed* is now for one year out of the crisis and it seems like opportunism is getting wide spread already. It is waiting for the next crisis to happen.

Before the crisis municipalities wanted to be in control. During the crisis, they were happy if something got developed, which made them less critical about the plans. This resulted also in bad urban planning and architecture. Peter van Swam experiences that some municipalities are more focused on speed than at the quality of a project at the moment. This might change again in the coming time.

Construction firms and subcontractors have enough work. This results in opportunistic behaviour and less motivation to do everything to get a project. They have full agendas and can ask higher fees for their work than before. The construction firms are less willing to take risks in price increases, so *Kavel Vastgoed* as developer has to bear more risk. Furthermore, it is hard to get suitable workforce for construction firms and subcontractors in the short term. Subcontractors are deciding per project on the basis of profit perspective if they are taking it or not and are less willing to make long term agreements. In a tight market, there is a risk that the subcontractors get too powerful if you work with fixed partners and that a too high price has to be paid. Chain partners and co-creation are fancy often mentioned terms, but in reality, often meaningless. Sometimes agreements for several years are signed between parties. But in the end a lot of parties are choosing the projects with the highest profit despite the agreements they made.

## The Market for Owner-Occupied Dwellings After the Crisis

Peter van Swam does not have a lot of experience with the new Crisis and Recovery Act, he always managed the processes that there was no need to use it.

It is hard to say something about the available plan capacity, because of the macro-level. He read that 200,000 dwellings are needed in the coming years, but he would not be able to point out on the map where this should be realised. But this task to increase the housing stock is spread out over time and different locations. The municipality of The Hague is for example working to redevelop the Binckhorst district and they have a lot of empty old governmental offices, which they can turn into residential. So, their focus is on brownfields and the transformation of the existing urban areas.

### Case

The project Gouden Buurten in Lansingerland is an important project for *Kavel Vastgoed*. In this project 3,000 dwellings are getting developed together with *Amvest* according to a concession model. Some land positions were taken after the former minister published the Vinex plans. The Pre-emption Act (*Wet voorkeursrecht gemeenten*) was not used that much during that time. Since *Amvest* and *Kavel Vastgoed* both had land positions they start to check if there was a base for cooperation. On the basis of each other's qualities and capacities they decided to team up and go together to the municipality to start the process. The municipality acquired the land that was not taken yet after the consultation with *Amvest* and *Kavel Vastgoed*, to increase their power in the development process. For each subproject agreements are made between all the parties. This concession model is according to theories about cooperation models for spatial development the structure with the least involvement of the municipality. In practise, the municipality and developers need each other, so cooperation is needed in all the cooperation models. This concession model won popularity during the Vinex period. Some municipalities had to add thousands of dwellings to their existing stock, but they were too small to arrange it themselves. *Kavel Vastgoed* was willing to lead the projects under the conditions that they can work under market conform conditions. The municipality is mainly dealing with public law tasks, like zoning plans and granting permits. Also, more regional aspects and goals are pre-financed and developed by the municipality. The land preparation was tendered according to the European standards, since the local government was indirectly involved by getting the land for the public space for a symbolic price.

In the beginning, there were some discussions with the responsible alderman of the merged municipality, since he thought that the former municipality of Berkel en Rodenrijs made wrong agreements for the Gouden Buurten. He was more in favour of the projects within the municipality where the municipality had a larger involvement and responsibility, due to active land policy. Lansingerland was sometimes distrustful to *Kavel Vastgoed*, since they thought *Kavel Vastgoed* had too much power. The crisis showed the advantages of the concession model for the municipality, since the risks and losses are for a large part of the market parties. The municipality had also to deduct the value of positions in this project, but not comparable in total value with other projects within the municipality. *Kavel Vastgoed* has an obligation to put effort in a feasible zoning plan for the municipality. A realisation agreement is made for each subproject, within the framework of an intension agreement.

Four different architecture offices were involved in the first subplan, the Gouden Griffel, and one of them was also in charge of the coordination and the urban planning of the project. Plans of all the architects are implemented in the first phase. The physical development of the project Gouden Buurten started in 2003 with the Gouden Griffel a subproject of 500 dwellings.

The production declined during the crisis. Back then *Kavel Vastgoed* sold and constructed subprojects of 4 houses at the same time. This is slowly increased, first to 10, later 20 and now even

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more. *Kavel Vastgoed* has all the plans, but they need to prepare the soil for the real estate construction.

For the Gouden Podium *Kavel Vastgoed* decided to work with another urban planner and architect, since they construct two projects at the same time and they want to offer different styles in both projects in order to avoid competition against their own project. This was also a process, since first an urban planner had to be selected and later the architects.

*Kavel Vastgoed* asks for proposals from different construction firms. *Van Mierlo* is the preferred construction firm of *Kavel Vastgoed*, since they have a share in *Kavel Vastgoed*. It is a minority share, so *Kavel Vastgoed* asks proposals from other parties too. *Van Mierlo* and *ERA Contour* started together with the first project. At the moment *van Mierlo* is still constructing a subplan and *Riz Bouw* got via a tender selected to construct the Gouden Podium plan.

Peter van Swam does not have too much detailed information about the relation between construction firms and subcontractors. So, it would be better to ask them, but he sees that a lot of people became self-employed during the crisis and that this wave of self-employed workers is still active.

*Kavel Vastgoed* was working with three different real estate brokers. *Kavel Vastgoed* decided in the crisis that they wanted one broker who is working exclusively for us. The amount of transactions decreased and the brokers are working on the basis of percentage fees. *Kavel Vastgoed* does not know if it happened in their case, but they heard stories in the market that brokers suggested projects with higher fees for them to their customers. *Kavel Vastgoed* was afraid that other developers would offer higher percentages and that the brokers would suggest those projects to clients instead of their project. To prevent a competition on the broker fees they decided to ask a broker to work exclusively for *Kavel Vastgoed*. With this system *Kavel Vastgoed* could also give more attention to their clients and they have more control over it. *Kavel Vastgoed* still works with one other real estate agency, but that is more a second string. There are no long-term agreements with the exclusive broker, so *Kavel Vastgoed* is flexible to change or cooperate with other brokers if market circumstances change.

Last year all the agreements are renegotiated with the municipality. Shortages for the municipalities are reduced in this new agreement. *Kavel Vastgoed* and the municipality agreed on a new framework and with this framework they started the production on full speed. The quality of the plan was still maintained.

During the crisis *Kavel Vastgoed* did not give any discounts, what a lot of developers did. They rather wanted to wait and sell the quality they wanted for the price they wanted. Since the crisis is over buyers are acting different. There is more demand than supply. *Kavel Vastgoed* gets more applications than they have dwellings to sell. *Kavel Vastgoed* distributes the dwellings with a lottery system. They decided to do a lottery system instead of granting it to the highest bidder, since that would give more hassle. *Kavel Vastgoed* decreased the time of the option to buy for customers, since there is so much demand. The high demand gives *Kavel Vastgoed* pressure to increase the production, because they do not want that the interested people lose their interest to buy property in the Gouden Buurten. So, for the interested people *Kavel Vastgoed* tries to develop quickly some more buildings if possible. This results in many smaller subprojects.

### Appendix 3.7.

#### Interview 7: Droogers, Jan (Van der Lecq en Droogers)

Interviewees: Jan Droogers (Director)

Organisation: Van der Lecq en Droogers

Interviewer: Cor Bollemeijer

Date: 13 June 2017

Location: Office Van der Lecq en Droogers (Edisonlaan 16, Bleiswijk)

#### Description of Van der Lecq en Drooger.

*Van der Lecq en Droogers* is a local enterprise. They have a construction firm department and also a small development pillar. The development pillar of *Van der Lecq en Droogers* is special due to the small scale. They do not have a lot of managers and other employees. There are three people working for the development and one person in the administration. They work with a small team, which makes them more flexible.

The development pillar is working for the production of the construction firm pillar. In the construction firm pillar are 15 carpenters working. They operate mainly in the municipality Lansingerland and surroundings, since they are not known by other municipalities.

#### Tasks of Jan Droogers

He is director of the firm and is responsible for the project development.

#### Summary of the interview

##### *General*

*Van der Lecq en Droogers* mainly develops at plots that are bought from the municipality and they did not take land positions themselves in the Vinex period. They had the possibility to buy plots, but they informed the municipality and the municipality bought it in the end. That was also during a booming time in the sector, so they tendered the land to a market party. This was common practice before the crisis.

During the crisis, a lot of market parties stopped their development or put their activities on a slower pace. *Van der Lecq en Droogers* had a lot of work during this time, due to the fact that they dared to continue. This also made the team of employees stable during the crisis. They even had to hire more external workforce. This was possible since they had a stable financial situation to develop small projects themselves and for the larger projects they have a financial partner. This financial partner is a personal relation of Jan Droogers.

That the development continued, does not mean that nothing changed. The dwellings were planned with a sales price of 300,000 euro, but are sold at the end for 240,000 euro. The price had to be changed to make them saleable in the market during the crisis.

The market is changing, so the relation between *Van der Lecq en Droogers* and other involved parties are changing too. In the past, the municipality and *Van der Lecq en Droogers* made sometimes direct agreements. Now the crisis is over, the municipality is doing a selection process to sell their land. They are inviting multiple parties in the initial state to come up with plans and to check who is offering the best price for the land. Market parties have to go all the way in quality and price, due to the competition that is organized by the municipality. This is a very time-consuming process. It took the municipality 1,5 years to organize the tender. They should be able to do this a lot faster according to Jan Droogers. *Van der Lecq en Droogers* does not experience the focus by the municipality to speed up the process. The attitude of the municipality did not change a lot. The negotiation takes place

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during the tender and after the tender it is just a matter of executing the plans that are described in the contract. Renegotiation did not take place before, during and after the crisis.

The relation between market parties, changed too. Most of the developers are working differently and are selecting for each project the cheapest subcontractor. The subcontractors are using their power, which is caused by the tight labour market in the construction sector. This results in higher prices or that they are not willing to contract at all, due to full agendas. This results in the fact that some construction firms cannot start new projects anymore due to a lack of employees, available self-employed people and low workforce capacities by subcontractors.

*Van der Lecq en Droogers* is a bit different compared to many other developers, since they did and do always work with fixed subcontractors. They rarely ask a second offer of another company. They just do it if they have the feeling that the price is too high. The fact that *Van der Lecq en Droogers* is working with fixed partners, results in mutual trust between the parties and this pays off in this period of a tight market. The subcontractors are still willing to collaborate with *Van der Lecq en Droogers*. They calculate the increasing market prices, but at least they are willing to work for *Van der Lecq en Droogers*. It is important to be a good employer for the staff to make sure, that they do not start for themselves or go to other companies. This is what *Van der Lecq en Droogers* tries to do and it results in a stable team of employees.

*Van der Lecq en Droogers* prefers not to work with self-employed people. The quality is mostly substandard and they gossip in the building kettle about higher returns on their work by being self-employed. *Van der Lecq en Droogers* prefers to have most of the workforce employed by themselves. This gives more control and security of the availability. However, a disadvantage of employing them is that the government set a lot of rules which makes it hard to decline workforce in case they are not needed anymore or get physical problems.

It is usual in the construction sector that invoices are paid weeks after they are sent out by the subcontractors. Subcontractors are responding on that by sending invoices for different terms and phases of the project to secure their income. It means that a lot of administration has to be done to process all those invoices. *Van der Lecq en Droogers* asks their suppliers to give once or twice per month an invoice. This reduces the workload of the administration to 3,000 invoices on yearly basis. This would be ways higher if all the subcontractors would send more invoices per project and more administrative employees would be needed. In return *Van der Lecq en Droogers* promises to pay the invoices quickly, which is rare practise in the construction sector.

The small internal organisation of *Van der Lecq en Droogers* has many advantages. The flexibility to the subcontractors and personal relation with the subcontractors makes that they are willing to collaborate *Van der Lecq en Droogers*. Costs of the organisation are kept low, compared to the large construction firms which have many managers and other employees, which makes it bureaucratic. At a starting meeting of the municipality the large firms are attending with 8 people, while Jan Droogers is coming alone. The large bureaucratic organisations have more costs of the workforce, but also more mistakes are made during the process. Despite the small organisation, they are still able to develop projects with a reasonable building output. Their largest project that they are developed alone is as large as 115 dwellings.

Collaborating with another developer has the advantage that risks and the needed funds can be shared. But collaborating with another party also leads to discussions, which result in longer decision-making processes. By cooperating with another developer, it is always in the contract that the construction firm pillar of *Van der Lecq en Droogers* is the party that will be contracted for the construction of the project. Once they were collaborating with the municipality and they wanted to

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make a public procurement for the underground parking lot. Luckily in the end it was not needed and the construction firm pillar was allowed to construct the parking lot.

The complexity of the regulations and procedures really depends on the project. Some complex projects are taking years. But if the project is not too complex and the municipality is in favour of it, it can be realized quite quickly. *Van der Lecq en Droogers* bought one piece of land before the crisis and reached an agreement with the municipality how to develop it. This was cancelled due to the crisis. Now that the crisis is over the municipality prioritizes the project on other plots, since they are owned by the municipality itself. The municipality wants to recover their investment in the land position. There is a conflict in the aspect that they are the regulator and a market party.

### Case

There is two or three times a year a meeting between the developers and the municipality. The large developers, but also the small developers out of the region are invited to discuss about the future plans. All the parties are focussed on dwellings for first-time buyers. Jan Droogers thought there was more demand for semi-detached houses and wanted to realize those dwellings.

The project in the Meerpolder, between the Oostmeerlaan and Meerweg, started in the crisis. Jan Droogers went to the responsible alderman of the municipality (the landowner) to show his interest and offered a price for the land. Then negotiations started about a price. Due to the crisis, there were no other interested parties, but the municipality had to check if it is a market conform price. They are very careful with that. At one moment *Van der Lecq en Droogers* reached a final agreement with the municipality about the price. The municipality had to deduct the value of the land for the first phase, since they bought it before the crisis for a higher price. For the second phase *Van der Lecq en Droogers* managed to make a direct agreement with the municipality too, but this was the last time. A turning point was reached by the municipality due to the favourable conditions of the market, which resulted in the policy that the projects had to be tendered from then on.

Jan Droogers of *Van der Lecq en Droogers* was not aware that there was made use of the new Land Development Act by the municipality. He knew that other development was desired by the municipality in the initial state, but after negotiations the municipality allowed to develop the semi-detached dwellings according to the plan of *Van der Lecq en Droogers*. There was also negotiation space for the land price. So, the housing programmes and the land prices that are given in the Land Development Act are not fixed at all.

### Future

Jan Droogers thinks it is hard to say anything about the future. All the prognoses about the needed new dwellings seems to be so high. When he hears that 80,000 new dwellings are needed he cannot imagine who is going to live in all those new dwellings.

He does not think that new Vinex-like locations need to be assigned. The prices of the construction workers and building suppliers are rising so fast at the moment. We are building a bubble and it is waiting for the next crisis to happen. Those price increases are not just on paper, but also something that Jan Droogers experiences in real-life. The building costs of the new identical semi-detached dwellings are significant more expensive in the construction costs as the project with the same dwellings realized a year ago. *Van der Lecq en Droogers* also had to pay more for the land to the municipality, so they do not profit from the price increase of the dwellings.

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Jan Droogers does not see an advantage in involving a developer in the process. They just take a margin of the profit and the municipality can also do that task by tendering construction tasks. They can make more profit with it.

### Appendix 3.8.

#### Interview 8: Weerd, Pieter (Riz Bouw)

Interviewees: Pieter Weerd (Director)

Organisation: Riz Bouw

Interviewer: Cor Bollemeijer

Date: 14 June 2017

Location: Office Riz Bouw (Einsteinweg 37, IJsselstein)

#### Description of Riz Bouw

*Riz bouw* is a family company founded 55 years ago. They specialised themselves in single family dwellings, so they do not build offices, schools and factories. High-rise residential is also not their speciality. They are used to work at a serial project base and are not working for small scale private customers. *Riz bouw* is mainly active in the region of maximum one hour driving distance of their office in IJsselstijn and this is also where most of the development takes place at the moment. They cooperate mainly with the same clients, those are developers, investors and also social housing associations.

*Riz bouw* has also a subsidiary company that is focused on acquiring land positions. This is done to guarantee production possibilities for the future of *Riz bouw*. They are always collaborating with a developer once they acquired a position and the plot has to get developed. They do not want to do the development themselves, because they see themselves as a construction company.

They have a workforce of 40 employees at the moment. Most of them are at the construction site. 10 of them are construction workers. This is too less to realize the more or less 200 dwellings they deliver each year, so they also subcontract a lot of work. The subcontractors are hiring again external workforces, who are often self-employed.

#### Tasks of Pieter Weerd

Pieter Weerd is financial and commercial director of *Riz bouw*, which makes him responsible for acquisition of the projects and outsourcing of tasks. His colleague, the technical director, is taking over the project once the project is contracted.

#### Summary of the interview

##### *General*

At the moment, there is a really strange situation, since everybody in the residential construction sector agreed in the crisis that we will not experience the same situation as before the crisis in the future. But now it looks like even more extreme as in 2008. Large projects are starting and they are easy to sell and the prices are rising fast again.

There are more factors than demand and supply in the real estate development sector. Politics are playing an important role too. Before the crisis, we got the Vinex locations assigned and there we could produce relatively easy and with a high speed. Those places are developed and the politics changed their vision to production within the existing urban areas. This brings additional costs with the development, since existing real estate has to be demolished and often soil contamination has to be cleaned. Furthermore, there are more involved parties, like neighbours, with the right to appeal. More plans and procedures are needed, like traffic and sound plans. This makes the preparation time ways longer compared to the Vinex projects. There is possibly enough plan capacity within the existing urban areas, but longer lead times should be taken into account. This means that twice as much effort should be done to reach the same building output compared too greenfield locations. In most of the regions it is unlikely that large greenfields will get assigned for development. This has mainly to do



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with politics. Maybe in regions with a really high pressure like Amsterdam some greenfields will be assigned if there is enough political support.

Before the crisis there were building outputs of 70,000 to 75,000 on yearly basis. This is 45,000 at the moment and we will reach the 50,000 this year, while there is a demand for 80,000. This gap between the demand and supply is being built up and adds up to the existing gap each year.

The developers changed a lot if we compare the situation from before, during and after the crisis. Before the crisis there were basically two different ways to get projects. The first way, were projects that were offered directly to *Riz bouw* by partners, which were satisfied about them by previous collaborations. The second way were projects where the client asked prices to several construction firms to pick the best deal. Both of the ways were working for *Riz bouw*, since they could also offer reasonable prices by tenders.

The amount of residential real estate development projects decreased during the crisis. This has two reasons. The first one was the lack of demand for new dwellings, which made the developers reduce the development outputs. The second reason was the lack of demand from social housing associations, due to market circumstances and changed regulations. This decreased level of building demand, made the developers more powerful and gave them a position that they could contract construction firms for better prices. *Riz bouw* could lower the prices by asking their suppliers and subcontractors to find solutions to cut costs as well, so that they stay attractive for the final clients and survive the crisis, together. *Riz bouw* went proactive to the clients with the lower prices, which made the clients prioritize the projects of *Riz bouw* above other projects. The reduction in the amount of work and the lower prices resulted in the need to reduce in the number of employees.

After the crisis the workload for construction firms increased again. New people were hired by the construction firms. This was manageable in the beginning, but it was getting harder and harder to find suitable employees. Everybody sees that the market is growing again and tries to acquire a piece of the gains that the market has to offer. For a project, a lot of work is getting subcontracted, but the subcontractors are also finding their limits and are subcontracting and collaborating with self-employed people. Here is at the moment the bottleneck, there are simply not enough people available. Every construction firm and subcontractor is trying to get the few available bricklayers, tilers, plumbers and other workers with heavy physical involvement. This lack is caused by two reasons. On one hand, the huge amount of workforce that was flowing out of the sector during the crisis found jobs in other sectors and they do not want to return to the construction sector. They are satisfied with their new positions. On the other hand, there are also not a lot of young people willing to become active in the physical building industry. So, the problem will increase in the future, since the active people are getting older in average.

The situation of the lack of construction workers shifted the power balances in the supply chain. In the past, especially during the crisis, the hierarchy was organized as following: the developer at the top of the chain, followed by the constructions firms and the subcontractors at the end of the chain. The developers were able to select the construction firms and set conditions for it and the construction firms were able to choose the subcontractors. Now the construction workers can basically select the project they want to work for, because of the tight labour market for construction workers. This selection is, on one hand, based on prices, but also relations that were built up in the past are important. *Riz Bouw* prefers to work for developers that were also providing work to them during the crisis. They also see that their subcontractors are still willing to collaborate with them, because *Riz Bouw* was helping them through the crisis.

*Riz Bouw* has the advantage of the trust that they created by taking initiative during the crisis by collaborating and finding solutions with the subcontractors to maintain an attractive price level, which resulted in work during the crisis. This makes them willing to work for *Riz Bouw* in times of a

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tight market without misusing their power. There is a large social factor for the subcontractors and self-employed workers. They mostly do not select simply the project with the highest revenues for them. Next to the social aspect are also reliability and punctuality important aspects. *Riz Bouw* is always paying their subcontractors on time, which is appreciated by the subcontractors. The crisis was a time that subcontractors and self-employed workers were financially forced to take all the projects they could get. They discovered that not all the construction firms were that reliable as *Riz Bouw*. This makes them faithful to *Riz Bouw* even if other construction firms are paying more. It is clear for everybody in the supply chain that all the involved parties have to make some profit and seeking for the optimal distribution of the available margin under the involved parties is the game. Construction firms have to look into other options if subcontractors are asking too high prices.

Some materials are quite stable in price and for other materials the prices are fluctuating extremely. Wood is for example quite stable, since it is not solely dependent on the building industry, but also used in large amounts in other industries like the paper industry. This makes the price more stable. There are also many stone like materials where there is a world market instead of a local market.

For glass and concrete it is different. Those markets are more local and quite some production lines have been closed down during the crisis. This resulted in scarcity and waiting times. This resulted in prices that did not decrease too much during the crisis and it resulted in the ability to upscale the production now that the crisis is over. Before the crisis, a lot of prefab concrete elements were directly available, but this is not the case anymore. Everything is getting produced by order. Stocks are reduced and JIT (Just In Time) deliveries are introduced, since maintaining a stock costs money. However, it is always a trade-off. Sometimes small stocks are desired, in cases where the effect of a delayed JIT delivery results in high costs and delays. In practice, this means that thinking ahead is required, since everything must be ordered in time. There are also other materials getting harder to obtain like rigid foam insulation. Often there are substitutes to replace those materials.

Next to the lack of available workforce and some materials, there is another issue. There is also a lack of equipment. There are, for example, too less pile drivers, this causes a delay for some projects. A today's reservation for pile activities, can take up to 16 weeks before the pile drivers are available. It is not just a matter of purchasing more pile drivers, since there are also people needed to control the machines. Companies are also hesitant, since they are not sure if this is a temporary high demand because of all the collected demand in the crisis or that it is an ongoing process. The crisis is still too fresh to take large risks.

It is important to find alternatives if scarcity is a factor. This counts for materials, but also for workforce. This means that *Riz Bouw* prefers to work with prefab elements, to make less people at the construction site required. This prefab innovation is on one hand to speed up the process and on the other hand with an eye on the future. It is expected that less and less people are willing to work at construction sites. In the end, it is the developer who decides, if prefab technology is accepted, but if *Riz Bouw* has a saying in it, they prefer to work with the prefab elements. In the factories there are still employees available, better work circumstances and conditional environments are possible. However, repetition is required to recover the setup costs for the production of the elements. The flexibility of projects with prefab elements is also reduced. This makes that prefab is suitable for serial building projects for social housing associations, first-time buyers and maybe one segment higher.

It is important that parties fit together in the cooperation, so that there is a cultural match between the different companies. *Riz Bouw* prefers to work for developers who have knowledge about the building sector. And *Riz Bouw* subcontracts to parties that are matching with their company culture.

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*Riz Bouw* prefers to work with short lines of communication and with reliable partners rather than with elaborated contracts. Some subcontractors are bureaucratic themselves and they might cooperate better with large contactors and developers like *Bouwfonds* instead of *Riz Bouw*.

### Case

In the past *Riz Bouw* realised dwellings for *Amvest*. *Riz Bouw* contacted *Amvest* with the question if they have interesting projects that have to be realized for them, which resulted in the offer to participate together with two or three other parties in a tender for the realization of Gouden Podium. Price was playing a role in the tender, but also presentation and vision. The weighting of the different factors is not known by the participants of the tender.

*Riz bouw* won this tender. This means that they will realize the first subproject of the Gouden Podium and there is an intention that also the four next subprojects will be constructed by *Riz bouw* after some market conform corrections of the prices and conditions. *Riz bouw* is contracting their subcontractors with the same conditions. They make fixed agreements for the first subproject and after that market conform correction will be accepted. The subcontractors are making most likely also agreements with their suppliers and external workforce about fixed prices for the project. Flexible and fixed agreements in contracts are going through the entire supply chain.

After those subprojects, the developer will take a look how to proceed further. This might be a direct agreement with *Riz bouw* or another party or a new tender. *Ontwikkelcombinatie Westpolder/Bolwerk* is the official client of *Riz Bouw* for the project Gouden Podium in the Gouden Buurten. It is a cooperation between *Amvest* and *Kavel Vastgoed*.

### Future

It is an exciting time, since it is not sure if the high demand will continue or if it is a temporary state due to the collected demand in the crisis. If the demand will reduce a bit it is not necessarily bad, maybe some rest will return to the market.

Quality is an important aspect in the industry. In the past, there were supervisors from the developers present at the construction site to check the quality. A lot of the practical knowledge of the developers is lost in the crisis and is not being built up again by hiring new people. The quality insurance is now more the responsibility of the construction firm instead of the developer. Also, the government shifts the attention from checking the quality of the construction to alternative quality assurance systems where the construction firms must check themselves. The construction firms are still a bit seeking to find ways in this.

The development of self-control and ensuring the quality, in combination with a lack of available construction workers will most likely result in more prefabrication in the future. It is easier to check in the factory if the elements are according to the desired standards. The only check at the construction site is then if they are assembled well. This is better to organize than when everything is built at the construction site, since in the latter, there are more people and more parts involved.

Most of the innovation in the construction sector is driven by external factors like governmental regulations (environment) or practical problems (a lack of materials/people). This is different compared to the car industry, where innovation is driven by satisfying customers.

The construction sector follows the ideas that are coming out of the phases before. The developer is the initiator and starts the process. Together with architects and an urban planner the ideas get shaped on paper. The construction firms are following and just executing the ideas of the previous mentioned parties. This means that construction firms do not have a large saying in the options that are available for the customers. There was never really a breakthrough in providing many options, since this is not in the interest of the developer. In the end, profit has to be gained on the land. Developers are providing enough options to sell all the dwellings, but not much more. In the

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crisis, there were good initiatives of more tailor-made buildings, but now the market is booming again all the initiatives are disappearing. The power that customers had during the crisis decreased in the market with a high demand and low supply. Construction firms are also not spending a lot of money on research and development, since the margins are small and it is relatively easy to enter the construction market and to apply the innovations of the other construction firms. This reduces the willingness and need to invest in innovation.

Another development in the industry is that more and more construction firms are adapting the 'lean' principle. This is working on project base, but can also have a negative influence on the market as a whole. An example is the flooring. Most construction firms want to do the flooring on Friday, so that it can dry in the weekends. This is working on project base, but has a huge impact at the flooring companies. They have a lot of work on Fridays and empty agendas the rest of the week. If they start to apply price differentiation for the most wanted days it might be not that 'lean' anymore to construct always the floor on Fridays. All the decisions have a complex impact on the market.

### Appendix 3.9.

#### Interview 9: Paalvast, Michel (Van Mierlo)

Interviewees: Michel Paalvast (Business manager)

Organisation: Van Mierlo

Interviewer: Cor Bollemeijer

Date: 30 June 2017

Location: Gouden Buurten information centre (Westerpolderstraat 2G, Berkel en Rodenrijs)

#### Description of Van Mierlo

*Van Mierlo* is a family company founded in 1929. They are focused on the development and construction of dwellings, but *Van Mierlo* realised also commercial and public real estate. They work according to the modern standards by adapting Lean concepts, BIM & Revit in their way of working.

#### Tasks of Michel Paalvast

Michel Paalvast is business manager of *Van Mierlo*.

#### Summary of the interview

##### *General*

There is a gap between demand and supply of new owner-occupied dwellings, since there is a mismatch of what the market wants and the political vision. Most home buyers want single family housing, but there is a lot of land needed to produce all the single-family dwellings. The vision of the politics is to build dense in already existing urban areas. Market parties are willing to acquire land positions to develop, but changes in the zoning plans are often not supported by the municipality to enable development.

The fact that the municipalities changed to a more passive attitude in the land development, should not be a problem. There is enough knowledge by market parties to take this responsibility over and they are eager to do so. The problem is that there is too less supply of land where development is possible. It is an important task of the municipality to control the growth and development of the city and they can do that with the zoning plan. It is always a hard point of discussion to transform green into urban areas. However, more land is needed if the goal is to add 70,000 up to 100,000 new dwellings to the existing stock. Every building needs land. Maybe a part can be done within existing urban areas, by for example transforming offices. But greenfield locations are certainly needed too.

The qualitative mismatch between what the potential buyers want and the governmental policies results in prices that are driven up at the market. The connection between the production costs of a dwelling and the market price is getting detached, which results in a new real estate bubble. This is not considered as a large problem by the buyers at the moment, due to the low interest rate. Problems might arise for those people who lock their interest rate for a short term and the interest rates are increasing. Luckily it is nowadays mandatory to amortise a part of the mortgage each month, this reduces the risk.

Municipalities are in general willing to enable development, but the political aspect is important, too. The politicians want to be remembered as the one who finds the right balance between green and new development and not as the one who fills up the greenspaces with buildings. This political aspect is especially notable just before the elections. They are more careful in granting permissions and changing zoning plans, since they do not want to lose votes.

The national government is not giving direction in urban development at the moment. During the crisis, they were quite defensive and at the moment a new alliance for the central government is

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getting negotiated. Maybe more direction will be given by the national government when an alliance is formed. The direction that will be taken depends of course also on the parties that are participating in the alliance.

A lot has changed for the market parties. There are huge shortages of construction workers. There are examples in the market that projects get three to four months delayed, since there are no available bricklayers. A lot of construction companies cut their workforce during the crisis. Some people went to other sectors and other people became self-employed. This resulted in a huge increase in self-employed workforce which is still present in the market. They see that the market is getting more favourable and are not willing to get employed anymore, since they can get higher profits by being self-employed in this market. The self-employed people that had to work during the crisis for lower returns are now willing to change to other clients, who are paying more. This move to another client is easily done for self-employed people, compared to workers who are employed by the company.

Subcontractors are just willing to contract for the short term, due to the uncertainty of prices and employees. *Van Mierlo* tried to contract subcontractors for a project of 400 dwellings, but they were not willing to sign for a commitment for more than 100 dwellings, due to the lack of own employees and the uncertainty that comes with self-employed workforce. The lack of construction workers is larger compared to the situation before the crisis. It is partly because of the outflow during the crisis, but also young people do not want to start a profession of a construction worker anymore. The challenge in finding enough construction workers results in the fact that sometimes the construction workers are more expensive than what is calculated to the client. Jobs have to be done and as a construction company you should take the loss at some parts and hopefully other parts are compensating this loss. At the moment, the subcontractors have the power in setting the prices. Within the same project there are price differences for bricklayers of 20 percent. That are the same bricklayers, but the phase started a bit later, so the negotiation moment was a bit later for that subproject. This increase was unexpected, so it is not calculated by the client.

There is not just a bottleneck at the available construction workers, but also a lot of production lines for construction supplies were closed during the crisis. The total production capacity is lower compared to before the crisis. This results in waiting times for some supplies, like piles has a delivery time between the 14 and 20 weeks. The factories are waiting with reopening the production lines and increasing the output till the prices are at a higher level, due to the scarcity. The price of piles raised by 20 percent compared to the price in the crisis.

It is important to inform all the subcontractors on time about the plans for the coming time, since supplies and people need to be allocated to the project. A good planning is more important than before to avoid delays in the process.

The prices of the construction firms are raising with a slower pace than the market price of the dwellings. Construction firms are always a bit behind, since they want to offer a good price in tenders. This is needed due to the organised competition. This competition decreased a bit over time. It was common that 8 or 9 parties were participating in a tender during the crisis. This is getting less. At this moment *Van Mierlo* is not making the calculations for all the invitations for tenders, because it is expensive (+/- €25,000) to calculate the costs of an entire project. An important decision criterium is the amount of invited parties. In projects where more parties are participating the chance for winning and recovering the calculation costs is smaller. For some projects, none of the invited construction firms are willing to make calculations. One to one negotiations will become more common again to come to a contract.

*Van Mierlo* is not involved in the Gouden Podium project. This is a choice of *Kavel Vastgoed*. This is favourable for both parties, since it is important for *Kavel Vastgoed* that they work with more

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construction firms to avoid dependencies. Also, *Van Mierlo* has advantages of working for different developers, so that they are known by more clients. *Van Mierlo* has a share in *Kavel Vastgoed*, but they still have to compete on price like *Van Mierlo* has to do by other developers. The beginning phase of the project is a bit different, since *Van Mierlo* is also taking development tasks from of *Kavel Vastgoed*, once they have the intention to collaborate.

*Van Mierlo* has the advantage that they have a good relationship with their subcontractors. During the crisis, they were always reliable and paid within the agreed terms. This was not what all the other construction firms did. The payments of invoices are an issue in the building industry. It also happens that the payment terms are starting from the first of the month by large construction firms like *BAM*. This means that if an invoice with a payment term of 60 days is send to the construction firm, it will be paid almost three months later.

The subcontractors are now more willing to collaborate with *Van Mierlo*, since they are reliable with paying and did not misuse their power in the crisis, than with other companies that were less reliable. There are more factors than just the profit, that subcontractors and self-employed people take into account by selecting their project. The payment terms and conditions, cooperation and not misusing power are important components as well.

*Van Mierlo* had to decrease in number of employees as well during the crisis. But this is already built up again with mainly young people that have experience with the technology of today. *Van Mierlo* does not have too many problems with getting new employees, there is a tendency that people want to work for smaller companies where they know the people from the management and not for large multinationals where they are just a number. The large need for new employees is also noticed by the new employees. During job interviews they dare to negotiate about better conditions, like a lease car. This did not happen during the crisis.

The number of subcontractors that is collaborating with *Van Mierlo* did not change a lot compared to during the crisis or before the crisis. *Van Mierlo* has and always had the policy to work with more subcontractors to reduce the risk. If one party gets into trouble there are always other subcontractors to take over the jobs.

For the completion tasks *Van Mierlo* has mostly year contracts. This means that they have a contract for the flooring systems, indoor frames, inside doors and the not bearing indoor walls. With those elements *Van Mierlo* is collaborating with a single party, by means of a year contract. A year is the longest contract period *Van Mierlo* uses. They make the contracts, since those are homogeneous products, which are the same for each project. It costs too much time to make every time new agreements about this. For more heterogeneous products and services, like bricklaying, which is possible in different compositions, it is not working to make year contracts, since it is different for each dwelling or project.

An increase in the construction time is not always desired. Customers for owner-occupied dwellings are fine with the fact that the construction takes some time. They like to follow the construction process and it gives them also time to make decisions about furniture and other interior choices. For housing associations and investors, it is another case, they prefer to speed up the process to capture the rent faster. There are two decision moments during the construction phase. In the beginning the customers have to decide which large options they want, like expansions at the dwellings and changes in the frames. This should be done early in the process, because of the delivery time of the needed supplies. Later in the construction process there is a second decision moment where the customers have to decide about things like the colour of tiles.

## The Market for Owner-Occupied Dwellings After the Crisis

A dwelling is for most of the people one of the largest purchases they do in their life. This makes them quite critical about the dwelling. The construction sector became more client orientated during the crisis. It was in the past possible to sell the dwelling to another customer if the first one does not want the dwelling as planned. Due to the lack of customers during the crisis it became necessary to listen more to the demands and desires of the customers, since the clients were not waiting in line anymore. This trend of more customer orientated working and more choice freedom for the customer is still present in the way of working now that the crisis is over. This will also slowly turn again if the demand for new dwellings stays high. There are now already companies who were more customer orientated during the crisis, but changed back to the old situation. Other construction firms are trying to keep the service level that they developed during the crisis. *Van Mierlo* tries to keep up the service level by hiring a lot of young employees. Young people are thinking rather in options and challenges than risks. Also, the new (3D) software gives more possibilities in the future.

### *Case*

The Gouden Griffel was the first project of the Gouden Buurten. It is developed by the development combination owned by *Amvest* and *Kavel Vastgoed*. *ERA Contour* and *Van Mierlo* were contracted by the developers as the construction firms. A plan is made upfront about which part had to be constructed by *Van Mierlo* and which part had to be constructed by *ERA Contour*. The constructor is already involved in an early stage of the project, since the construction firm has to check the plans of the architect. The constructors are involved early since it is up to the them to correct mistakes if it turns out that there are construction mistakes. After the plans were ready the negotiations between the developer and the construction firms about the prices started. The development combination made an agreement with *Van Mierlo* and another one with *ERA Contour* for different parts of the project.

### *Future*

A lot of market parties are discovering that it does not make sense to contract more work than they can handle. The turnover will increase, but the profit will stay more or less at the same level, since they have to higher external workforce. This means that a lot of market parties are going to reject projects, since they already deal with full agendas. It will happen that construction firms will reject projects of developers and also that subcontractors are not willing to contract the construction firms. *Van Mierlo* is only participating in projects, which they are sure that they can execute successfully.

The lack of construction workers will most likely be solved by the market. In the past, we had a lot of Polish people working in the construction sector. Most of them went back to Poland, since the economy there became stronger as well. There might come construction workers from other countries when the wages for construction workers are getting high enough in the Netherlands. Not all the regions are used to work with bricks. The construction industry has to find also other building methods to deal with the changed circumstances. This might be partly in innovations and the use of more prefabricated elements.

The investment in the new technology is important for *Van Mierlo*, even if it costs money to use this software, instead of saving money with it at the moment. It is the vision of *Van Mierlo* that innovation is needed to stay interesting enough for employees to work for the company and it takes also time for all the employees to get used to the new ways of working. A risk is that other companies are offering higher salaries and are buying the good employees away in which *Van Mierlo* invested by training and education. The employees of *Van Mierlo* are getting offers, but the offers are not interesting enough to leave the company. *Van Mierlo* is paying market conform, there are good social contacts, freedom



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in work and there is a good vibe. This is till now enough for the employees to not respond on those external offers.

Innovation takes also place at the construction site. *Van Mierlo* is experimenting with a digital delivery of the project. This means that the supervisors are walking with a tablet trough the buildings and take pictures and they are able to send it directly to the subcontractors. For them it is clearer what should be improved and where it should be improved. In the past, this happened with pen and paper in the building kettle, which resulted in more mistakes in the communication.

Greenfield locations of the size that were developed during the Vinex period will most likely not happen anymore, but on a smaller scale greenfields will be assigned for development. The smaller urban cores of the municipalities, next to the large cities are also growing and coming closer and closer to the cities. It is a logical development that for example greenhouses next to the existing urban areas have to make place for residential development, due to the high demand for dwellings.

The development at greenfields will be a more organic process rather than a large project as we saw in the past. This is also partly caused by the fact that it will be more market driven. The first condition is that the actual owners, mostly farmers, are willing to sell their land. Municipalities are not using their Expropriation power at the moment. The municipality should also be in favour of the plans and change the zoning plan to enable the project. It is the task of the developer to find positions that are fulfilling both of the previously mentioned conditions.

Appendix 3: Organisation Structures of the Cases

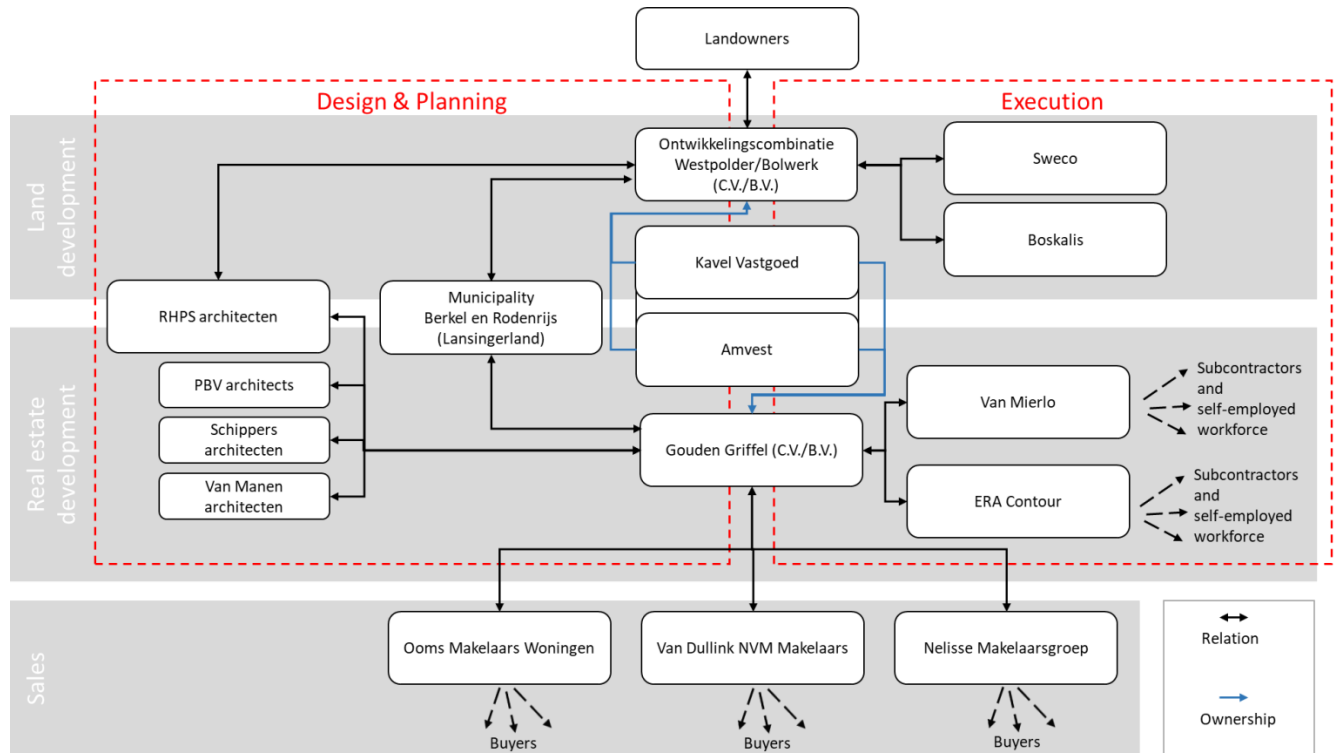


Figure 37: Organisation structure of the development of the Gouden Griffel (Case T=1)

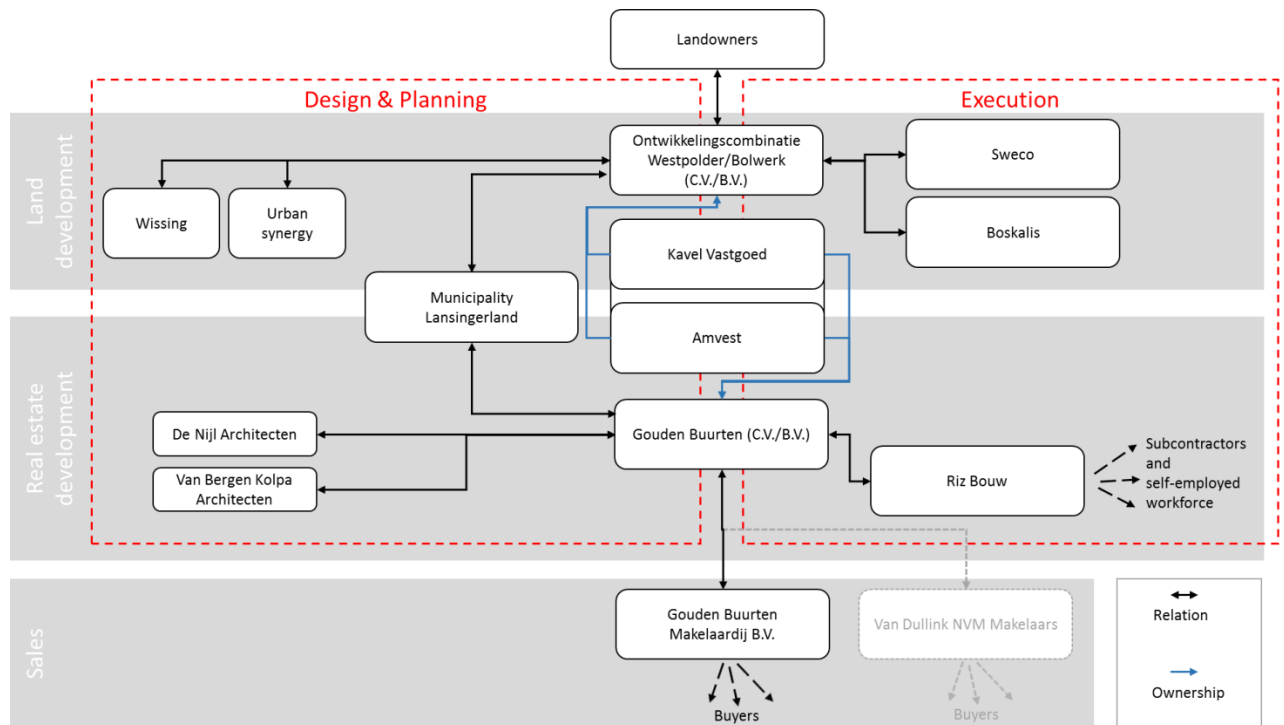


Figure 38: Organisation structure of the development of the Gouden Podium (Case T=2a)

## Appendix 4: Scientific Article

# Reinventing the governance structure at the construction market for owner-occupied dwellings after the crisis

Cor Bollemeijer, TU Delft

### Abstract

Traditional neo-classical economic theories are failing to explain the current situation in the Dutch housing market. There is a high demand for newly built owner-occupied dwellings, but the production is not increasing as quickly as expected. New Institutional Economics is offering explanations for this situation. The institutions in the development sector changed during the real estate crisis, which caused a disruption of the governance structures. There are still thresholds, even in this favourable time, to form new development alliances. Those thresholds are caused by several reasons, like financing issues, capacity problems and an increased risk awareness of all the involved parties. Relations should be reinvented, and incentives for market parties should be created to invest early in the development process.

**Keywords:** Dutch Housing Market, Housing Production, Housing Systems, Mismatch, New Institutional Economics, Real Estate Crisis, Williamson's Four-Layer Model

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### 1. Introduction

The production of owner-occupied dwellings is not aligned with the current demand. The production of owner-occupied dwellings decreased during the real estate crisis as a logical consequence of the lack of demand (Statistics Netherlands [CBS], 2017). The real estate crisis has been over for some years and the demand for housing increased significantly, but the production never reached the same level as before the crisis (Statistics Netherlands [CBS], 2017). This has caused shortages of dwellings, which increased the prices of real estate significantly. The desired amount of new constructed dwellings is 35,000 too few on annual basis, considering the actual demand, this situation has already resulted in a shortage of 200,000 dwellings in 2016 (Drissen, 2016). This shortage is likely to increase even further in the coming years, due

to the demographic development and the lack of new initiatives for development projects.

It is usual that the construction of real estate follows the economic trends with a delay of two to three years compared to the general economic trends (de Wildt, Keers et al., 2005), but the common and expectable delay has already been exceeded some years ago. The high demand for residential real estate makes the pressure on the real estate market very high in the popular regions of the Netherlands, which results in fast increasing prices of dwellings. This extreme growth in sales prices has already been noticed in almost all the Dutch regions in the middle of 2017 (CALCASA, 2017).

DiPasquale and Wheaton (1992) described that the price will rise in the short term in case of a high demand for dwellings, but will fall

back into its equilibrium, since the quantity of the supply will rise in the longer run as well by means of new production. This is a neo-classical economic approach and does not seem to have enough explanatory power to describe the actual situation on the Dutch housing market. This neo-classical approach considers transactions to be frictionless and assumes that all the required information is freely available to all the players, which is certainly not the case in the real estate development sector (Buitelaar, 2004).

The New Institutional Economics places this approach in a wider framework which enables more insights into the functioning of the market. This theory deals with transaction costs and is focused on the governance structures and the costs that are related to run the system. The production chain of owner-occupied dwellings will be assessed with this theory and compared to the pre-crisis situation.

First of all, an introduction to the Dutch housing market will be given, since this is a very complex system compared to many other markets. After that, there are two sections of theory. First, an introduction is given in section 3 to New Institutional Economics, the theory that is used to analyse the Dutch housing market, and after that, more information is given about intertemporal analysis in section 4.

The important institutional changes in the different institutional layers of Williamson are subsequently given in sections 5, 6, 7 and 8. The general trends which are described for each layer of Williamson's model will be verified with a small case study in the municipality of Lansingerland in section 9. Following that, a description about why a higher number of development alliances fail to emerge is given in section 10. In section 11 is focused on the risk aversion of the involved parties and how this risk allocation has an influence on the governance structure.

In the final section of the article (12), a conclusion of the observations is given and possible solutions to make the governance

structures more efficient and increase the number of development alliances and building output.

### 2. The Dutch housing market

A housing market has many different characteristics compared to a perfect regular market, which is assumed to be the case in neo-classical theories. Examples of the assumptions for a perfect market are: A large number of players on both sides (demanders and suppliers), homogeneous products, no governmental intervention, every actor aiming for profit maximisation and perfect information about the present and future is available to all the parties involved (Koutsoyiannis, 1979). This is certainly not the case in housing markets (Kiel & Zabel, 2008; Priemus, 2000a).

The market forces in the Dutch housing market are disrupted, since there is a lot of government intervention in the entire supply chain of residential real estate development; there are actors who have more power than others and there are also social organisations, which are not aiming for profit maximization, active on the Dutch housing market (Haffner & van Dam, 2011). Those are just two examples of the many disruptions of the housing market.

One of the important governmental interventions in the market is zoning. Zoning is a widely used tool to control land use and is applied in almost every country (Lai, 1994). The use of zoning or other control mechanisms results in limitations in the availability of building land (Barker, 2004), which is one of the most important resources for real estate development.

The Dutch housing market is characterized by its structure as a stock market. The new construction of dwellings do add not more than 1.5 percent per year to the existing housing stock in times with a good production rate (Priemus, 2000b; Verhoeven, Knops et al., 2013). This makes it impossible to adjust the supply fully to the demand (Sociaal-

Economische Raad, 2000). This inflexibility in the adjustment of the construction to the demand is reinforced by constraints in the land supply due to governmental policy and zoning plans (Barker, 2004). The large scale of the land-development projects and the interconnectedness between the actors created a closely intertwined system, which means that a shock in one part of the system has fundamental influences on the entire system (Buitelaar & Bregman, 2016).

The production of dwellings is not one simple market, but a complex network of many actors, and the development chain is an assembly of different markets, such the land, financial and real estate markets (van der Schaar, 2006).

DiPasquale (1999) recognised the lack of explanatory power of macro-economic, neo-classical theories to explain the development on the housing market (DiPasquale, 1999). She suggests doing research on micro-level and taking the builder, investor or landlord as units of analysis to understand the decision-making process and the outcomes of the housing market. This is done in this article by using the New Institutional Economics theory and taking the four-layer model of Williamson as a framework.

### 3. New Institutional Economics

Coase (1937) was a pioneer in the New Institutional Economics stream, but it was Williamson who gave more theoretical and methodological foundation to this theory by introducing the four-layer model (see figure 1).

Williamson (1998) describes four different layers of institutions, namely: Embeddedness, Institutional Environment, Governance and Resource Allocation and Employment. The institutions in the different layers have, according to Williamson (1998), different origins, but interact and influence each other. The arrows in Figure 1 show the interactions between the different layers. However, even though Williamson shows only

the interaction between the levels directly bordering each other, he admits that in reality the system is fully interconnected (Williamson, 1998).

The first layer of institutions, the Embeddedness layer, are the informal institutions. This is the research area of economic historians and social scientists (Nee & Ingram, 1998).

New Institutional Economics and Transaction Cost Economics focus on the second and third level of institutions, the Institutional Environment and the governance structures (Nielsen, 2009). Transaction costs are: all the costs that are made and time that is invested to develop and enforce the plans, contracts and agreements. This includes communication and research that is done in order to conclude those documents. Those costs are in the development process of owner-occupied dwellings made by market parties as well as by governments. Transaction costs are basically the costs of maintaining the governance structure. The governance structure with the lowest of transaction costs will generally emerge.

Price and output are the most important decision variables in the fourth layer of Williamson's model. The neo-classical economists do research in this area (Williamson, 1998). This layer is adjusting in a continuous way to the actual circumstances.

The institutions in the different layers can be influenced by institutional change in the other layers. Legislation is based on cultural beliefs, but it can also influence the culture and norms of society, so here is an example of a mutual relation between the Embeddedness and the Institutional Environment layer. Legislation determines the position of (public) actors and influences thus, the governance structures. The Governance layer influences the way in which organisations allocate their workforce and other resources. These were just some examples of how the different layers interact

from the numerous interactions existing in real life.

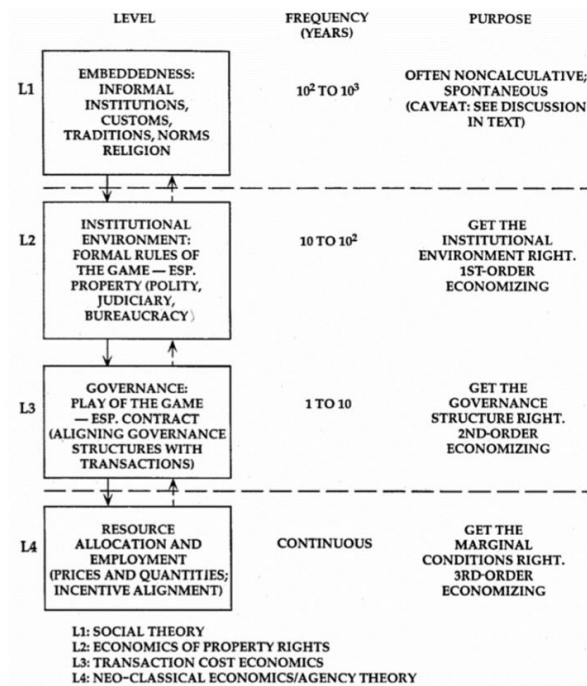


Figure 1: The four-layer model (Williamson, 1998)

#### 4. Intertemporal analysis

Williamson received criticism that his four-layer framework does not take the dynamics of real life into account, but Williamson (1991) defends his framework against this criticism by describing that changes in the Institutional Environment make the governance structures dynamic. Shifts in the environment influence the possible alignment governance structures, which has an influence on the transaction costs and thereby increase or reduce the use of certain structures (Williamson, 1991). This approach enables statistical intertemporal comparative analysis with the four-layer model. Changes in the layers can be explained, since they are caused by changes in one of the other institutional layers.

This method is used in this article to make a comparison between the institutional settings before and after the real estate crisis. It is also used to give an explanation as to why development alliances are not coming into being and why the building output is not reaching the expected level. The trends over

time will be analysed layer by layer in the coming sections.

#### 5. Embeddedness

Williamson describes this layer as relatively stable (Williamson, 1998) and this is also visible in the production chain of owner-occupied real estate. The market has changed drastically in the last decades, but the institutions in the Embeddedness layer did not change much. The major institution in this Embeddedness layer which slowly shifted in the last decades is the direction of more free market thinking of the government. This resulted in decentralisation, simplification of rules and legislation, and deregulation.

The perception of the importance of direct governmental interventions in real estate development changed over time. In 1990 it was decided that the development should be more market-orientated, but the central government was still very active in setting goals and providing guidelines until 2008. The focus on decentralisation also pushed the task for housing provision to the local, municipality level. Many municipalities were active on the land market in order to have more power to direct the development in the desired direction. The crisis showed the risks of this approach and created awareness and support among many municipalities to leave the land market and make it a private task.

#### 6. Institutional Environment

The responsibilities and tasks of the different government layers are formally institutionalised. Those formal institutions shape the procedures and the flexibility of the available plan capacity. The plan capacity is the number of dwellings that can be constructed on the land that is assigned by the municipalities as building land. The crisis was a window of opportunity for the government to institutionalise the trend in the Embeddedness layer more quickly by putting more distance between it and the market.

The Institutional Environment changed as a reaction to the market circumstances too. The financial requirements for banks became stricter to prevent bankruptcy. Also, the requirements for mortgages were tightened, which reduced the financial possibilities for potential home buyers. This was a very pro-cyclical reaction from the government and financial institutions which depressed the market even further (Boelhouwer, 2016). This new regulation for the financial markets makes that there are fewer financial means available to invest in the development sector (Franzen, ten Have et al., 2017). This makes it harder to make development alliances to enable the projects.

The process of deregulation, decentralisation, and simplifying, and integrating different as well as shortening the lead times is still ongoing. The new Environmental Act (Omgevingswet) will replace the Spatial Planning Act and 25 others which are important for development. This will simplify and integrate the legislation and make the planning procedures more efficient. The introduction of this new act was planned for 2019, but has been postponed to 2021 since more time is needed for proper drafting and implementation of the law.

### 7. Governance

The national government has been moving the responsibilities and tasks for housing provision to the local governments over the last few decades. Municipalities approached this responsibility mostly by acting actively on the land market. This resulted in financial setbacks for many municipalities during the crisis. Most of the municipalities rethought their policies and decided that they should steer the development in a less risky manner. They want a greater involvement and more initiatives from market parties in the land development phase.

Market parties experienced the setback during the crisis too and also became more risk aware. Market parties are generally

willing to take over the activities of the municipality, but they are facing next to the increased risk awareness, another problem. There are too few sites indicated by the municipalities that are suitable for development, according to market parties. The municipalities are expecting an active role from the market parties in coming up with suitable ideas for locations to add to the plan capacity. However, market parties are not directed and supported in finding the locations by any of the governmental layers, which makes an investment in research and planning of sites an uncertain project. Market parties are demanding action from the government in simplifying the legislation and helping to indicate suitable sites for development (van Breukelen, 2017).

The unfulfilled expectations of both the market parties and the municipalities, result often in 'Wait-and-see' behaviour. This causes problems in creating alliances that could enable new large-scale development. Those alliances are needed to upscale the building outputs to fulfil the high demand for new dwellings.

Another bottleneck in creating alliances is the fact that has become harder to find investors due to the tighter regulations on the financial market. This financial partner is a precondition to enable the project.

The governance structure in the real estate development sector changed too. Many companies became bankrupt during the crisis or decreased their capacity. This happened over the entire supply chain, resulting in a decreased production capacity. But it also had an impact in other governance structures, since a large share of the workforce is self-employed, and the average company size decreased. Hiring self-employed workforce and working with subcontractors has become more common since the crisis.

The self-employed persons, often do not want to work for an employer anymore in the short-term, and are planning to stay self-employed (EIB, 2016). They can earn more this

way, and they can select the best projects for themselves, since there is enough work.

This means that more parties get involved to reach the same production capacity. This increases the complexity of the governance structure, with higher transaction costs and decreases the efficiency of the structure as a result.

### **8. Resource Allocation and Employment**

Bottlenecks in the availability of some building supplies and a lack of available labour force were experienced in the period prior to the crisis, due to the high building output, caused by the great demand for newly constructed dwellings. The crisis resulted in a drop in the demand for real estate, which also affected the building output of dwellings. The market for labour and building supplies changed from a tight market into a market of overcapacity. The lack of customers and the dropping prices resulted in a decreased production capacity over the entire supply chain. This reduction in capacity was caused by several measures taken by the actors involved in the residential building sector, like a decrease in the number of employees, some construction firms stopping their activities and some factory lines or entire factories closed due to the lack of demand.

Now, the crisis is over, and the demand has reached a high level again. Several development projects that were planned prior to the crisis have been taken into consideration again and new projects have started. Construction firms are experiencing bottlenecks in production again, even though the building output is not at the level of before the crisis. It is expected that it will take some time to increase the production capacity after it was scaled down during the crisis, but it takes longer than expected, according to the existing literature (de Wildt, Keers et al., 2005).

There is a tight market for construction workers and some of the building materials are also hard to obtain. This gives much power to the supply industry and the construction

workers. There is enough work, but the workforce is too small. Companies over the entire supply chain are trying to increase their number of employees. Opportunistic behaviour has them asking high prices and picking the best projects and companies to collaborate with. The power balances in negotiations have changed drastically during and since the crisis.

The competition shifted from the construction market in the past, to the land market. There might arise a situation in the future where the competition moves to the labour and building supply market. The developers and construction firms which can make alliances with subcontractors and suppliers are the ones which are still able to produce new dwellings.

### **9. Empirical validation**

Many trends of the institutional changes which are described in the previous sections are also present in the municipality of Lansingerland. The demand for housing increased significantly and the municipality also changed to a more facilitative role instead of an active one in the land market (Zevenbergen & den Heeten, 2017).

Significant changes in the land development phase are not experienced for the analysed projects, the development of *Gouden Podium* and *Meerpolder*, since the contracts were already drafted before or during the real estate crisis. It is slightly renegotiated about financial conditions.

The general trends of the institutional change in the construction process of the real estate is experienced in the cases. So are the tight labour and building material market experienced in both of the cases. It is a challenge to find enough workers for the construction site, which results in subcontracting a large share of the tasks (Weerd, 2017). The contracting parties are not willing to make long term agreements, since the availability of workforce is uncertain and the prices are rising quickly (Paalvast, 2017).



This results in more complex and dynamic governance structures.

Also, the availability of building materials are causing challenges in the development projects within Lansingerland. The delivery times for some building materials like concrete foundation pillars have increased significantly (Paalvast, 2017). This has an effect on the planning process. Decisions for orders have to be made earlier in the process, which results in less flexibility later (Weerd, 2017).

### 10. Non-emerging governance structures

There are more difficulties experienced in forming alliances to make the land development possible. This is partly caused by withdrawal of municipalities. They incurred and paid in the past many transaction costs in the initial phase of a project. They were bore a large share of the risks during the land development phase. This task has not been taken over enough by the market parties yet, since the guidelines given by the municipality are insufficiently, which makes investments in the planning phase risky. This results in wait-and-see behaviour from the market parties. Market parties are demanding action from the government in simplifying the legislation and helping to indicate suitable sites for development (van Breukelen, 2017).

Another important partner required in an alliance is an investor to introduce financial means. The investors are more risk aware in the post-crisis situation and they are also bound to stricter financial requirements.

Furthermore, construction firms do not have enough capacity to run all the projects. The project cannot continue in cases where one of the required partners is not found or when the parties cannot reach an agreement as to who bears the costs and risks in the project. All the transaction costs that are incurred by a discontinued project will not be earned back and are spilled. This is very inefficient.

### 11. Risk aversion and allocation in governance structures

It is harder to form alliances in the Governance layer, due to the reduced number of parties active on the market and the increased risk awareness of all the involved parties. Municipalities were often taking the risks and accumulating the costs at the beginning of a project. They mostly changed their policy and tried to allocate the initiatives and the risk associated with the development to the market parties. Market parties are also more risk aware, due to the recent crisis and are not willing to take unnecessary risks by investing in very uncertain projects.

There are smaller and thus more parties involved in the development process, since more work is subcontracted, and the construction firms are often working with self-employed construction workers. This increased the flexibility for the construction firms on one hand, but increases the uncertainty about the available labour force on the other hand. The transaction costs are increasing to maintain the governance structure, because the increased complexity of the arrangements and the uncertainty in the current situation.

### 12. Conclusion and solutions

The neo-classical economic theories just take the institutions of the Resource Allocation and Employment layer into account. This framework is not wide enough to explain all the dynamics in the development chain of owner-occupied dwellings. The four-layer model of Williamson offers a good framework to analyse the institutions in the development chain of owner-occupied dwellings. Many observations that are given by Williamson are also present in the complex building sector, like the fact that the Embeddedness layer is relatively stable and the lower the layer is, the less resistant to change it is. The interconnectivity between the layers is also clearly present in the construction sector.

The analyses give insights into how the governance structures in the land development phase are changed, driven by a slow shift in the Embeddedness layer and the very pro-cyclical policy adaptation that was implemented, due to the risks that became clear during the crisis. The governance structure in the real estate development phase changed as well. More small companies and self-employed people became active in the sector, due to the outflow of employees during the crisis. This gives more flexibility to the construction workers and increased the number of contracts needed to enable the development.

This change in the governance structure resulted in more difficulties in finding the right alliances needed for the development. All the transaction costs which are incurred are lost in cases where no alliance is shaped and ultimately, the project has to be cancelled. This makes investments at the beginning of a project risky. There are not many parties willing to take on the risk of accumulating transaction costs for an uncertain project. This reduces the number of initiatives taken and because of the decreases the potential building output.

Change is needed on the level of Governance to reach the desired goals. Several parties are still discovering their position in the new circumstances after the crisis. Municipalities are expecting more initiative from market parties, but the market parties are seeing the risks, which are increased even further due to new legislation, in the initial phase too. An incentive to incur transaction costs in the beginning by finding the right alliance and checking if the plans are accepted by the municipality should be put into place.

This incentive could be more active support from the municipalities in earlier phases, so that the market parties know that they will get permission for their plans. Municipalities can do this by offering consultations to market parties early in the process. Municipalities can also provide clear

public visions regarding to the districts in which densification or expansion of the housing stock is desired and in which districts initiatives are not desired. This helps the market parties to put their focus and resources into promising projects, rather than spilling their resources on projects which will not be permitted.

It seems that financing projects in the initial phase is problematic, due to stricter regulations for financial institutions. Those incomplete alliances can be fixed by decreasing the amount of costs in the beginning of the project by more organic-like development. This might increase the total amount which must ultimately be invested, since scale benefits will be missed. But it also decreases the risks and offers the possibility to bring a large share of the costs to a later phase. More organic-like development can be undertaken in projects with professional developers, but it might also offer interesting opportunities for self-commissioning by the owner-occupiers. Municipalities can support this by giving developers better opportunities to phase the project. Municipalities have, for example, the possibility to sell the land in different phases to the developers in cases where development takes place on locations initially owned by the municipality.

Another measure that can be taken is offering loans with favourable conditions for investment in land development. This can be done by organising a revolving fund. Market parties should be able to withdrawal financial means from the fund to finance the initial phase of a development project. Only projects in areas that are designated by the municipality should qualify for loans out of the fund, to ensure that development takes place in the desired areas. Market parties will pay back the borrowed finances once the developed dwellings will be sold at the market. A mortgage on the land itself can be taken as security to reduce the risk of not recuperating the money which is loaned.

## The Market for Owner-Occupied Dwellings After the Crisis

Governance structures should change to become more efficient and avoid the incompleteness of the alliances. This can be done by municipalities by supporting market

parties in focusing on chanceful projects in places where (re)development is desired and by offering better financing possibilities in the initial phase of the project.

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