

MASTER

Strategic behavior of landowners

strategic choice in the negotiation of a land transaction, recommendation how municipalities could deal with urban landowners

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GRADUATION THESIS


Strategic behavior of landowners

Strategic choice in the negotiation of a land transaction
Recommendation how municipalities could deal with urban landowners

**Eindhoven, University of Technology
Department; Construction Management & Engineering**

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26th of Februari 2009

BSB


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Colophon

Strategic behavior of landowners:

This is a research project on the decision criteria of urban landowners to choose an active or passive strategy in the negotiation about a possible land transaction. The research project will result in a conclusion about the importance of certain decision criteria on the strategic choice behavior of landowners.

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Preface

One goal in writing about this research project is to keep the text efficient. In current times we are all busy and people do not have time to read researches with appendices of more than 100 pages. That is why I tried to keep the research project as short as possible. The appendices also only contain the relevant interviews for the research project. Unfortunately for our foreign friends the interviews are in Dutch.

This led to a research project that contains only 50 pages (except management summary) & Appendices of only 8 pages.

With kind regards,

Jelmer Kooij

Management Summary

We have known decades where the governments choose to build at Greenfield locations. As we know we have seen 'de groeikernen' in the 1960's until mid '80ies. The last breath of the new city policy was the fourth Memorandum on Spatial Planning Extra (VINEX). Here the policy turns to a more market led policy, where development is stimulated on locations with good economic potential. Now this last Memorandum is almost fulfilled the government is focusing more and more at the transformation of the inner cities.

To realize the transformation targets set by the central government the municipalities (who should complete this task) need land. It has long been recognized that multiple or fragmented ownership of land stagnates developments and may even inhibit developer demand altogether. Without state intervention, development cannot proceed unless agreement is reached with every owner (Adams et al, 2001). Who owns the land can build, of course within the boundaries set by the government. Because of this segmented ownership a lot of restructuring and transformation plans are not executed, partially or at extreme high acquisition costs. Some existing owners at the transformation area don't feel much for the project, and are only willing to sell the land at a very high price. Sometimes all land owners are willing to cooperate, but practice shows that this is an exception (Buitelaar et al, 2008).

The Land Development Act (The Land Development Act, issued July 1st 2008) offers the municipality more tools to cooperate with land owners. The land owners can participate in the development of the plan. It is often the case that the original owners of the land are either unwilling or unable to cooperate in the transformation projects. Local authorities, corporations and developers are responsible for the transformation projects. They must acquire the land in question, which means that they become temporary owners for the duration of the transformation project. Land ownership and the problem of acquiring land are both issues that affect spatial development. Sometimes, for example, it is simply not possible to obtain all of the land in the plan area, which means that the remaining plots have to be incorporated into the planning. This means that the acquisition options are of key importance to the plan, unlike expansion areas, where the acquisition of land is often a derivative of the choice of location and the planning (Buitelaar et al, 2008).

With regard to the transformation of urban sites, it is often difficult to obtain a positive operating balance. Firstly, land acquisition is expensive due to relatively high land prices and the long-drawn-out acquisition procedures. Secondly, the value of the land in the old situation is often close to the value of the land and buildings in the new situation. For purposes of comparison: in expansion areas, the jump in value 'from old to new' is much greater, because the zoning of the land in question changes from agricultural to residential. The design is often modified throughout the transformation process, to achieve a positive operating balance. Attempts are made to boost returns through the use of high-density construction, by increasing the number of apartments being built, and by extending the program to include high-end, owner-occupied property. Cost-cutting is achieved by incorporating fewer embellishments into the dwellings and the residential environment. This might involve a different layout, or the use of cheaper materials (Buitelaar et al, 2008).

Acquisition options are of key importance in the process of urban transformation. Segmented ownership makes acquisition more difficult, this could lead to the change of plans or even a whole stop of the plan. The success of the plan has a direct relation with the ownership at a transformation site. (Buitelaar et al, 2008) conclude that governments should adopt property-aware planning practices. They concluded that there is a direct relationship between the success of a transformation project and land-ownership, in its extensive form.

That is why this research looks for explanation of inner-city landowner behavior. Above mentioned researches agree that landowners form a big threat for inner-city (re) developments. That is why we researched why these landowners choose to or not to sell their assets to landowners that are willing to cooperate in the (re)development activities of the municipality or developer. Rephrased this leads to the following research question.

What are the decision criteria for the landowner that is unwilling or unable to develop their selves (from now on called; landowners or private landowners) to act active or passive on the land market, and how much do these decision criteria influence the choice of the landowner to behave active or passive in the negotiation?

In literature we looked for the decision criteria that are important for the landowner that is unwilling or unable to develop. Most decision criteria were found in the research project by (Adams et al, 2001a); who did extended research into ownership behavior at Brownfield redevelopments. The decision criteria that are important for the landowner to choose an active or passive strategy in the negotiation process with the municipality are the following;

- DC 1. The suitability of the current location.
- DC 2. The emotional bond with the current location.
- DC 3. Level of uncertainty by the landowner whether the municipality is matching the desired value for the land.
- DC 4. Trust in the negotiation partner.
- DC 5. Importance of land for the development progress.
- DC 6. Number of finished deals until now.
- DC 7. Strategy (active / passive) of the other private landowners. (see paragraph 5.3)

To analyze how much the decision criteria influence the choice of the landowner we adopted the conjoint preference modeling method (Kemperman, 2000). This to get insight in the choice behavior of landowners when they are confronted with land acquisition processes. Preference modeling is preferred above direct questioning because the respondents cannot manipulate their answers. Even so, many respondents will not be aware of the technique and the answers will not be influenced by former knowledge.

Behavior of the landowner can be predicted by two decision criteria; first 'suitability of the current situation' and the 'emotional bond with the commodity'. For the choice of an active strategy both are of the same importance. For the choice of a passive strategy emotional bond with the current location is the only important decision criteria.. A high value for the emotional bond increases the chance for the choice of a passive strategy by the landowner. For the

choice of an active strategy of the municipality decision criteria four and five are important; 'trust in negotiation partner' & 'importance of land for the development progress'. For the choice of a passive dominant strategy only decision criterion five is important; 'importance of land for the development progress'. And the range value indicates that this decision criterion is very important for the choice of a passive strategy. A low value for this decision criterion increases the chance on a passive dominant strategy for the municipality.

From the data we conclude that the landowners have a very internal view when they choose to adopt an active or passive strategy in the negotiation about the transaction of land. From my point of view there is not much that the municipality can change about the suitability of the landowner's location or the emotional bond of the landowner. Today municipalities take plan-led planning procedures that were suitable for Greenfield development into Brownfield (re)development. The consequences are that plans only partially executed or with higher percentage of red functions ore at higher exploitation costs. (Buitelaar et al, 2008) have shown that the success of urban (re)development in the Netherlands has a direct relationship with the financial success of the plan. That is why we recommend the application of Property Aware Planning¹ practices. This implies that the municipality should determine for each individual landowner whether the chance on expropriation procedures weigh against the possible revenues for the entire plan. According to (Buitelaar et al, 2008) this will lead to more balanced projects and less projects that suffer from negative exploitation.

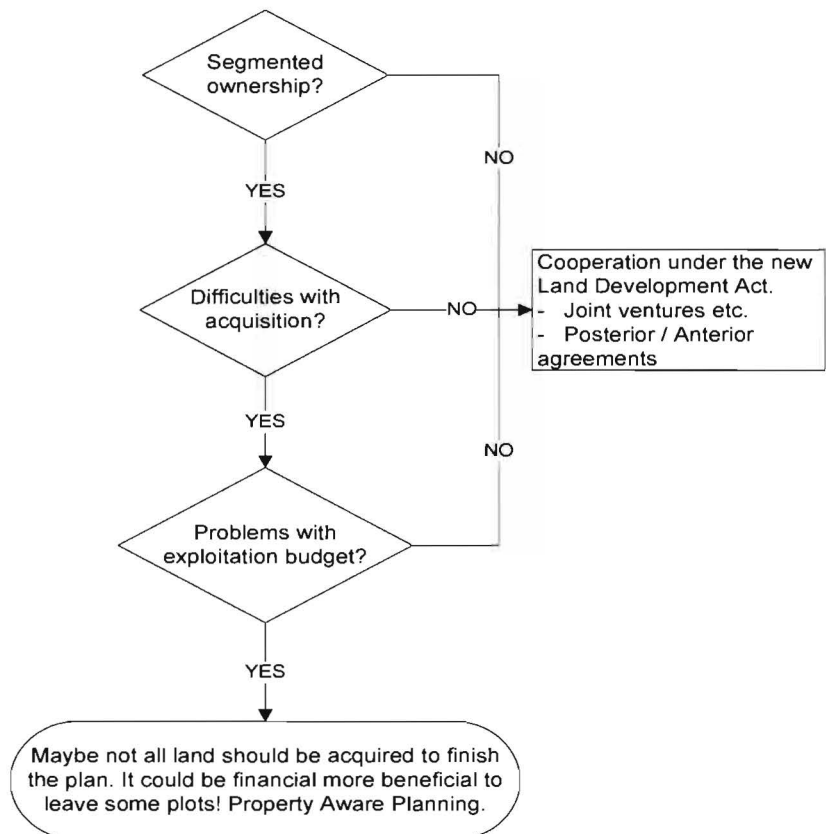


Figure 1: Should the municipality adopt Property Aware Planning practices?

¹ Property Aware Planning; inner-city (re)development is often the consequence of possibilities to acquire land. Property Aware Planning is the constant awareness of the cost of acquiring a certain plot versus the revenues for the overall plan.

Table of Contents

1.	Introduction.....	1
1.1	Motive	1
1.2	Problem definition.....	2
1.3	Hypothesis	3
1.4	Research goal	3
1.5	Research question	4
1.6	Definition of scope	4
1.7	Research Method	4
2.	Planning policy and the land policy.....	6
2.1	A short history of planning policy.....	6
2.2	Business parks	7
2.3	Development policy.....	7
2.4	Active and facilitating land policy.....	8
2.5	The new Land Development Act [Wro].....	9
2.6	Instruments in the land market.....	9
3.	Private landowners and the land market.....	11
3.1	Types of landowners	11
3.2	Behavioral characteristics of land owners.....	12
3.3	Ownership constraints	12
3.4	Owner perceptions of broader context for urban redevelopment.....	13
3.5	Ownership division at VINEX locations (Holland example)	15
3.6	Impact of ownership constraints urban redevelopment in Holland	15
4.	Decision framework.....	17
4.1	Definitions	17
4.2	Decision framework.....	17
4.3	The municipality and her possible strategies.....	18
4.4	The landowner and his / her strategies.....	19
4.5	Consequences of combined strategies.....	19
5.	Approach of analysis	21
5.1	Goal of the analysis	21
5.2	Choice of analysis method.....	21
5.3	Elicitation of influential attributes.....	22

5.4	Specification of attribute levels and their levels	24
5.5	Choice of measurement task	25
5.6	Selection of experimental design	26
5.7	Constructing the questionnaire	27
5.9	Analyzing the results	30
5.10	Predict the outcome with Game Theory	30
6.	Results of the analysis	32
6.1	Research questions specified on the data	32
6.2	Which outcomes are predicted most by Game Theory	32
6.3	Do the outcomes of Game Theory fit the prediction by the respondents?	36
6.4	Decision criteria that influence conflict situations	37
6.5	Decision criteria that influence the choice of a dominant strategy	39
6.6	Which decision that influence outcomes by iterative dominance	43
6.7	Responses that where expected but not found in the dataset	43
7.	Conclusion and discussion	45
7.1	Conclusion	45
7.2	Discussion	46
8.	Recommendation	47
9.	Solution	48
9.1	Implementation	49
10.	Validation	50
10.1	Validation of decision criteria	50
10.2	Validation of survey outcome	50
10.3	Validation of solution	50
	Respondents survey (43)	51
	External interviewed people (6)	51
	References	52

1. Introduction

This part of the research will deal with the motive of the study, definition of the problem and the hypothesis and research question. Also this chapter will entail a vision of the scope and a setup of the research method.

1.1 Motive

The Netherlands has a long tradition of government involvement in the preparation, establishment and implementation of spatial planning. This involvement in implementation is, however, highly decentralized. Characteristic features of the system are the lack of instruments of national and regional governments. Coordination takes place by means of consultation, persuasion and cooperation, laid down in detailed procedures. Due to increasing geographical scales of social and economic processes and the shift from government to governance, the Dutch planning system faces huge challenges (Louw et al, 2003).

The governments are not only active in spatial planning but also in the acquisition and release of building sites. Before the 1990s developers were scarcely active on the Dutch land market. This structure changed with the fourth Memorandum on Spatial Planning Extra (VINEX). This meant an emphasis on owner-occupied housing at Greenfield areas. Also old subsidies for land development and social housing were abolished; the national government no longer prescribes the land prices for social housing. As a result private developers acquire land on those Greenfield sites, often to safeguard their continuity of their construction activities (Priemus and Louw, 2003). This had a big effect on the prices paid for land. Land speculators drove land prices up and municipalities got left behind with a negative exploitation result.

The fourth Memorandum on Spatial Planning Extra is almost fulfilled, with all the difficulties described above. The focus of the Dutch governments is aimed at the restructuring and transformation of urban areas. New Dutch planning policy states the ambition to develop 40% of the houses in existing urban areas. This results in a minimum of 20.000 and a maximum of 40.000 new houses every year within already existing urban areas (Buitelaar et al, 2008). These developments on the land market and in policy started the new Land Development Act [Wet ruimtelijke ordening] (2008). This new Law gives municipalities more implementation power, which offers the municipality the possibility to direct spatial development operational or facilitating. In this manner municipalities can arrange the distribution of costs between the municipality and the developers (or private developers) that are active in the project. These costs can differ from division of costs for land acquisition and exploitation but municipalities can also reclaim financial benefits from projects for plan oriented amenities. With active spatial development municipalities can cooperate with land owners to develop the plan.

Inner city land acquisition is a difficult process, where the ability to acquire land has definite influence on the possibilities of the developments. Plans change because some plots cannot be acquired; not many municipalities take this in account at the drawing table. Plots in urban areas have many different owners like; the government, companies and private land owners.

In contrast to the size of the plans, a lot of land should be acquired, more than with plans at borders of the city (Buitelaar et al, 2008). This implies a more difficult acquisition process, where the chance on amicable acquisition diminishes with every extra land owner.

1.2 Problem definition

To realize the transformation targets set by the central government the municipalities (who should complete this task) need land. It has long been recognized that multiple or fragmented ownership of land stagnates developments and may even inhibit developer demand altogether. Without state intervention, development cannot proceed unless agreement is reached with every owner (Adams et al, 2001). Who owns the land can build, of course within the boundaries set by the government. Because of this segmented ownership a lot of restructuring and transformation plans are not executed, partially or at extreme high acquisition costs. Some existing owners at the transformation area don't feel much for the project, and are only willing to sell the land at a very high price. Sometimes all land owners are willing to cooperate, but practice shows that this is an exception (Buitelaar et al, 2008).

The Land Development Act (The Land Development Act, issued July 1st 2008) offers the municipality more tools to cooperate with land owners. The land owners can participate in the development of the plan. It is often the case that the original owners of the land are either unwilling or unable to cooperate in the transformation projects. Local authorities, corporations and developers are responsible for the transformation projects. They must acquire the land in question, which means that they become temporary owners for the duration of the transformation project. Land ownership and the problem of acquiring land are both issues that affect spatial development. Sometimes, for example, it is simply not possible to obtain all of the land in the plan area, which means that the remaining plots have to be incorporated into the planning. This means that the acquisition options are of key importance to the plan, unlike expansion areas, where the acquisition of land is often a derivative of the choice of location and the planning (Buitelaar et al, 2008).

With regard to the transformation of urban sites, it is often difficult to obtain a positive operating balance. Firstly, land acquisition is expensive due to relatively high land prices and the long-drawn-out acquisition procedures. Secondly, the value of the land in the old situation is often close to the value of the land and buildings in the new situation. For purposes of comparison: in expansion areas, the jump in value 'from old to new' is much greater, because the zoning of the land in question changes from agricultural to residential. The design is often modified throughout the transformation process, to achieve a positive operating balance. Attempts are made to boost returns through the use of high-density construction, by increasing the number of apartments being built, and by extending the program to include high-end, owner-occupied property. Cost-cutting is achieved by incorporating fewer embellishments into the dwellings and the residential environment. This might involve a different layout, or the use of cheaper materials (Buitelaar et al, 2008).

Acquisition options are of key importance in the process of urban transformation. Segmented ownership makes acquisition more difficult, this could lead to the change of plans or even a

whole stop of the plan. The success of the plan has a direct relation with the ownership at a transformation site. (Buitelaar et al,2008) conclude that governments should adopt property-aware planning practices. They concluded that there is a direct relationship between the success of a transformation project and land-ownership, in its extensive form.

Land ownership is of key importance within the plans of transformation of urban areas. Private land owners that are unwilling or unable to cooperate in the development under jurisdiction of the Land Development Act form a threat for many of these projects. Temporary land ownership by the municipality is often necessary to complete the project, because the municipality has instruments to acquire the land legally. The problem here is that these acquisition procedures are very expensive because of high land-prices and long acquisition procedures (expropriation a.o.) set by the Law.

1.3 Hypothesis

Private landowners are the biggest threat in urban transformations, for one because they are often not capable to develop the land themselves. And second because they have a different vision on the value of the land they possess than the municipality. Because of this vision on value the choice to cooperate or not cooperate with the municipality in an acquisition process is a very interesting one. Some land-owners are generally unwilling to cooperate, and sit and wait until they are expropriated. I think that the process of urban transformation will be more efficient when municipalities adopt property-aware planning. By assessing the risks of a plan before the start of the project we expect a process improvement.

With a better view on the decision criteria of private land-owners to act active or passive in land acquisition processes, municipalities can assess the risks of an urban transformation plan.

1.4 Research goal

The goal of this research will be to determine the variables on which private land-owners and the municipality base their decision to act active or passive to each other. I want to determine which variables are most important for a successful negotiation or cooperation between these participants. Also I want to research the individual payoff that is reached by those choices, which will lead to a rational base for the choices. The research project will lead to a model for the municipality to assess the risk of private land-owners. This model should give the municipality an insight into the feasibility of land acquisition.

The goal is to determine which variables influence the choice of landowners that are unwilling or unable to develop their selves to act active or passive in the acquisition process. From this analysis I want to form a model that the municipality can use to assess the risk of private property-owners at an early stage in the planning phase.

1.5 Research question

What are the decision criteria for the landowner to act active or passive on the land market, and how much do these decision criteria influence the choice of the landowner to behave active or passive in the negotiation?

- Is the land acquisition process the basis for a conflict situation between the two stakeholders in our research?
- What is the definition of an active or passive strategy by the landowner and what are the effects of an active and a passive strategy for the landowner and the municipality?
- How can we measure the decision criteria in which a landowner acts passive or active?
- Which decision criteria and how much do specific decision criteria influence the strategic choice of the landowner?
- Which decision criteria and how much do specific decision criteria influence the strategic choice of the municipality according to the landowners?
- How can we influence the choice of strategy by the landowner?

1.6 Definition of scope

1. Because of the developments in land policy and the defined problem. I want to take land acquisition within urban areas in account. Urban sprawl and the old VINEX note are not represented in this research project. Inner city renewal is in my view more interesting because more divided ownership. But also because there is a clear interdependency between the success of a (re)development project and the ownership of the land.
2. The main research question talks about the decision criteria for the municipality and a private land-owner. My focus is on these two, and not on other players on the land-market because of the following reasons;
 - Municipalities are claiming a more active role in the land market, private inner city renewal initiatives often fail because developers do not have the power and instruments to acquire all the land needed.
 - Developers are limited in the options within the strategies of active or passive behavior.
 - Private land-owners are the problem holders in my study. They are the land-owners that form the greatest threat. The municipality has a lot of options to cooperate with land owners in the development of the site. But these private land-owners are often unwilling or/and unable to cooperate in these forms of cooperation.

1.7 Research Method

- Literature study; used for the description of the land acquisition process. I think that is sufficient to do a literature study to determine a process of land acquisition. This because I only need an abstract representative of real life problems to get an answer to my research question. With this abstract version of the process I can make a more overall conclusion, but at the same time I also lose specifics.

- Semi structured interviews/desk study; to get additional information about the decision criteria that play a role in the land acquisition problem.
- Questionnaire; the questionnaire is important to give me input for the game, with the questionnaire I want to learn more about the importance of the decision criteria stated in the main question.
- Game Theory; with the Game Theory I want to calculate what the difference of payoffs will be for the plays considering the change of the rules by the instruments that the municipality can use in the game.
- Simulation; simulation will help to validate the outcome of my research, will players react active or passive, and can players be influenced?

2. Planning policy and the land policy

This chapter is about the way the Dutch land market functions, and which policies are at the basis. First this paragraph will deal with the history of Dutch planning policy and the change in development legislation. Second, I want to deal with the definition of land, stakeholders at the land market and instruments that are used at the land market.

2.1 A short history of planning policy

The focus of this research project is on the transformation of urban areas. City renewal has been an important policy for the Dutch Government since the Second World War. After the war the renewal for the automobile was a big incentive to transform the cities. With the necessary changes the governments also tried to achieve social and economic goals in and around the cities. They started to build new business parks in the city to stimulate the employment in and around the city. In neighborhoods that were declining the government build new quality houses to attract well earning families to these neighborhoods.

We have known decades where the governments choose to build at Greenfield locations. As we know we have seen 'de groeikernen' in the 1960's until mid '80ies. Around the '80ies became clear that the development of those new cities had some negative side effects.

- For the adjacent bigger cities it meant an outflow of higher educated people.
- The employment in these 'groeikernen' did not grow in proportion with the number of inhabitants which led to problems with commuter traffic.

These problems started the discussion to a more intensive use of space in the old cities of the country, the compact city. The last breath of the new city policy was the fourth Memorandum on Spatial Planning Extra (VINEX). Here the policy turns to a more market led policy, where development is stimulated on locations with good economic potential. Now this last Memorandum is almost fulfilled the government is focusing more and more at the transformation of the inner cities. This transformation has an important place in the Dutch planning policy; Dutch cities are under constant renewal.

The new policy is to increase the number of buildings within the city to make the city more compact. The idea is to intensify the use of land within the existing settlements. This implies the redevelopment of urban wasteland and concentrate development on agricultural land adjacent to the old build-up areas (Valk van der, A; 2002). The inner cities have a lot of locations where the use of the land can be intensified. The governments are realizing that more and more. Especially old business parks catch the attention of the municipalities. There are two types of inner city transformation locations according to; (Buitelaar et al, 2008).

1. Redevelopment where zoning changes; former industrial areas, military quarters, harbors, locations near rail way stations, and locations with old amenities. These locations need to change in function, because they are strategically situated within the city. Often the change is to residential or commercial zoning.
2. Restructuring locations; these are locations that are not up to date to the standard of this time. The level of transformation is different for every location.

In the discussion the role of inner city transformation is important for different projects and goals. In the project 'Mooi Nederland' by VROM intensified space use is a central issue. With the transformation of already build up areas the government aims to protect green parts of the country.

2.2 Business parks

Also high on the agenda of the government is the 23000 of hectares of Brownfield business parks, that are often located within the boundaries of the city (Gordijn et al. 2007). These sites often know bad maintenance, companies leave and Brownfield locations are not replaced by new business because there are better business parks at Greenfield locations.

In the discussion about the restructuring of Brownfield areas people often discuss that stagnation occurs because of the relative low prices for land at those areas. First of all, the price against quality ratio of Greenfield areas is more beneficial than the costs that come with the redevelopment of Brownfield's. There are high costs involved with the requirement and demolition of existing real estate. Second, municipalities have invested low in the quality and often they have little financial reserves for maintenance and for structural renewal. The combination of low startup quality and the presence of deferred maintenance lead to fast aging of these areas (Olden, 2007). Restructuring will take place in urban areas, which are densely populated and where ownership is divided. This knowledge brings a challenge for the future of Dutch planning.

The differences in land prices at business parks have a strong geographical component. In the Randstad the prices for land in industrial areas are the highest. Within the provinces the differentiation of the land prices are even higher than between the different provinces. Even within the same Brownfield, the prices of land can differ up to 20 percent.

2.3 Development policy

Dutch municipalities are not only active in zoning and producing statutory land-use plans. They also cooperate in the land acquisition market. Dutch municipalities often participate in the acquisition of land and releasing them for building sites. This is called active land policy. Research of (Groetelaers, 2004), shows that almost all the municipalities are active in land acquisition at locations adjacent to old build-up areas (VINEX areas).

The opposite of active land policy is called facilitating land policy which means that the municipality only does the zoning, and the land-use plan. In other countries besides the Netherlands these types of development policies are also recognized. (Adams et al. 2002) define 6 types of land policy measures. There are some similarities visible with Dutch planning policy. The Dutch municipalities are mostly using the first three policy measures (see figure 1). With the new Land Development Act the influence of the municipality increases. They gain possibilities to set conditions to all developments. We will explain more of these possibilities later, but it entails influence on building permits, reclaiming investments & possibility to set location demands. That is especially useful when the municipality is aiming to construct a percentage of social housing.

Land policy measures		Illustrative powers	Primary emphasis
Direct control over development;			
1.	Control over specific development without taking land	Standards and norms; permits; zoning; compulsory re-parcellation	Regulatory
2.	Control over specific development by taking land	By agreement or exchanges; by compulsory purchase; by pre-emption or sale; forced dedication	Developmental
3.	Control over specific development by direct public-authority participation	Infrastructure; statutory functions; general development	Developmental
Fiscal control over development			
4.	Influence over general development by fiscal measures	Land profit taxes; property taxes; transfer taxes; municipal income tax; municipal sales tax; death/inheritance tax; wealth tax; subsidies; price and sales controls.	Financial
5.	Influence over specific development by fiscal measures	Infrastructure charges; taxation of vacant land; taxation based on development scheme; conditional loans and subsidies; transport pricing policy	Financial
General influence over development			
6.	General influence on the land market.	Indicative planning; co-ordination of development; information on land holdings; information on land transactions.	Information and guidance

Figure 2: land policy measures (Adams et al. 2002)

2.4 Active and facilitating land policy

In order to understand the different land policies in the Netherlands we should look at the land use planning system. Land use is laid down in statutory land-use plans. Dutch municipalities usually take initiative for Greenfield developments. This is called active land policy. With active land policy a Dutch municipality is active on the land market; the municipalities use their private law instruments to direct acquisition and stimulate development. This form of policy is also used in the case where private developers already have acquired land at the location. These developers agree to sell their land without the aim to make profit on the land. In return, they get a building claim which means that they get the first right to buy the serviced land. This is often done at prices agreed upon in the first negotiation. When the municipality chooses to let the market start with the development we call this facilitating land policy. With facilitating land policy the municipality does not participate in land acquisition. The municipality directs the development through norms, permits and zoning.

For inner-city redevelopment municipalities seem less eager to use active land policy, and acquire land before development. This is based on the research of (Buitelaar et al, 2008), that concluded that none of the eight researched municipalities decided to acquire the land actively before the plans were situated with the goal to develop the land their selves. In most cases the municipality decides later to use their private law instruments, almost always at request of the

developing party. There are two reasons why the developers ask the municipality to participate in land acquisition;

1. The developer can share the risk of land acquisition with the municipality.
2. The municipality possesses several private law instruments to acquire the land when landowners are unwilling to sell.

2.5 The new Land Development Act [Wro]

The New Land Development Act is written to direct facilitating land policy better than is the case right now. Because of the new Land Development Act [Wro] this is more interesting, the municipalities can make land-use plans more detailed. The goal of the new Law is; (free translation) The new Land Development Act offers the municipality the possibility to direct private spatial development. Although this is a narrow goal, this new Law is a big improvement to direct the financial side and the possibility to direct private spatial development (van den Brand, 2008).

With the new Land Development Act the power of the municipality to reclaim these costs has grown. Within this system, participation of private actors is interesting for both parties. This law gives municipalities more tools to cooperate with private land owners that want to develop. The Law stimulates voluntary cooperation, but when land owners do not want to cooperate there are several tools in Public Law to force 'cooperation'. Even though the power to reclaim costs from private developers has grown, active land policy will not lose its importance. There are two forms of contacts between governments and private developers. Anterior [contract under private Law; before spatial-plan is issued] and posterior contracts [contract under public Law, after spatial-plan is issued], both give the municipality power to divide benefits and costs according to ownership. The first contract gives the municipality and possible developers much freedom, in contrast to the latter, which is set to reclaim costs from private developers through building permits.

Because of the increase of instruments of the municipality, like setting location-demands, the position of private land owners has become weaker. The setback of the position of private land owners is tried to improve by new procedures where landowners can give their opinion (zienswijzen) (van den Brand, 2008).

The problems with free-rides are solved with the new Land Development Act, because the municipality has the opportunity to reclaim all necessary costs for overall amenities (roads, sewers etc) of the plan. The only side note that can be placed here is that, with facilitating land policy the municipalities do not have the power to direct the process. The land owners determine when they want to develop their land and according to which terms.

2.6 Instruments in the land market

In my view the problem with restructuring and transformation in urban areas starts with the possibilities to acquire land. There is a lot discussion about the instruments the government can use in land acquisition. Should the government use them more forward? Or should the selling of land be more voluntary in certain issues? How do we use these instruments, and how

do these instruments affect the future process. All process managers know that juridical expropriation cost a lot of time in the project. It is also an expensive form of land acquisition, when we take time as a cost in consideration.

A land-use plan provides municipalities a legal base to apply, when necessary, right of first refusal or compulsory purchase rights. Even though, municipalities prefer to buy land the amicable way (Louw et al, 2003). The legal base to use these instruments and the specific nature of the commodity is the cause for an interesting negotiation. An unfair negotiation, when the seller (land owner) does not want to sell, the buyer has the power to claim the land compulsory. The following tools exist for the municipality in the land market. These could be consequences of an active or passive behavior.

- Amicable acquisition [minnelijke verwerving]; the negotiation between the seller and buyer is normal, if the seller feels that an offer is acceptable he could make the choice to sell. The only thing is that amicable acquisition is mandatory by the government when a municipality wants to acquire. This 'instrument' is often used as a procedural part of expropriation.
- Act on Municipal Right of First Refusal (RoFR) [Wet voorkeursrecht Gemeente]; the seller of the land chooses whether he wants to sell. But he should offer the land first to the municipality. Municipalities use this tool often in combination with active negotiation to acquire the land.
- Expropriation / Compulsory purchase rights [onteigening]; the municipality has no legal ground to start this procedure when they have not tried to acquire the land through negotiation. When this instrument is used the municipality and the owner are legally bound to negotiate.
- Developments rights; [zelfrealisatie] the owner can develop the land in cooperation with the municipality. Under the New Land Development Act it can be done active and passive. Passive should be taken lighter, because this is not always a choice of the property owner. The municipality can also choose to develop with facilitating land policy, so cost division takes place though building permits.

These instruments in the land acquisition process seem clear and easy in use. In the Netherlands this is certainly not the case. There is much discussion about the use of these instruments. In England the same difficulties seem to occur. The English Urban Task Force identified five main obstacles to the successful use of compulsory purchase in the assembly of land for urban regeneration;

1. Specific resources are not available to assist local authorities with the cost of compulsory purchase. As a result, many authorities are prepared to contemplate compulsory purchase only where they have previously entered into a back-to-back deal with a prospective developer who contracts to cover an authority's CPO costs in full.
2. The bureaucratic nature of and protracted timescale inherent within, compulsory purchase procedure. As an earlier research study demonstrated, that compulsory purchase is a 'complex, time-consuming and bureaucratic process, leading to higher costs'.
3. Third the English version of the Law is very difficult, the Urban Task Force calls for simplification. Arguing that the multitude of legislation, policy guidance and case law on

compulsory purchase causes confusion to practitioners and is prone to restrictive interpretation by lawyers.

4. The lack of necessary skills and experience at the local level, owing to the infrequent use of compulsory purchase in the previous two decades.
5. The widespread perception that compensation for the compulsory purchase of commercial property is inadequate, since it does not take account of the forced nature of the transaction (Adams et al, 2001).

3. Private landowners and the land market

The land market can at least be called peculiar. Land has specific properties, every piece has a unique location and it is not possible to move a piece of land. Other properties of land are the rules and regulations that determine whether a piece of land can be used for a specific function. The consequence is that there is market segmentation, divided in the different uses that are possible (Terpstra and Santing, 2007). In a perfectly competitive market, rapid changes in price balance the quantity demanded with the quantity supplied and ensure equilibrium. However, as numerous experts point out, the conditions of perfect competition are extensively breached in land and property markets (Adams et al, 2001a).

Another problem is the prices that are paid for land. To determine the prices there should be full information. Because full information is costly or time-consuming to acquire, market participants must act on partial information. This renders the concept of an identifiable and definitive market price problematic. Debate therefore concerns the extent to which estimates of value can ever correspond to actual price (Adams et al, 2001).

3.1 Types of landowners

In the research of (Adams et al, 2001b), three different types of land owners are divided;

- Land owners with development as central activity
- Land owners with ancillary interest in development (consists mainly of corporate bodies in both the public and private sectors)
- The third group are owners with occasional interest in development (small and medium sized companies or private individuals with property for the purposes of their own occupation)

Within the last type the distinction can be made between active landowners (active) and passive landowners (passive). Active landowners are those who develop their own land, enter into joint venture development or make their land available for others to develop. Such owners may try to overcome site constraints to make land more marketable or suitable for development. Active land owners, who obtain planning permission, tackle development constraints or market their land for sale and make a significant contribution to the development process.

In contrast, passive landowners take no particular steps to market or develop their land, even though they may intend to do so in the distant future, they may respond, or fail to respond, to offers from potential developers, but otherwise they retain their land without development. They rarely attempt to overcome constraints in order to make land more marketable or suitable for development. Passive owners therefore contribute little to the development process and nothing at all, if they refuse to sell land that has development potential. Nevertheless, passive owner behavior should not be confused with irrational owner behavior. Refusal to sell land with development potential may be perfectly rational for the individual owner if, for example, it helps to minimize tax liabilities or maximize future choice (Adams et al, 2001).

3.2 Behavioral characteristics of land owners

Even if market signals were to be fully received by owners, their response may remain unpredictable. Most commentators acknowledge that not all landowners are profit maximizing or even rational in their behavior. Debate therefore concerns the extent to which landowners are motivated by nonmarket considerations, under unresponsive to market signals and, consequently, whether this has any serious impact on the long-run supply of land (Adams et al, 2001a).

Interesting is to which extent the individual preferences of particular land owners can be accommodated in models of land supply. (Adams et al, 2001a), for example, acknowledges, the reluctance of elderly couples to sell up and move at any price. This may be an example of an exceptional case, where individual preferences are more important than monetary considerations. From this perspective, varied ownership behavior may well reflect strategic moves to influence or threaten the behavior of competitors and could thus be analyzed within mainstream economics though Game Theory (Adams et al, 2001a). There are more ways to account for these individual preferences. These can be noted as a 'psychic income' or positive feeling that a certain ownership status can create. The personal preferences can be represented by the concept of 'consumer surplus' or the amount above market value that would be required, as compensation, to tempt particular owners to sell (Adams et al, 2001a). We should also recognize that these preferences are more based on utility maximizing behavior by households than profit-maximizing behavior by firms.

3.3 Ownership constraints

(Adams et al 2001a), recognize that the theories of supply of land should take in account the distinctiveness of land as a commodity, imperfect nature of the land market, behavioral characteristics and the institutional context for land ownership, exchange, and development. According to (Adams et al 2001a), ownership constraints can exist if development is unable to proceed because the required ownership rights cannot rapidly be acquired through normal market processes. From this definition, (Adams et al, 2001a) defined five main categories of ownership constraints;

- ownership unknown or unclear,
- ownership rights divided,
- ownership assembly required for development,

- owner willing to sell but not on the terms acceptable to potential purchasers,
- owner unwilling to sell

A Ownership unknown or unclear	A.1 Title deeds incomplete or missing A.2 Ownership in dispute
B Ownership rights divided	B.1 Land held in trust B.2 Land subject to leases or licences B.3 Land subject to mortgages or other legal charges B.4 Land subject to restrictive covenants B.5 Land subject to easements B.6 Land subject to options or conditional contracts
C Ownership assembly required for development	C.1 Ransom strips C.2 Multiple ownership
D Owner willing to sell but not on terms acceptable to potential	D.1 Restrictive terms or conditions of sale D.2 Unrealistic expectations of prices
E Owner unwilling to sell	E.1 Retention for continued current use for: E.1.1: occupation E.1.2: investment E.1.3: making available to others on nonprofit basis E.2 Retention for control or protection E.3 Retention for subsequent own development E.4 Retention for subsequent sale E.4.1: indecision (terms of sale unresolved) E.4.2: postponement (delayed sale advantageous) E.4.3: uncertainty (unsure of present value or E.4.4: speculation (hoping for future rise in value) E.5 Retention for no specific purpose: inertia

Figure 3: classification of ownership constraints in the development process (Adams et al. 2001a)

The most prevalent form of constraint encountered was the division of ownership rights. However, according to (Adams et al 2001a), because of the most existing leases on potential redevelopment sites were of short-term duration, the impact of this was limited. In contrast, multiple ownership of land proved particularly hard to resolve without the prospect of lucrative commercial development and or state intervention. Other troublesome barriers to redevelopment were caused by owners willing to sell but whose expectations of price were unrealistic and by those entirely unwilling to sell (Adams et al, 2001a).

3.4 Owner perceptions of broader context for urban redevelopment

Adams et al, 2001b measured the perceptions of owners of the broader context of urban development. First the landowners were interviewed about their knowledge of contextual factors. Second, they were ask whether they thought they had any influence on these

contextual factors. And last they had to remark whether these contextual factors impact on their decision to use, market, develop or purchase a certain plot. Significantly, the three factors that produced the widest distribution of results were all locally based: the economic performance of the city, supply and demand for property in the city and the local planning policies of the city. In all three cases approximately 37% felt that the factor had no impact, around 21% felt that they were a discouragement and 25% or more responded that they were an encouragement (Adams et al. 2001b).

	Knowledge claimed by owners	Perceived influence by owner	Impact on owner activity
National economic context			
National taxation, e.g. Corporation Tax or Capital Gains Tax	High	None	No impact
Economic performance in UK as a whole	Moderate	Very Low	Mixed
Availability of private sector development finance	Moderate	Very Low	No impact
Rates of interest charged by private-sector financial institutions	Moderate	Very Low	No impact
Supply and demand for property in UK as a whole	Low	Very Low	No impact
National Policy Context			
National planning guidance for England or Scotland	Moderate	Very Low	No impact
Availability of development grants or subsidies from public sector	Moderate	Very Low	No impact
Conditions of development grants or subsidies from public sector	Moderate	Very Low	No impact
Existing compulsory purchase powers and practice	Moderate	Very Low	No impact
Implications of privatisation since early 1980s	Moderate	Very Low	No impact
Trend towards sustainable development since late 1980s	Moderate	Very Low	No impact
Activities of national environmental groups	Low	Very Low	No impact
European environmental and planning legislation	Low	Very Low	No impact
Local Economic Context			
Economic performance of City in which site located	High	Moderate	Mixed
Supply and demand for property in City in which site located	High	Moderate	Mixed
Local taxation, e.g. Council Tax or Uniform Business Rate	High	Very Low	No impact
Local Policy Context			
Local planning policies of city in which site situated	High	Moderate	Mixed
Activities of local environmental groups	Low	Low	No impact

Figure 4: Contextual factors and ownership strategies: knowledge, influence and impact (Adams et al, 2001b)

It is immediately striking from the evidence presented in the paper that such owners related much more strongly to the local context for redevelopment than they did to the national context. In a sense, this is a reassuring result since it emphasizes the importance of the 'local' and suggests that the 'global' is often mediated through its impact at local level. Moreover, it gives some encouragement to policy makers to ensure that the local conditions for urban regenerations and especially those concerned with the local property market and planning system, are conducive to Brownfield redevelopment (Adams et al, 2001b).

3.5 Ownership division at VINEX locations (Holland example)

Past years there were many problems with the land market at the VINEX locations in Holland. Because developers speculated and bought pieces of land to get building rights, municipalities had to work together with those developers. A free market was far from the standard. Municipalities also claim that cooperation with these market parties was difficult because the difference in goals. Although municipalities want a high quality neighborhood, developers strive for a maximum profit. Municipalities noted that this was a recurring problem in negotiations. The figure right shows the division of ownership with the beginning at several VINEX locations. The diagrams are divided per 3 provinces; North, East, South and West provinces. The darkest color stands for the land in ownership of the municipalities. The lightest color stands for the original landowners. The last colors are the remaining land owners, developers, speculators and construction companies. The figure right shows the division of land ownership just before the start of the execution of the plan.

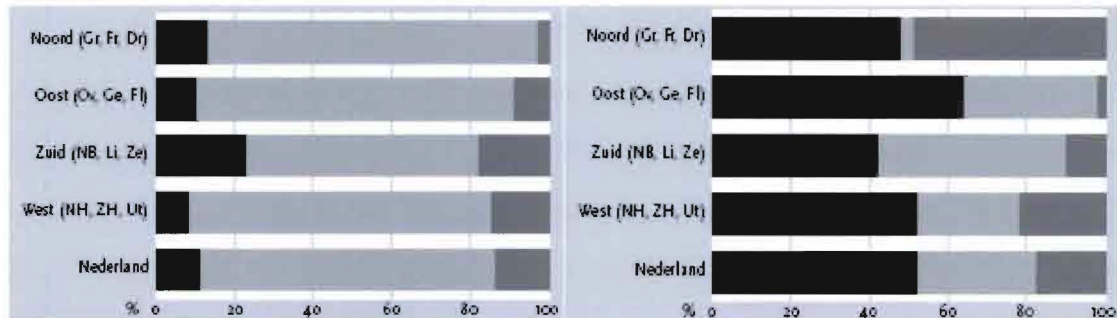


Figure 5: Left is Land ownership at the beginning of project and beginning of infrastructural works by the municipality and right is just at the start of the execution of the plan.

3.6 Impact of ownership constraints urban redevelopment in Holland

Although there is not an extended research to ownership constraints in Holland, this problem is widely acknowledged (Buitelaar et al, 2008), (Louw et al, 2003), (Priemus and Louw, 2003), (Louw, 2008). These papers propose several solutions for the problems with private land owners in Holland. As we have seen before, the government has a strong top-down planning base where active and passive participation are options.

(Louw, 2008) described the land-assembly for the La Gare area project in 's-Hertogenbosch in the Netherlands. The interesting part is the game with public legislation that made it possible to acquire most of the land without the intervention of public law tools. (Louw, 2008), describes the type of land assembly as project-led plan assembly, which means that the

leaders think more about property development and landowner behavior. Instead of plan-led land assembly what often gets a lot of negative attention. In a project-led land assembly process the key issue is to transfer landownership directly from a passive to active landowners. This active landowner is also directly involved with the property development (Louw, 2008). In my case the difference between active and passive landowners is the willingness to transfer the land to an 'active' landowner by the definition of (Louw, 2008).

In his paper, (Louw, 2008) explains the difference between plan-led and project-led land assembly. Project-led land assembly gave the municipality of 's-Hertogenbosch an advantage because the public agents reacted reactive instead of proactive. Because of this, the municipality had a strong leadership in the process. (Louw, 2008) describes the project or plan-led strategy as follows;

	Project-led	Plan-led
Private agents	Proactive	Reactive
Public agents	Reactive	Proactive

Figure 6: Project-led or plan-led land assembly

In the research of (Buitelaar et al, 2008), similar conclusions are made about inner-city transformations. They agree that plan-led assembly is not suitable for these types of transformations. Because of the divided ownership and the impact for ownership constraints, ownership leads the plan. The municipality and private developers are responsible for the acquisition of the land, to transfer it to active stakeholders. Because of the difficulty of transferring these plots from the former owners to active landowners, (Buitelaar et al, 2008) propose Property Aware Planning practices. That means that the municipality should acknowledge the criteria of the landowners to transfer their land. Also they have to assess the price of the land and the exploitation and building costs. With all this in mind, they should assess whether they are willing to acquire the land, or whether it is more beneficiary to put the plot outside plan lines.

4. Decision framework

From literature and interviews with experts we have set a decision framework that the players have to deal with. In this chapter we will explain this framework and work towards the approach of the analysis. With the goal to answer the following research question; which decision criteria are important for the landowner to choose an active or passive strategy in the land acquisition process and how important are these individual decision criteria for his choice? This chapter will explain the definitions of active and passive landowners and municipalities and will discuss the combined outcomes of their strategies.

4.1 Definitions

There are different definitions that we use in the course of this research project. In the literature study became clear which definitions the researchers use. This paragraph explains which definitions are used for landowners and their type of behavior.

Types of landowners

In the research of (Adams et al, 2001b), three different types of land owners are divided;

- Land owners with development as central activity
- Land owners with ancillary interest in development (consists mainly of corporate bodies in both the public and private sectors)
- The third group are owners with occasional interest in development (small and medium sized companies with property for the purposes of their own occupation)

The focus is on the latter two groups; the landowner with a low interest in development. We do not use the first definition because these are professional developers. According to Dutch Law; the Land Development Act; there are enough possibilities to cooperate with professional developers. In our view they do not form a threat for the development process in the same way the latter two groups of landowners do.

4.2 Decision framework

The players choose the strategies which lead to combined outcomes of the game. In the main question of the chapter becomes clear that we presume that landowners and the municipality base these choices on decision criteria. These decision criteria are the outcome of a decision framework, also based on Game Theory. The basis of this theory is that players follow utility maximizing behavior.

This means that the landowner could want as much money for their piece of land. But it could also mean that the landowner aims to keep the land. For the municipality this is the same. It could mean that the municipality wants the land as soon as possible, or that the municipality aims to acquire the land for as little money as possible.

The underlying aim of the players is the basis of the strategy in the game. The players choose a strategy to 'maximize their utility'.

The underlying aim of the players is based on three levels. For the landowners this means that he assesses the relationship between his property and the plan (environmental settings). Besides the personal criteria that influence the landowners, there are also several criteria that are derived from the plan and the negotiation. The size and location of the plan is important for the decision to accept or decline an offer. When a landowner feels more important for the progress of a certain plan, he is more inclined to drive a hard bargain. The same is for the moment in the acquisition process. When you are the last one to be bought out, you are more likely to drive a hard bargain. The behavior of the other landowners is important; you are in each other's vicinity, so you know what is going on. When other landowners decline certain offers, you will be more inclined to think that the municipality does not offer enough.

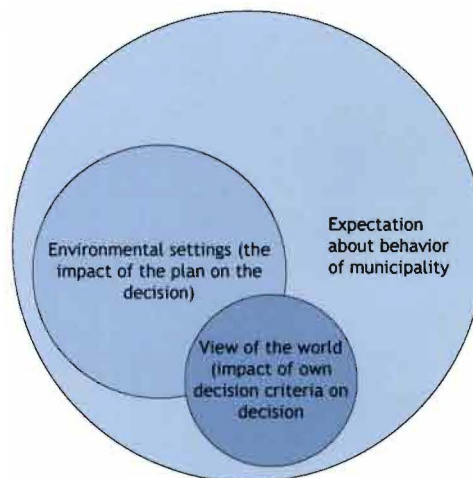


Figure 7: View on the negotiation by landowner (left) and municipality (right)

The last one is the expectation of the behavior of the municipality. It is a constant game between the landowners and the municipality. The municipality has certain tools behind the curtain to obtain the land without cooperation (expropriation, compulsory purchase). When the municipality feels that the negotiation with the landowner not progresses it may choose to use these tools.

4.3 The municipality and her possible strategies

The behavior of the municipality is of key importance in this simulation. An active municipality induces a public track, were the municipality is active in a certain part of the development and acquisition process. When we want to put this in a matrix we see that there is a public and a private side. This knowledge is vital when we want to structure the problem; the process is very different at both sides.

- **Active municipalities** intervene in the acquisition process;
 - They form alliances with active landowners and developers.
 - Their aim is to acquire the land amicable, and make it fit for development.
 - When amicable acquisition does not work, active municipalities are known to use their private law instruments. For instance their tools to acquire the land mandatory (Onteigening).
 - When they acquire land they make it right for building and transfer it to a temporary owner that develops and sell it to the end-user.

- **Passive municipalities** do not or barely intervene in the land acquisition process. They make the legal forms ready so the market can develop the land their selves.

4.4 The landowner and his / her strategies

Besides the strategy of the municipality the landowner should also assess which strategy will lead to the highest payoff in the specific situation. In the situation presented in this study we talk about landowners that are unwilling or unable to develop the land their selves. We choose this constraint to target a very specific group of landowners in the Dutch landmarked. This group is very resistant and when plans are at the point of commencing they can stall the process. There are even examples that municipalities choose to alter the plans and keep parts of the land out of the plan lines.

		Municipality	
		active	passive
landowner	active	AA	AP
	passive	PA	PP

Figure 8: Public and private acquisition

- **Active landowners** are those who make their land available for others to develop. Such owners may try to overcome site constraints to make land more marketable or suitable for development (Adams et al, 2001b).
- **Passive landowners** take no particular steps to market or develop their land, even though they may intend to do so in the distant future, they may respond, or fail to respond, to offers from potential developers, but otherwise they retain their land without development (Adams et al, 2001b).

4.5 Consequences of combined strategies

There is an interdependency of the choices by the municipality and the landowners. As we have seen the players choose a strategy based on several levels. They look at internal decision criteria, environmental settings and on the expected behavior of the opponent. When players behave according utility maximizing behavior this will lead to the choice of the best possible strategy.

In the previous chapters there were drawings of a matrix with first an active or passive municipality and later an active or passive landowner. In those matrixes were 4 combinations of letters; AA, AP, PA and PP. These combinations correspond with the consequences of the combined strategies. For instance, the combination AA means that the municipality chooses an active strategy and the landowner also choose an active strategy. These combinations will lead to the following consequences.

AA – active municipality & active landowner -> the goal of both players is to transfer the land. Because the landowner chooses an active strategy the municipality negotiates amicable.

- **AP – active municipality & passive landowner** -> the goal is to acquire the land, the landowner does not want to market the land actively so the municipality should use their public law instruments to acquire the land.
- **PA – passive municipality & active landowner** -> the goal is to transfer the land, because the municipality is not active in the acquisition process this will lead to negotiations with other potential developers.
- **PP – passive municipality & passive landowner** -> the municipality is passive in the land acquisition market and the landowner does not want to market its plot. Because other developers do not have the public law instruments that the municipality possesses this will lead to a hold-out situation.

When we put all these consequences in a matrix form we get the following matrix. Pay attention that the consequences in the matrix are summaries of the text above!

		municipality	
		active	passive
Landowner	active	Amicable negotiation	Negotiation with developer
	passive	Compulsory purchase	Hold-out by landowner

Figure 9: Strategies and consequences

In a matrix form we see a clear division between two processes. When the municipality takes a passive approach the process will take a public direction. Public companies and people become the most important stakeholders in these processes. This will lead to less involvement by the government, specific it leads to no involvement in acquisition and development activities. The government will always be involved in the process for legal and planning reasons.

Because of several reasons the municipality could also choose an active participation in the acquisition and development process. This will lead to very different outcomes in strategy combinations. When a municipality is active, the landowner ‘almost’ always had to negotiate with the municipality first before they can negotiate with private parties. This is because there are public law instruments; like the right of first refusal. As several interviewees mentioned there is almost no urban land left where the government did not set this public law instrument. An active municipality is also willing to use other public law rights, for instance; when the landowner does not want to sell, an active municipality could use compulsory purchase. In short the municipality has two different strategies, to become active in the land acquisition process or the stay passive.

5. Approach of analysis

Restructuring and transforming of urban areas is a large and difficult process. The land acquisition process is an important part of this process. As seen before the decision of the private landowner to act active or passive is a vital one in the process. The “next steps” in the process depend on this choice. There are different reasons why a municipality and a private landowner will demonstrate an active or passive attitude. In this research project those reasons are qualified as decision criteria.

5.1 Goal of the analysis

The first step in the research project is to gather the decision criteria from the literature and validate them with different experts in the field.

Which decision criteria are most important for the private landowner in the decision to choose a strategy in the land acquisition process?

With the decision criteria I want to measure how important those criteria are for the private landowners. With this approach I always want to answer the following questions;

- Is the land acquisition process the basis for a conflict situation between the two stakeholders in our research?
- What is the definition of an active or passive strategy by the landowner and what are the effects of an active and a passive strategy for the landowner and the municipality?
- How can we measure the decision criteria in which a landowner acts passive or active?
- Which decision criteria and how much do specific decision criteria influence the strategic choice of the landowner?
- Which decision criteria and how much do specific decision criteria influence the strategic choice of the municipality according to the landowners?
- How can we influence the choice of strategy by the landowner?

5.2 Choice of analysis method

For the analysis of the problem we adopted the conjoint preference modeling method (Kemperman, 2000). This to get insight in the choice behavior of landowners when they are confronted with land acquisition processes. Preference modeling is preferred above direct questioning because the respondents cannot manipulate their answers. Even so, many respondents will not be aware of the technique and the answers will not be influenced by former knowledge.

Conjoint preference methods involve construction experimental designs to vary a set of attributes. In such a manner, that the necessary and sufficient conditions to estimate the preference of interest are satisfied (Louviere, Hensher and Swait, 2000). The variables that describe choice alternatives are termed the attributes of these alternatives. And the values of these attributes over which real alternatives range are termed their levels. (Timmermans,

2001). The systematical variance in the levels also gives accurate estimates of the influence of the aspects, in spite of the changing attitude of the respondents (Alexander et al., 1978).

We assume that individuals form impressions or beliefs about various salient attributes of real alternatives; however, because of limitations in human information processing capabilities, time and resource constraints, or differences in personal tastes and preferences, individuals may not consider all available choice alternatives, or use all possible attributes to evaluate alternatives (Louviere and Timmermans, 1990).

Consistent with random utility theory, we further assume that choices are the outcome of a utility maximization process in which individuals try to choose the best option for their circumstances. Furthermore, the notion of information integration is essential to the conceptual framework: the preferences stated by individuals reveal their attribute values or utilities; hence, the functional form of an individual's utility can be diagnosed or tested by designing an appropriate experiment and performing certain statistical analyses on the conjoint preference data (Louviere and Timmermans, 1990).

To answer the questions set in the previous paragraph we want insight in several preferences. First we want to know what the preference is of the landowner; this will be the first question the respondents have to rank on the basis of the negotiation situation. Second, the respondents have to assess what the preference of the municipality would be on the basis on the same negotiation situation. The third questions will be the estimated result of the negotiation. On the basis of the same negation situation which outcome is most likely according to the respondent? By asking this we can assess the fit between the outcome predicted with Game Theory and the outcome predicted by the respondents.

In case of conjoint preference analysis, the goal is to estimate a preference or utility function, implying that respondents are asked to express their degree of preference for the experimentally situation. (Tmmermans, 2001). We will follow the steps of (Kemperman, 2000) for the construction of a conjoint preference model;

1. Elicitation of influential attributes;
2. Specification of relevant attributes and their levels;
3. Choice of measurement task;
4. Selection of experimental design;
5. Constructing the questionnaire;
6. Analyzing the results;

In this chapter we will explain how we have designed the preference model to get the data about the preferences of the landowner. And on the basis of which decision criteria (attributes) they choose an active or passive strategy in the negotiation about a land transaction.

5.3 Elicitation of influential attributes

The first set of decision criteria came from the literature study and from the interviews with the different experts that were consulted. In this part I will talk about the first nine criteria that I found and their decision-making contexts.

1. **(Unrealistic) expectations of price;** There is much interest in literature so owners that constrain the land acquisition because they either set an unrealistic asking prices, or because of unrealistic expectations of the land value (Adams et al. 2001a). Mr. P.S.A. Overwater had some criticism, according to his experience landowners have help from professional agencies like Overwater that helps with the assessment of reasonable price setting.
2. **Uncertainty of possible value and gain;** Owners may keep land of the market when they are uncertain about their own future or are uncertain about the possible improvement of marketability in the future. This type of uncertainty is especially felt in thin and fragile markets, such as many inner-city markets (Healey and Barrett, 1990).
3. **Economic prospects of the owner;** The personal economic prospects of the landowner are important for the choice to keep land in retention (Adams et al, 2001b). It could be the case that the company of the landowner does not thrive well and he is planning to close it. But it is also possible that the company is doing so well that the current location will be too small for future business. There are numerous reasons why the plot could be suitable or less suitable for the landowner in the future.
4. **Trust in municipality;** Do the landowners feel that the municipality will act positive in the negotiation? Trust is a vital part in the negotiation with the municipality. This is because the municipality has far more power in the negotiation than the landowner. Thus whether a deal will be satisfactory for the landowner will ultimately also depend on this factor.
5. **Emotional bond with commodity;** Land is emotion. This is not very new; we all know demonstrations for tree preservation. This is also the case with property. Some people have spent their lives to build a life for themselves at a certain location. Even if compensation is sufficient leaving could still be an emotional burden for the landowner.
6. **Local economic prospects;** Research to contextual influences on ownership behavior, (Adams et al, 2001b); show that local factors certainly influence the behavior of owners. Especially the following points seemed important;
 - The economic performance of the city,
 - Supply and demand for property in the city,
 - The local planning policies of the city.
7. **Size and location in the plan;** The size and locations is very important for the landowner to choose a strategy. According to (Adams et al, 2001a) the landowner that feels his piece of land is important for the plan will drive a hard bargain. In the same paper there are also pieces of land mentioned that are probably not very large, but there are situated at a key location for the progress of the plan (so called ransom strips). For example, a small piece of land just located on the part where the access for the building site is planned etc.
8. **Moment in the acquisition process;** It's commonly known that the place in line will increase chances. When you are the last land owner in the process the chance that you can drive a hard bargain increases significantly. When you are the first in line in the process this will inhabit some landowners to cooperate, but rather stimulate behavior to keep the land in retention. In a private market, the last owner to settle is in the strongest position to drive a hard bargain with any developer who has already bought out all other owners (Adams et al, 2001).

9. **Behavior of other landowners;** How important is the behavior of other landowners when the decision is made to act active or passive. When other landowners will act passive, and keep their land in retention, will that affect the decision to act active or passive?

5.4 Specification of attribute levels and their levels

The decision criteria in the previous were collected through performing desk research. To see whether the list is complete and to validate the decision criteria we chose to perform interviews with experts from the scientific field and practice. I spoke with the following experts about the decision criteria; all are important people with knowledge in the field of land acquisition and urban development.

- **Dr. E. Louw** (researcher OTB Delft)
- **Mr. P.S.A. (Peter) Overwater** (CEO bureau Overwater)
- **Ir. A. Segeren** (researcher Planbureau voor de Leefomgeving)

The first set of decision is too large for the people that have to answer the questions in my survey. According to (Timmermans, 2001), you should limit the number of attributes because the human mind can only handle a limited number of profiles. From the interviews with the experts and according to the definitions of the interviews we choose to limit the attributes to seven different attributes.

In addition to the number of attributes, one also needs to decide on the appropriate levels of each attribute. If one wants to estimate quadratic effects at least three levels are required. Furthermore, the range of the levels should be within the range of current experience and believability. Finally, the attribute levels should cover the range of trade-off held by each individual and competitive trade-offs should be ensured (Kemperman, 2000). According to (Kemperman, 2000) we choose three levels for the decision criteria. In correspondence with the interviewees mentioned above we choose for a low – medium and high level for each attribute. This division of levels is in line with literature of (Kemperman, 2000) and in line with the view of the experts.

By interviewing the three different experts we chose to combine some decision criteria to make the fit with the real situation better. Also the literature helped to form a better view on the different decision criteria (attributes) that are relevant for choice modeling. This resulted in a list of seven decision criteria that are put in a list below.

- **You grade the suitability of your current situation as followed;** here is the grade for the current and future suitability of the current location. The higher the grade the better is the suite of the current location.
Graded with an { 4 or 6 or 8 }
- **You quantify the emotional bond with your current location as followed;** here is the grade for the emotional bond with your current location. The higher the grade the bigger the emotional bond of the landowner.
Graded with { low / medium or high }

- **Level of uncertainty by the landowner whether the municipality is matching the desired value for the land;** this value presents the percentage of uncertainty by the landowner that the municipality will pay the sum that the landowner desires. You should look at value in a broad sense; think about transfer, trade of land etc.
Possible levels for uncertainty { 25% - 50% - 75% },
Where; { 0% no uncertainty and 100% total uncertainty }.
- **You grade the trust in your negotiation partner as followed;** this decision criterion marks the trust in the negotiation partner from the view of the landowner or the municipality.
Possible levels (in the form of grades) for trust: { 4 – 6 – 8 }
- **Your piece of land is of followed importance for the continuance of the plan;** some of the three to be acquired pieces of land is more important than others. An active municipality will strive to acquire all pieces. But will start with the most important pieces.
Possible levels are { small importance - medium importance – big importance },
- **Number of finished deals until now;** this decision criterion handles the moment in the acquisition process. None transfers mean that you are contacted early in the acquisition process. And because there are only three landowners in my survey, 2 transfers mean that you are the last that is contacted.
(None) the other two landowners have not transferred their land
(1 transfer) 1 of the two other landowners has transferred his land
(2 transfers) both other landowners have transferred their land.
- **The other landowners have or most likely will choose the following strategy;** this decision criterion will handle the influence on the choice by other landowners. Will landowners be influenced when the other two landowners act passive?
(both passive) both landowners behave, or will behave passive in the future
(mixed) one of the landowners behaves passive, and the other behaves active.
(both active) both landowners behave, or will behave active in the future.

5.5 Choice of measurement task

With the conjoint preference approach the respondents are asked to rate or rank hypothetical alternatives. Raking tasks require the respondents to order the profiles from the most to least preferred. An alternative way is to ask the respondents first to place the profiles in groups and then to order them within each group (Kemperman, 2000).

In our case we chose to measure the preference of the landowner on the basis of ranking. We choose to let the respondents rank their most preferable outcomes of the conjoint choice. Important is to acknowledge the interdependency of both players (landowner & municipality) to get to the combined outcome. In the decision framework we explained which strategies the players have and to which combined outcomes these lead. To recall;

- **AA – active municipality & active landowner** -> the goal of both players is to transfer the land. Because both players choose an active strategy.
- **AP – active municipality & passive landowner** -> the goal of the municipality is to acquire the land but the landowner does not want to transfer its land. In this case the municipality will use their public law instruments.

- **PA – passive municipality & active landowner** -> the municipality is not active in the process but the landowner is willing to transfer the land to an active landowner. This will lead in negotiation with a private active landowner (developer).
- **PP – passive municipality & passive landowner** -> the municipality is not active and the landowner does not want to transfer the land. This will lead to a hold-out situation. Developers do not have the tools to acquire the land from the landowner.

When we put all these consequences in a matrix form we get the following matrix. Pay attention that the consequences in the matrix are summaries of the text above.

		municipality	
		active	passive
Landowner	active	Amicable negotiation	Negotiation with developer
	passive	Compulsory purchase	Hold-out by landowner

Figure 10: Strategies and consequences

To get the preferences of the landowners clear we will let the respondents answer which combined outcome has their preference. By doing this the respondents have to think about the strategy that will lead to this outcome. The ranking of the most preferable combined outcome will be done by numbering them. The most preferable combined outcome is ranked with 1 and the least preferable combined outcome is ranked with 4. A random example is placed below; in this situation AA (active – active) is the most preferable outcome of the respondent. AP (active landowner – passive municipality) is this respondent's least preferable outcome.

		Municipality	
		Active	Passive
Landowner	Active	1	4
	Passive	3	2

Figure 11: Random answer table from the survey

5.6 Selection of experimental design

We use a fractional factorial design for our decision criteria. In a fractional factorial design, a subset of a full fractional design ($7^3 = 2187$ different alternatives) is used. In our example with 7 decision criteria (attributes) with three levels each, the smallest subset consists of 18 profiles, where all main effects of the decision criteria can be estimated independently. The reduction of the number of profiles is obtained by assuming an additive utility function with

main effects only. Interaction effects are assumed non-significant and hence are ignored. This assumption is often reasonable because main effects account for the largest amount of variance in the response data (Kemperman, 2000).

According to the explanation above we choose the way of structuring our attributes and levels. This resulted in the following 18 profiles according to figure 12. These profiles had to be understandable for the respondents so in the survey they looked like figure 13.

With conjoint preference models and ranking a difficulty is that subjects can only handle a limited number of profiles. That is why we choose to divide the 18 profiles in to two different subsets. The profiles in these subsets were selected random from the entire profile set. And in the survey the order of the profiles within this subset were also random not to induce correlation.

Profile nr.	dc1	dc2	dc3	dc4	dc5	dc6	dc7
1	0	0	0	0	0	0	0
2	0	1	1	2	1	1	1
3	0	2	2	1	2	2	2
4	1	0	1	1	1	2	0
5	1	1	2	0	2	0	1
6	1	2	0	2	0	1	2
7	2	0	2	2	1	0	2
8	2	1	0	1	2	1	0
9	2	2	1	0	0	2	1
10	0	0	2	1	0	1	1
11	0	1	0	0	1	2	2
12	0	2	1	2	2	0	0
13	1	0	0	2	2	2	1
14	1	1	1	1	0	0	2
15	1	2	2	0	1	1	0
16	2	0	1	0	2	1	2
17	2	1	2	2	0	2	0
18	2	2	0	1	1	0	1

Figure 12: the 18 different profile sets with their coding

5.7 Constructing the questionnaire

The questionnaire is build from the eighteen profiles above, divided in two different subsets. This means that every respondent had to answer 9 of these profile sets. We choose this number to keep the questionnaire short so the responds would not lose attention; which leads to optimal response. To give a view of the questionnaire we will give an example of 1 of the 18 profiles and the underlying questions.

The survey was conducted through the internet. I selected a group of 60 experts to act as response in the survey. The experts had to know something about the public law instruments mentioned in this thesis. Besides that criterion, they have to be aware of the difficulties with landowners in revitalization projects. And last they have to know how the Dutch development process works.

From the 60 experts that were asked to fill in the survey, 43 responded. This meant a feedback of 72%, which is a high response. The response is that high because I asked the experts personally to fill in the survey.

As explained before I am interested in the strategic choice of the landowner. To know the strategic choice of the landowner I also want to know the expected behavior of the landowner. Figure 6 (2 chapters back) shows that the decision is made on three levels. The landowner assesses their own situation, the plan oriented decision criteria (environmental settings) and last they anticipate the behavior of the municipality.

5.8 Questionnaire

Below is the environment which the respondents had to take in account. This environment is important to acknowledge for some decision criteria; such as DC7, which implies that there are beside the landowner to other landowners present at the location.

The environment that I created is the following:

Subject of study is the redevelopment of a Brownfield area. The purpose of the research project is to gain knowledge about the **strategic choice behavior of the landowner in the negotiation about the transaction of land**. We make a distinction between two stakeholders: the landowner and the municipality. A developer participates in the environment, but has a low-key role.

In the survey you should **take the role of private landowner**; you're business is situated on a business park location in the Netherlands that the municipality wants to revitalize. The business park is partly in possession of the municipality and there is also a developer with a stake (numbers are not important, but are substantial). He is willing to acquire the land but the developer only gets this possibility if the municipality declines to strike a deal with the landowner. The municipality (or developer) needs to acquire the land of **two other landowners** besides your plot.

The land where you are situated is your property, developing yourself according to the rules and regulations set by the municipality is not your goal. You are not willing or unable to develop the plot yourself! The municipality started conversations with you as well as conversations with the other two landowners.

Questionnaire:

Below is a negotiation situation with the 7 decision criteria with their corresponding values (the dark blue variables change with every negotiation situation, there are in total 18 different of these situations). These values are based on the Stated Choice Analysis method. In this survey you will see a total of 9 of these negotiation situations. From these values you have answer the questions below the situation.

Below you see the 7 decision criteria with a random selection of values. On the basis of these values you have to answer the questions below.	
17	Value
You grade the suitability of your current situation as followed	8
You quantify the emotional bond with your current location as followed	medium
Level of uncertainty by the landowner whether the municipality is matching the desired value for the land	75%
You grade the trust in your negotiation partner as followed	8
Your piece of land is of followed importance for the continuance of the plan	small
Number of finished deals until now	2 transfers
The other landowners have or most likely will choose the following strategy	both passive

Figure 13: Negotiation situation

Below you have to answer three different questions on the basis of the negotiation situation above. To answer the questions in the right way you should know the consequences of the different strategy combinations.

Questions;

Question 1	First you have to fill in what the most preferable combination of strategy is for the landowner. Fill them in the four boxes below, where 1 is the most preferable and 4 is the least preferable.
-------------------	---

		Municipality	
		Active	Passive
Landowner	Active		
	Passive		

Question 2	Second you have to fill in what you think the most preferable combination of strategy is for the municipality. Again with one as the most preferable and 4 as the least preferable.
-------------------	---

		Municipality	
		Active	Passive
Landowner	Active		
	Passive		

Question 3	Mark the combination of strategy that you think is most likely to take place.
-------------------	---

		Municipality	
		Active	Passive
Landowner	Active		
	Passive		

5.9 Analyzing the results

We used effect coding to code the decision criteria and ordinary least regression (OLS) will be used to estimate the utility function. When effect coding is used, attribute levels are coded as 1 on their corresponding vector, except for one of the attribute levels which is coded as -1 on all vectors. The sum of the effects is equal to zero for each attribute. The intercept is equal to the grand mean of the dependent variable, and the parameter estimates are equal to the deviation of the mean of the attribute level assigned 1's in the corresponding vector from the grand (Kemperman, 2000).

We will use Game Theory to predict the outcomes of the first two questions. With regression we will analyze which decision criteria are responsible for the game theoretical outcomes.

To test whether the estimated choice model significantly improves the null model, the log likelihood value at convergence LL (B) can be compared with the log likelihood of the null choice model LL (0). This is tested using the likelihood ratio test statistic; $G2 = -2[LL(0) - LL(B)]$, which tests for the hypothesis that all parameters are equal to zero. This statistic is asymptotically chi-squared distributed with degrees of freedom equal to the number of free parameters in the model (Kemperman, 2000).

The goodness of fit will be measured by assessing McFadden's rho square.

$$\text{Rho square} = 1 - LL(B) / LL(0).$$

5.10 Predict the outcome with Game Theory

The mathematical theory of games was invented by John von Neumann and Oskar Morgenstern in 1944. Since at least the late 1970's it has been possible to say with confidence that Game Theory is the most important and useful tool in the analyst's kit whenever she confronts situations in which what counts as one agent's best action depends on expectations about what one or more other agents will do, and what counts as their best action similar depends on expectations about her (Game Theory, 2006).

The assumptions made by Game Theory are done for structuring the situation of analysis. The assumptions are the following;

- You have to act (Doing nothing is an act).
- Your payoff depends both on what you do and on what other designated payers do.
- You do not know what they will do – but you know what they could do.
- They do not know what you will do.

This is what Game Theory is all about. Game Theory is useful because it could be used as a subsidiary inquiry that can be applied to negotiations. Game theorists do not agree with the notion that their work is a part of negotiation analysis, but is indeed very applicable. That is why this form of analytic approach is used in this thesis (Game Theory, 2006). In the simplest case in there are just two players that are participating and each having two alternative choices. The two matrix games are alike in that they all have according to; (Game Theory, 2006).

- **Fixed strategies;** you have to choose one of two prespecified strategies. There is no innovation, no creation of alternatives.
- **Two alternatives;** you are concerned about the choice to be made by just one other player. Simplest case: he or she also has just two alternatives.
- **Perfect information;** for each choice of alternatives (one chose independently by you and one by the other player) there will be a joint consequence. You and the other player have accurate knowledge of all possible consequences and of each other’s preferences.
- **Common knowledge;** you know the other player’s possible choices; he or she knows yours; you both know to other knows; and vice versa. The choice sets for each are common knowledge.
- **Simultaneous choices;** each of you must choose simultaneously; or equivalently, the second chooser does not know the choice of the first chooser.
- **No cheap talk;** there is to be no pre play discussion, known as cheap talk, between the players.

This is the setup for the simplest, nontrivial class of games. An amazing variety of games fall under this very restrictive set of assumptions. Appendix seven will show negotiation theory and how standard games could be analyzed. The setup for the prediction will be explained during the analysis of the data. We will use the matrix as shown before, where both players have a choice between two different strategies that lead to a combined equilibrium.

		Municipality	
		active	passive
landowner	active	AA	AP
	passive	PA	PP

Figure 14: Strategies of players and equilibria

6. Results of the analysis

This chapter will explain all the data and will show what the conclusions are that could be drawn from the data. The first part of the chapter will be about the overall answers that were given.

It is very important throughout this chapter that you as reader recognize that the survey was taken from the viewpoint of the landowner. And that question two was not the most preferable strategy of the municipality, but what you as landowner expects of the strategy of the municipality.

6.1 Research questions specified on the data

Which decision criteria are most important for the private landowner in the decision to choose a strategy in the land acquisition process?

The next questions are about the conflict situation that is perceived in land acquisition

- Which outcomes are predicted the most by Game Theory and the respondents?
- Do the outcomes from Game Theory fit with the outcomes by the respondents?
- Which decision criteria increase the chance on conflict situations?

The following questions answer which decision criteria influence the choice of strategy

- Which decision criteria influence the choice of strategy for the landowner?
- According to the landowners which decision criteria influence the choice of strategy of the municipality?

How can we influence the process of land acquisition?

- How can we influence the choice of strategy by the landowner?

6.2 Which outcomes are predicted most by Game Theory

The first questions together predict outcomes that can be analyzed with Game Theory. With the first question we ask for the preference by the landowner and with the second the landowner had to address the possible preference of the municipality. We should remember the rules by Game Theory in the last paragraph of the last chapter. And we should acknowledge the interdependency of the both stakeholders, that they behave rational and display payoff maximizing behavior.

An outcome of a game in Game Theory is equilibrium; this is a solid state in the game where the best possible outcome for both players is reached. This does not have to mean that this will not result in a conflict situation, because the payoff of one stakeholder could be significantly lower than the other in the equilibrium. There are two basic means to look for these equilibriums in the dataset. For one you could look where both players have a dominant strategy and thus equilibrium is reached. The second is to look for iterative dominant cases,

where one of the two players has a dominant strategy and the other is forced in a possible less optimal equilibrium. First I will explain the theory behind these two types of dominance.

Equilibria predicted by dominance

Dominance means that both players have a dominant strategy, so there are two options for both players; active or passive. See the following enumeration;

1. Active dominant strategy landowner; ($AA > PA$) & ($AP > PP$)
2. Passive dominant strategy landowner; ($PA > AA$) & ($PP > AP$)
3. Active dominant strategy municipality; ($AA > AP$) & ($PA > PP$)
4. Passive dominant strategy municipality; ($AP > AA$) & ($PP > PA$)

		Municipality	
		active	passive
landowner	active	AA	AP
	passive	PA	PP

Figure 15: Game Theory matrix to explain dominance and iterative dominance

When both players have a dominant strategy this could lead to equilibrium. I will explain one as example, but it should be clear that there are a total of 4 equilibria possible.

Municipality has an active dominant strategy; ($AA > AP$) & ($PA > PP$)
 Landowner has also an active dominant strategy; ($AA > PA$) & ($AP > PP$)
 This will lead to equilibrium in AA (Active-Active) because this is the equilibrium that both players prefer. The figure below illustrates this;

		Municipality	
		active	passive
landowner	active	AA*	AP
	passive	PA	PP

Figure 16: Example equilibrium by dominant strategy

Equilibria predicted by iterative dominance

Iterative dominance is almost the same but now only one of the two players has an obvious dominant strategy which will leave the other player a choice between two less interesting options. We have to acknowledge this as a possible conflict situation. The other equilibrium is

a clean equilibrium where both players in theory maximize their payoff. But iterative dominance is the equilibrium where only one of the players reaches an “optimal” payoff.

We will explain the equilibrium by iterative dominance (u-IDAA = landowner is iterative dominated towards AA) that is most found in the dataset. That is where the landowner is iteratively dominated towards an active strategy by an active municipality. This situation is realistic because often amicable negotiation is a better alternative than compulsory purchase.

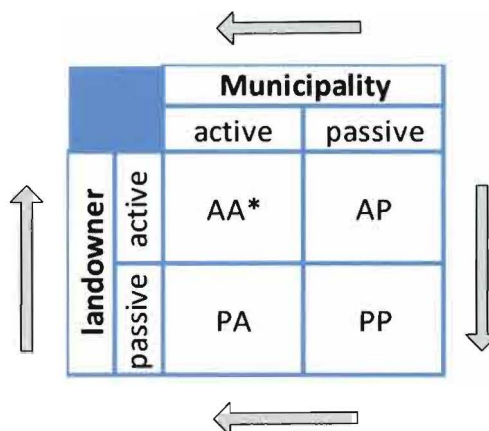


Figure 17: Situation where the landowner is iterative dominated towards AA

Outcomes predicted by dominance and iterative dominance in the dataset

As shown in the explanation dominant strategies together could result in a pure equilibrium and when 1 of the two stakeholders the equilibrium could end in iterative dominance.

Dominant strategy				Dominant strategy			
landowner	Freq.	Percent	Cum.	municipality	Freq.	Percent	Cum.
active strategy	154	39,79%	39,79%	active strategy	220	56,85%	56,85%
passive strategy	130	33,59%	73,39%	passive strategy	74	19,12%	75,97%
none	103	26,61%	100,00%	none	93	24,03%	100,00%
Total	387	100,00%		Total	387	100,00%	

Figure 18: Game theoretical outcome of strategies

Below is the table that shows how Game Theory predicts the games by dominance or iterative dominance. There are a total of 387 games in the entire dataset and the dataset leaves 33 games unpredicted by dominance or iterative dominance. These games are the games with none or two equilibria, that are possible conflict situation and we will discuss these later in this chapter. The prediction by Game Theory does not mean direct that there are only 33 conflict situations. As we have seen above all iterative dominant predicted games are also a sort of conflict situation. And also pure Nash-equilibria could lead to a conflict when the payoff for one of the two stakeholders is insufficient.

The table below shows Nash-equilibria predicted by dominance and iterative dominance. AA is an equilibrium predicted by Nash (through question 1 & 2). Landowner-IDAA means that the landowner is iterative dominated towards AA (less optimal outcome for landowner). And

municipality-IDPP means that the municipality is iterative dominated towards PP (hold-out situation).

Gametheoretical prediction about the outcome on the basis of dominant strategy or iterative dominance	Freq.	Percent	Cum.
AA	94	24,29%	24,29%
AP	28	7,24%	31,52%
PA	70	18,09%	49,61%
PP	32	8,27%	57,88%
landowner-IDAA	35	9,04%	66,93%
landowner-IDAP	4	1,03%	67,96%
landowner-IDPA	21	5,43%	73,39%
landowner-IDPP	10	2,58%	75,97%
municipality-IDAA	14	3,62%	79,59%
municipality-IDAP	18	4,65%	84,24%
municipality-IDPA	17	4,39%	88,63%
municipality-IDPP	11	2,84%	91,47%
none	33	8,53%	100,00%
Total	387	100,00%	

Figure 19: Prediction by dominance of iterative dominance

From the data I do conclude that the overall outcomes predicted by Game Theory towards a situation where the municipality is active (64%). It was expected that more games would end in equilibria with an active municipality. It is common knowledge that the municipality aims to acquire the land amicable but is not scared to use their public law instruments. The change on retention because of a passive municipality is small in the real world.

The landowners are far more iterative dominated towards AA or PA; the active strategy of the municipality. The case where the landowner is iterative dominated towards AA, means that the municipality has a clear active dominant strategy which leaves the landowner the choice between AA of PA (less attractive according to the specific set of decision criteria).

In our view this is in line with the reality where the municipality is often active and the municipality aims to let the process end in amicable negotiation. In this specific case the landowner has a negative set of decision criteria which leaves him with the desire to keep the land in retention or negotiate with another developer. This implies that the trust in the municipality is also low. The landowner is forced in a less optimal outcome by the municipality what is a conflict situation.

We will use the cases where the landowner is iterative dominated towards an outcome that is less preferable as conflict situations. Also the cases where the municipality is iterative dominated are possible conflict situations.

6.3 Do the outcomes of Game Theory fit the prediction by the respondents?

This paragraph will deal with the question whether the respondents predicted the same outcome in question 3 (remember the set-up of the survey) and the outcome of Game Theory. There are several conclusions that could be drawn from this chapter. For one we could look at the number of correct predictions by the respondents. Second we can look at the percentage of specific game theoretical outcomes that are also predicted at question three.

Predicted outcome Game theory (D)= predicted outcome respondent	Freq	Percent	Cum.	Pred. nr.	
				by GT	% right
same AA Nash	69	40,4%	40,4%	94	73,4%
same AP Nash	22	12,9%	53,2%	28	78,6%
same PA Nash	56	32,7%	86,0%	70	80,0%
same PP Nash	24	14,0%	100,0%	32	75,0%
Total	171	100,0%		224	76,3%
<hr/>					
Predicted outcome Game theory (ID) = predicted outcome respondent	Freq.	Percent	Cum.	Pred. nr.	
				by GT	% right
landowner-IDAA	18	33,3%	33,3%	35	51,4%
landowner-IDAP	0	0,0%	33,3%	4	0,0%
landowner-IDPA	14	25,9%	59,3%	21	66,7%
landowner-IDPP	8	14,8%	74,1%	10	80,0%
municipality-IDAA	8	14,8%	88,9%	14	57,1%
municipality-IDAP	2	3,7%	92,6%	18	11,1%
municipality-IDPA	1	1,9%	94,4%	17	5,9%
municipality-IDPP	3	5,6%	100,0%	11	27,3%
Total	54			130	41,5%
<hr/>					
Totaal predicted by resp & GT	225			354	63,6%

Figure 20: percentage of right predictions by respondents about outcomes by GT

Of the total of 354 games that could be predicted by Game Theory (are the games with 1 equilibrium) 225 are predicted right by the respondents which is 63,6%. The respondents clearly have a good view of the problem because with the predicted Nash equilibriums the % that are predicted high are much higher; around 73% - 80%. The cases with iterative dominance were lower; from the iterative cases about 42% were predicted right by the respondents at question three.

From this we conclude that there is a small basis for conflict situation. Although the pure Nash equilibria imply that strategies that are adopted by the players the respondents can be predicted by the respondents. The correct predictions by the iterative dominance games are much lower which is logical because it is a more difficult situation. The view from the landowner it is interesting that many landowner acknowledge (possibly not conscious) that there is a high change on iterative domination. The low correct prediction could be the case

because conscious landowners don't want to be iterative dominated, because this leaves them with a lower payoff.

6.4 Decision criteria that influence conflict situations

The optimal score within the Nash-equilibria show how optimal the equilibria are predicted by Game Theory and how they are predicted by the interviewees. We have seen in the dataset that 91% of the total dataset end in an equilibrium explained by dominance or iterative dominance. The other 9% are pure conflict situations; there are eleven games with no equilibria and 22 games with 2 equilibria. As we have seen in the previous paragraph this are not the only possible conflict situations. We have shown that iterative dominance could be a conflict situation. Also we have shown that 37% of the respondents predict another outcome that Game Theory, this could also imply that a conflict situation arises.

Number of pure Nash-equilibria per game	Freq.	Percent	Cum.
0	11	2,98%	2,98%
1	336	91,06%	94,04%
2	22	5,96%	100,00%
Total	369	100,00%	

Figure 21: Data from survey; number of Nash-equilibria per game

Before we look at the decision criteria that influence the chance on conflict situations we will explain which situations can become conflict situations. We define several conflict situations; iterative dominance is a conflict situation and also another answer at question three is a possible conflict situation. As we know iterative dominance could leave both or one of the players with a lower payoff than the optimum. We can look at the scores of the outcomes predicted by Game Theory and look where Game Theory predicts a low outcome for one or both player at equilibrium situations. These are possibly some iterative dominant cases and also cases where respondents choose for another outcome in question three.

We counted the cases where the combined outcome of the stakeholders is (4 or higher) as possible conflict situations. Because a combined outcome of 4 or higher means that both or one of both players do not reach their maximum payoff in the acquisition process. A remark should be made about this conclusion because a payoff of (2,2) does not have to mean that the players experience this as conflict situation. We will take this in account in the data analysis by regression.

There are 33 pure conflict situation based on none or two equilibria. There are $94 + 39 + 4 = 137$ possible conflict situations because of low payoffs for one or both players. This means that there are a total of $137 + 33 = 170$ possible conflict situations. Which means that $170 / 387 * 100\% = 44\%$ of the cases are possible conflicts situations. This is a basis to look at the interdependency between these conflict situations and the decision criteria.

Totalscores of combined payoffs with Nash-equilibria	Freq.	Percent	Cum.
2	104	29,38%	29,38%
3	113	31,92%	61,30%
4	94	26,55%	87,85%
5	39	11,02%	98,87%
6	4	1,13%	100,00%
Total	354	100,00%	

Figure 22: optimal scores with pure Nash equilibria

The parameters of the MNL model were estimated by maximum likelihood estimation. The software package STATA was used to estimate the parameters of the model. The estimated parameters of both stakeholders groups are displayed in the table below. We did not measure interaction effects.

Valid attributes	Levels	Conflict situations by none or two equilibria			Conflict situations because of low payoff		
		Utilities	Significance	Range value	Utilities	Significance	Range value
Plan specific constant		-2,88	0		-0,698	0	
Suitability of the current situation (graded)	4	0,10	0,79	0,52	-0,26	0,13	0,32
	6	0,26	0,48		0,20	0,21	
	8	-0,36			0,06		
Emotional bond with the commodity	low	-0,23	0,49	0,68	-0,25	0,13	0,71
	medium	0,45	0,17		-0,21	0,22	
	high	-0,22			0,46		
Uncertainty about offer by municipality	25%	-0,44	0,22	0,25	0,08	0,64	0,15
	50%	0,63	0,05		-0,31	0,06	
	75%	-0,19			0,23		
Trust in negotiation partner (graded)	4	0,65	0,04	1,29	0,03	0,83	0,50
	6	-0,01	0,99		0,44	0,01	
	8	-0,64			-0,47		
Importance of land for development progress	low	0,55	0,08	1,10	-0,26	0,12	0,47
	medium	0,00			0,05	0,78	
	high	-0,55			0,21		
Number of finished deals until now	0	0,68	0,07	2,35	0,43	0,01	0,83
	1	0,99	0,00		-0,03	0,86	
	2	-1,67			-0,40		
Strategic choice of other landowners	both pas	0,37	0,22	1,07	0,13	0,41	0,01
	mixed	-0,48	0,25		-0,25	0,14	
	both acti	0,11			0,12		
Adjusted Rho-square		0,11			0,08		
Log likelyhood function		-100,93	23,72		-232,55	37,91	
Log likelyhood null model		-112,79			-232,93		

Figure 23: Estimation of parameters that influence conflict situations

Goodness-of-fit measures

For the models that predict which decision criteria increase the chance on conflict situations we performed goodness-of-fit measures. The adjusted Rho-squares indicate the proportion of variability in a data set that is accounted for by a statistical model, in my case they are 0,11 for pure conflict situations & 0,08 for low payoffs. This does not indicate a fair fit of the model but because the model predicts individual choice we accept this fit. And to prove we have a good model we will see whether we predict better than the null model.

$$-2 (LL_{\text{null}} - LL_{\text{mnl}}) \sim \chi^2_{(\text{degrees of freedom})} \quad (3)$$

For the outcome with the pure equilibria (no and two equilibria), the outcome is 23,72. This model should be compared with the critical value of chi-square with 13 degrees of freedom (dc5b was not valid; model estimation without this decision criteria); which is 22,36. This implies that our model performs better than the null model. And for the model of the possible conflict situations the outcome of the model is 37,91. This is compared with the critical value of chi-square of 23,68; thus our model performs better than the null model.

Results of the analysis

The table shows that not all attributes are significant. For the pure conflict situations there are three significant attributes; uncertainty about offer, trust in municipality and the number of finished deals. For the possible conflict situation 'because of less optimal equilibria', two of these three attributes are significant; trust in municipality and the number of finished deals. The constants are negative (-2,88 & -0,698) which implies that this situation will not occur much. That data underlines this conclusion because there are only 9% pure conflict situation and 30% possible conflict situations because of less optimal outcomes.

As we interpret the significant outcomes, we find that the decision criteria 'trust in negotiation partner' and 'number of finished deals' are important for the chance on conflict situations. Decision criteria three is valid in the data, but because the effect coding did not result in a good distributed set it is difficult to draw conclusions from the data. The decision criteria 'number of finished deals' shows a higher range value which indicates that this criterion has more influence on the chance of conflict situations than the other decision criteria. A high level of both attributes increases the chance on conflict situations, and low level of these attributes decreases the chance on conflict situations. The range values indicate that the decision criteria for 'conflict situations by none or two equilibria' are more important because the range value is bigger. For the other conflict situations the range values are very low and thus the influence of individual decision criteria is also.

6.5 Decision criteria that influence the choice of a dominant strategy

This paragraph investigates the decision criteria that are important for the choice of the landowner and the municipality to choose an active or passive strategy. As seen in de explanation about Game Theory the interdependency of the choice is an important part. Both players should acknowledge that the outcome of the game is a combination of their choice and the choice of the opponent (interdependency). As seen in previous chapters the choice of

dominant strategy by the landowner is divided. The figure below (as seen earlier) illustrates this statement; 40% of the dominant strategies were active in contrast to 33% of passive strategies.

Dominant strategy landowner	Freq.	Percent	Cum.	Dominant strategy municipality	Freq.	Percent	Cum.
active strategy	154	39,79%	39,79%	active strategy	220	56,85%	56,85%
passive strategy	130	33,59%	73,39%	passive strategy	74	19,12%	75,97%
none	103	26,61%	100,00%	none	93	24,03%	100,00%
Total	387	100,00%		Total	387	100,00%	

Figure 24: Game theoretical outcome of strategies

The answers for the municipality are much more linear. The respondents (landowners) think that the municipality will often choose an active strategy in the land acquisition process; 57% in contrast to 19% passive strategies. This is in line with expectations when we look at real life situations. Where a Dutch lower government often leads development processes, and has the tools and incentive to lead acquisition processes. By using regressions and the STATA package we want to see which decision criteria are important for the choice of the landowner & municipality to choose an active or passive strategy in the acquisition process.

Valid attributes	Levels	Active behavior of landowner			Active behavior of municipality		
		Utilities	Significance	Range value	Utilities	Significance	Range value
Plan specific constant		-0,45	0		0,41	0,00	
Suitability of the current situation (graded)	4	0,73	0,00	1,32	-0,07	0,71	0,20
	6	-0,14	0,38		-0,07	0,72	
	8	-0,59			0,13		
Emotional bond with the commodity	low	0,66	0,00	1,35	0,03	0,86	0,11
	medium	0,03	0,83		-0,17	0,32	
	high	-0,69			0,14		
Uncertainty about offer by municipality	25%	-0,11	0,51	0,16	0,29	0,13	0,47
	50%	0,06	0,68		-0,11	0,52	
	75%	0,05			-0,18		
Trust in negotiation partner (graded)	4	-0,10	0,53	0,16	-0,54	0,00	1,02
	6	0,04	0,81		0,06	0,75	
	8	0,06			0,48		
Importance of land for development progress	low	0,09	0,57	0,12	-1,33	0,00	2,68
	medium	-0,07	0,68		-0,03	0,88	
	high	-0,03			1,35		
Number of finished deals until now	0	0,04	0,78	0,10	0,20	0,25	0,00
	1	-0,10	0,53		-0,41	0,02	
	2	0,06			0,20		
Strategic choice of other landowners	both pas	-0,07	0,65	0,07	-0,21	0,24	0,29
	mixed	0,07	0,66		0,29	0,12	
	both acti	0,00			-0,08		
Adjusted Rho-square		0,10			0,20		
Log likelyhood function		-235,16	49,93		-210,99	107,24	
Log likelyhood null model		-260,13			-264,67		

Figure 25: Regressions analysis on active behavior

Goodness-of-fit measures

For the models that predict which decision criteria increase the chance on active behavior. The adjusted Rho-squares indicate the proportion of variability in a data set that is accounted for by a statistical model, in my case they are 0,10 for the prediction of landowner behavior and 0,20 for the prediction of municipality behavior. This indicates a better model for the prediction of the behavior of the municipality than landowner behavior. The fit of the municipality is sufficient, and as said before we accept the fit for the landowner because it indicates individual choice.

$$-2 (LL_{null} - LL_{mnl}) \sim X^2_{(degrees\ of\ freedom)} \quad (3)$$

For the comparison with the null model, we see that both our models predict better then the null model. We see values of (49,93 for the landowner) and (107,24) for the prediction of the municipality.

Valid attributes	Levels	Passive behavior of landowner			Passive behavior of municipality		
		Utilities	Significance	Range value	Utilities	Significance	Range value
Plan specific constant		-0,79	0		-2,05	0,00	
Suitability of the current situation (graded)	4	-0,05	0,00	0,14	0,00		0,00
	6	0,24	0,15		0,14	0,61	
	8	-0,19			-0,14		
Emotional bond with the commodity	low	-0,66	0,00	1,42	0,42	0,12	0,92
	medium	-0,09	0,58		0,08	0,75	
	high	0,76			-0,50		
Uncertainty about offer by municipality	25%	0,29	0,09	0,37	-0,48	0,11	0,78
	50%	-0,21	0,21		0,18	0,48	
	75%	-0,08			0,30		
Trust in negotiation partner (graded)	4	0,19	0,25	0,14	0,49	0,07	0,54
	6	-0,24	0,17		-0,44	0,20	
	8	0,05			-0,05		
Importance of land for development progress	low	-0,13	0,47	0,29	1,68	0,00	3,35
	medium	-0,03	0,87		0,00	1,00	
	high	0,16			-1,67		
Number of finished deals untill now	0	0,24	0,14	0,35	-0,03	0,90	0,07
	1	-0,15	0,40		-0,01	0,98	
	2	0,11			0,04		
Strategic choice of other landowners	both pas	-0,07	0,67	0,94	0,14	0,58	0,12
	mixed	-0,79	0,55		-0,15	0,56	
	both acti	0,87			0,02		
Adjusted Rho-square		0,08			0,21		
Log likelihood function		-226,70	40,64		-149,51	78,67	
Log likelihood null model		-247,02			-188,85		

Figure 26: Regression analysis on passive behavior

Goodness-of-fit measures

For the models that predict which decision criteria increase the chance on passive behavior we performed goodness-of-fit measures. The adjusted Rho-squares indicate the proportion of variability in a data set that is accounted for by a statistical model, in my case they are 0,08 for the prediction of landowner behavior and 0,21 for the prediction of municipality behavior. This indicates a better model for the prediction of the behavior of the municipality than landowner behavior. The fit of the municipality is sufficient, and as said before we accept the fit for the landowner because it indicates individual choice.

$$-2 (LL_{\text{null}} - LL_{\text{mnl}}) \sim \chi^2_{(\text{degrees of freedom})} \quad (3)$$

For the comparison with the null model, we see that both our models predict better than the null model. We see values of 40,64 for the landowner and 78,67 for the prediction of the municipality.

Results of the analysis

When we look at the results of the regression we can conclude that the landowner has a more internal view in the choice for a dominant strategy. This in contrast to the municipality; where the more external decision criteria are important for the choice.

Behavior of the landowner can be predicted by two decision criteria; first 'suitability of the current situation' and the 'emotional bond with the commodity'. In the choice of an active dominant strategy the range values of these decision criteria is almost the same. This implies that for the choice of an active dominant strategy both decision criteria are of the same importance. A low value for these attributes increases the chance on an active strategy of the landowner. With the choice of a passive strategy the first decision criteria is not linear. We already saw this with the conflict situations. Because we cannot interpret this decision criterion for the choice of a passive dominant strategy we focus on the second. Emotional bond with the current location is only important decision criteria for the choice of a passive dominant strategy. A high value for the emotional bond increases the chance for the choice of a passive strategy by the landowner.

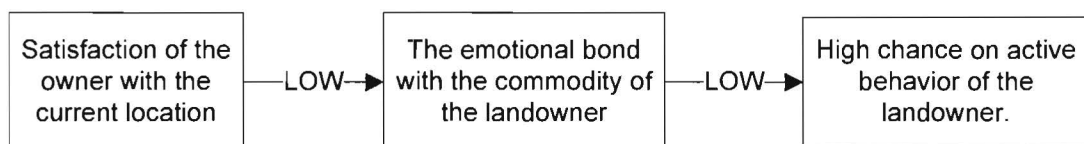


Figure 27: Assessment of landowner behavior

For the choice of an active strategy of the municipality decision criteria four and five are important; 'trust in negotiation partner' & 'importance of land for the development progress'. As said before these are more external oriented decision criteria. When we look at the range values we see that the second is more important for the choice than the first. The range value of 'importance of land for the development progress' is two and a half times more important than the first. High values for these decision criteria increase the chance on an active strategy of the municipality. For the choice of a passive dominant strategy only decision criterion five is important; 'importance of land for the development progress'. And the range value indicates

that this decision criterion is very important for the choice of a passive strategy. A low value for this decision criterion increases the chance on a passive dominant strategy for the municipality.

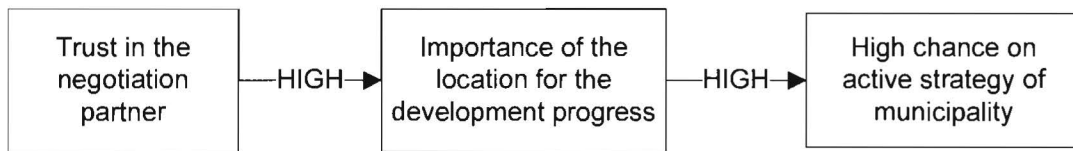


Figure 28: Assessment of municipality behavior

6.6 Which decision that influence outcomes by iterative dominance

In the data was visible how many games could be predicted by Game Theory. From literature and interviews became clear that the municipality aims to end the negotiations amicable. From this knowledge we presume that under the “New Land Development Act, issued July 1st 2008”, the following combined outcomes are most beneficial for the municipality (green marked).

		Municipality	
		active	passive
landowner	active	AA	AP
	passive	PA	d

Figure 29: Most preferable outcomes for the municipality

We have seen in the previous chapter which decision criteria influence the choice of the landowner to adopt active role in the acquisition process. These are not the only outcomes from the game theoretical predictions. We have also looked at the 8 different cases where one of the two players are iterative dominated. Unfortunately the data was invalid in seven of the eight cases. The case were the regression analysis was valid was where the landowner is dominated towards AA. This means that the municipality has an obvious dominant active strategy which leaves the landowner with the less optimal choice between compulsory purchase and amicable acquisition.

Only decision criteria 1 influence this outcome, a low value for the ‘suitability of the current location’ increases the chance on iterative domination.

6.7 Responses that where expected but not found in the dataset

This paragraph will deal with the responses that I would have expected but were not found in the data. At the start of the research project I had a view on the problem which resulted in a hypothesis. For one I thought that a difference in view about the value of the land resulted into a slow decision process. The following issues were expected but not found in the dataset;

- The seven decision criteria are not all represented in the data outcome.
- Low impact of environmental settings on the choice of the landowner.
- Low influence of landowner behavior on the choice of the municipality.

Seven decision criteria

The seven decision criteria were put in the analysis because they seemed relevant for the decision process of the landowner. Two of the seven decision criteria are not represented in the data; 'uncertainty whether municipality will match the desired value' & 'behavior of other landowners'. From the international literature (England) the third decision criteria is very important, (Adams et al. 2001a) claim that uncertainty about the value of land is a key factor in land retention. Also the seventh decision criteria seemed important for the decision process of the individual landowner. By reflection of the strategy by the other landowners the choice of strategy of the individual landowner could be affected. But this is not the case according to the data presented.

Decision criteria 3 could not have an impact on the choice because the criteria are about the uncertainty of the value. There is always uncertainty about the value that the municipality will pay for the land, and other decision criteria seem to be more important. The seventh decision could be of less importance because the landowners find the internal decision criteria more important than the external decision criteria. This is a perfect explanation for the reason why this decision criterion is not valid for the landowner. For the municipality the behavior of other landowners is even less important. They negotiate with each landowner individually and the behavior of other landowners does not influence the negotiation with the landowner.

Low impact of external decision criteria

The decision criteria were specifically set on the decision making of the landowner. Anticipated was that the decision to cooperate was influenced by the external decision criteria (DC3, DC4, DC5, DC6 & DC7). But from the data none of these external decision criteria seemed to have influence on the choice of the individual landowner to choose a dominant active or passive strategy. This is interesting because all these decision criteria were set on the choice of the landowner.

Low influence of landowner behavior on the choice of municipality

Pay attention, the collected data is from the view of the landowner. But this means that the landowner thinks that their behavior has almost no influence on the choice of the municipality to adopt a strategy. Even more so, decision criteria 4, and especially 5 are the only important decision criteria for the municipality according to the landowner.

Why decision criteria five seem important for the municipality according to landowners is obvious. The development process is of key importance for the municipality and also the drive to start an acquisition process. Also decision criteria four is important for the municipality according to the landowners. This is something that was not expected, because the municipality has a bigger influence and then you would think that trust is of less importance. I expected that trust was a bigger factor for the landowners. From literature and interviews two statements are often made, one is that land is emotion and overall trust in the municipality is low. The contrary seems right from the data, not the trust in the municipality is important but the trust in the landowner.

7. Conclusion and discussion

This chapter will entail the details from the data collection and the conclusions that can be drawn from the data. First the paragraph will review the research questions that should be answered by the data. The main research question is the most important question of the research project and also the only one that should be answered through a data collection. To recall;

What are the decision criteria for the landowner to act active or passive on the land market, and how much do these decision criteria influence the choice of the landowner to behave active or passive in the negotiation?

7.1 Conclusion

The decision criteria that made the survey are found in international literature and validated / altered through interviews with experts around the field. The decision criteria that seemed important for the landowner to choose an active or passive strategy in the negotiation process with the municipality are the following;

- DC 1. The suitability of the current location.
- DC 2. The emotional bond with the current location.
- DC 3. Level of uncertainty by the landowner whether the municipality is matching the desired value for the land.
- DC 4. Trust in the negotiation partner.
- DC 5. Importance of land for the development progress.
- DC 6. Number of finished deals until now.
- DC 7. Strategy (active / passive) of the other private landowners. (see paragraph 5.3)

The decision criteria were put in a survey using stated choice analysis and the respondents were asked to answer their most preferable outcomes from the landowner's point of view. Also they had to assess what they thought the municipality would do. With these two answers together we could look at the most likely outcomes according to the respondents (landowners). With the last question where we asked the respondents to predict the outcome to see if respondents could predict the outcome by looking at the decision criteria. First of all it was interesting to see that the respondents answered in such a way that the municipality is behaving more active in the negotiation than passive (57% active / 19% passive). The answers for the respondents are far more divided (40% active / 33% passive). This shows that the landowners are far more influenced by the decision criteria than the municipality (see paragraph 6.2). Because of this chance on a dominant strategy of the municipality it is very visible that the landowners are often iterative dominated towards two less attractive choices (see paragraph 6.6).

Which decision criteria influence the chance on conflict situations?

A high level of decision criteria 4 (trust in negotiation partner) and DC6 (number of finished deals until now) increases the chance on conflict situations, and low level of these attributes decreases the chance on conflict situations.

Which decision criteria influences landowner behavior?

Behavior of the landowner can be predicted by two decision criteria; first 'suitability of the current situation' and the 'emotional bond with the commodity'. In the choice of an active dominant strategy the range values of these decision criteria is almost the same. This implies that for the choice of an active dominant strategy both decision criteria are of the same importance. A low value for these attributes increases the chance on an active strategy of the landowner.

In the case of passive strategy the chance only increases or decreases because of one decision criteria (DC2; the emotional bond with the current location). A high value for the emotional bond increases the chance that the landowner will act passive.

From the landowners perspective; which decision criteria influence municipality behavior?

For the choice of an active strategy of the municipality decision criteria four and five are most important; 'trust in negotiation partner' & 'importance of land for the development progress'. When we look at the range values of the decision criteria we see that the second is more important for the choice than the first. Decision criteria 'importance of land for the development progress' is 2,5 times more important in the choice for strategy than the first. High values for these decision criteria increase the chance on an active strategy of the municipality.

For the choice of a passive dominant strategy only decision criterion five is important; 'importance of land for the development progress'. A low value for this decision criterion increases the chance on a passive dominant strategy for the municipality.

7.2 Discussion

There are a few remarks that should be made about the data collection. In discussion with respondents became clear that many found the number of decision criteria (attributes) too much to get a clear view on the situation. This is an explanation why some decision criteria were not represented in the data. The respondents did remark that some decision criteria caught their attention during decision making; this is the basis of conjoint preference modeling method. This indicated that this type of survey does work.

Another remark that should be made is about the ranking of the answers. The respondents had to rank their most preferable to their least preferable outcome from 1 to 4. This is not entirely correct; when we look at specific payoffs of those outcomes some are more negative than others. For example, compulsory purchase has a very low payoff for the landowner. But the ranking indicates that all outcomes have the same weight. This is why we cannot conclude about the specific importance of individual combined outcomes. But we can say which outcome is most preferable according to the choice set. When the survey is done again it is interesting to do the survey amongst real landowners. We did not choose this strategy because we thought that their answers are influenced by feelings and sentiment. But the answers by the experts also show a very internally driven landowner.

8. Recommendation

From international and national research becomes clear that the success of inner city transformation has a clear interdependency with the possibility to acquire land. Quotes such as 'who owns the land can build' are often mentioned. (Adams et al, 2001) conclude that multiple or fragmented ownership of land renders coordination development problematic and may even inhibit developer demand altogether. According to (Adams et al, 2001) development cannot proceed without state intervention or unless agreement is reached with every owner.

Although there is not an extended research to ownership constraints in Holland, this problem is widely acknowledged (Priemus & Louw, 2003), (Buitelaar et al, 2008) and (Louw, 2008). (Buitelaar et al 2008) conclude that governments should adopt Property Aware Planning practices. They conclude that there is a direct relationship between the success of a transformation project and land-ownership. From this literature I had derived the following hypothesis. I think that the process of urban transformation will be more efficient when municipalities adapt property-aware planning. By assessing the risks of a plan before the start of the project we expect a process improvement. Also the costs combined with interventions like compulsory purchase can be more efficient. Through earlier start of the acquisition of plots, process improvements can be reached.

From the collected data becomes clear on which decision criteria landowners decide to choose an active or passive strategy. Especially internal decision criteria are important for the landowner such as 'the current suitability of the location' and 'the emotional bond with the commodity' (decision criteria 1 & 2). This implies that landowners who score high on these decision criteria can form a delay in the process. These landowners will directly adopt a passive strategy which will lead to two possible outcomes in the matrix; compulsory purchase or retention (the landowner keeps the land in retention). The municipality should acquire this knowledge about landowners at the plan sight. When the municipality would choose to go forward the costs of purchasing these plots (financially as well as the cost of possible delay for the project) should be compared with the alternative to leave some plots (Property Aware Planning).

In my view this research project agrees with the conclusion in Urban Transformation & Landownership (Buitelaar et al, 2008); governments have to adopt more Property Aware Planning practices instead of plan-led planning practices. The municipality should assess the number of these landowners that are unwilling or unable to develop the land themselves and see how they assess their current suitability and emotional bond with the current location. From this assessment the municipality should define the risk of active or passive behavior. When the last is the case, the municipality could choose to start an expropriation procedure during negotiation. Or the municipality could conclude that expropriation is not worth the value it represents in the future project. In my view this will decrease the chance on high exploitation or plans that change because of high acquisition costs.

The solution is two way; first is a decision scheme to show if Property Aware Planning practices are necessary. And the second will show how to assess personal situations of landowners.

9. Solution

As we mentioned inner-city (re)developments are often not executed or at extreme high acquisition costs because of segmented ownership and problems with acquisition of land. This results in high cost for land acquisition and is one of the main reasons why plans need to change during transformation projects. Not only the price of land is important in this, but also the process is expensive due to time and man force consuming expropriation procedures. In an ideal world this delay is not necessary, when all landowners cooperate and transfer their land to active landowners. Sometimes all land owners are willing to cooperate, but practice shows that this is an exception (Buitelaar et al, 2008). This is why we recommend that the municipality assess the risk of plans at two levels.

- The overall planning policy
- Risk of individual landowners for the development process

The overall planning policy should be an assessment whether it is better to adopt Property Aware Planning. This means than the plan should be more ownership-led than plan-led. Ownership has a great impact on the financial success of plans. Because of the high cost of land at inner-cities the possibilities to acquire land are of key importance to the success of a plan. Below is a decision scheme to see whether the municipality should adopt Property Aware Planning² practices.

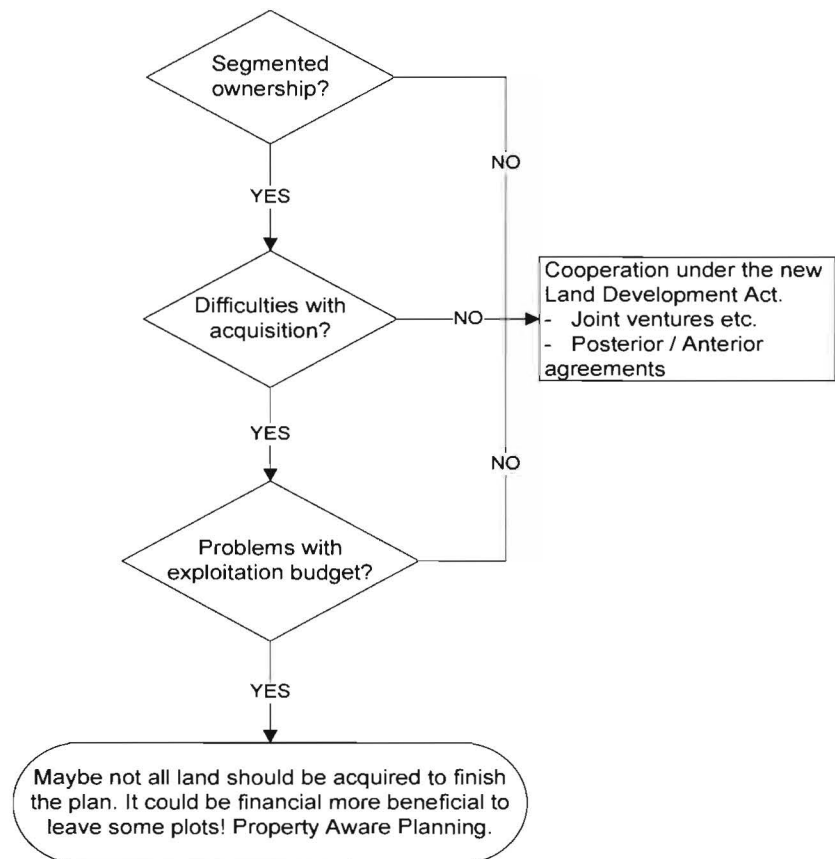


Figure 30: Decision scheme for Property Aware Planning

² Property Aware Planning; inner-city (re)development is often the consequence of possibilities to acquire land. Property Aware Planning is the constant awareness of the cost of acquiring a certain plot versus the revenues for the overall plan.

The decision scheme show the most important issues when it comes to difficulties in (re)development of inner-cities; segmented ownership, landowners that are reluctant to cooperate and problems with the budget. To summarize, the first part is to address which planning system is best for the municipality. When the cost of land influences the plan often the choice is made to alter the plan; make more apartments, plan more high end domiciles. But the problem starts with the acquisition of land which is too expensive because of high prices and a long and staggering process. The process of land acquisition can be improved by looking at the landowners present at the locations and using the tools for acquisition more efficient according to landowner behavior.

When you assess that there is a high chance on passive behavior of an individual landowner, the municipality should think if it is worth the effort to acquire the land. You know beforehand that an acquisition procedure will most likely end in compulsory purchase, which is a long procedure. Municipalities should assess beforehand the chance on landowner behavior. As explained above, a passive individual landowner can bear high on the exploitation costs.

Below is an assessment on the chance of certain ownership behavior. You can mark the level of suitability and the level of emotional bond with; 0 for low, 1 for medium and 2 for high. When the formula ends in a positive number this implies a higher chance on this type of behavior. When the outcome is negative it means a low chance on that type of behavior. For example; a high suitability (2) and high emotional bond (2) will mean a low chance on active landowner behavior & a high chance on passive landowner behavior.

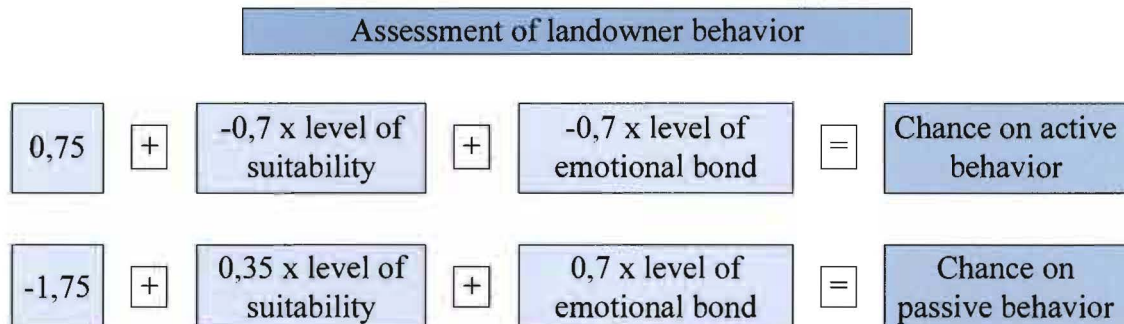


Figure 31: Should you use Property Aware Planning

9.1 Implementation

The solution for the problem is one that cannot be implemented in just one part of the development process. Property Aware Planning is a constant awareness of the cost of certain activities versus the revenues. The research project agrees with the necessity of this approach within municipalities, where dreams of success often blind the importance of a well balanced financial plan. That is the remark where I want to finish this research project with, where the focus was to research landowner choice behavior. Thanks to my research project we now know that landowner choice behavior is very internally driven. This implies that the perception of these landowners is very difficult to influence. How can you change the landowner's perception of their suitability or emotional bond? Think before you plan! Think before you expropriate!

10. Validation

There are two parts where I validated my research project, in both events I choose to interview experts about the decision criteria. The outcome of the model is also validated with interviews. Because we did not choose to use the exact numbers of the model, the validation with interviews is sufficient. If we chose to use the numbers that were calculated with STATA we had to validate these specific numbers with a real life acquisition process, to see whether the model predicts the real life situation.

10.1 Validation of decision criteria

To gather the decision criteria I choose to search for them in literature. When I gathered a list from literature, I spoke with experts in the field to see whether the criteria that I had until then were complete. I spoke with three different experts about the decision criteria.

- **Dr. E. Louw** (researcher OTB Delft)
- **Mr. P.S.A. (Peter) Overwater** (CEO bureau Overwater)
- **Ir. A. Segeren** (researcher Planbureau voor de Leefomgeving)

After the interviews with these experts on development policy and land acquisition we made the survey with the seven decision criteria that were left. These seven decision criteria were the input for the choice of the landowner.

10.2 Validation of survey outcome

There is a difference in validating the survey outcome and validating the specific data reflecting the decision criteria. As we told before we are not aiming to use the specific outcomes of the decision criteria. This will mean that we can say that one decision criteria is more important than the other in the choice of a certain strategy, but we cannot make a distinction on the specific level of importance.

We validated the outcomes of the and conduction of the survey with interviews with the following three persons;

- **Dr. E. van der Krabben** (Raboud universiteit Nijmegen)
- **Ir. A. Samsura** (Raboud universiteit Nijmegen)
- **Ir. A. Segeren** (researcher Planbureau voor de Leefomgeving)

We concluded that the outcomes of the survey were logical according to the knowledge present with the three persons. At the Radboud University Dr. E. van der Krabben & A. Samsura made a remark about the ranking and the impact of some combined outcomes. We addressed this remark in the discussion of the research project.

10.3 Validation of solution

In the solution I did not use new literature but the research data from the survey, which is why I consider the validation of the survey enough for the solution. The remarks by the people we interviewed are already put in de discussion of the research project.

Respondents survey (43)

Prof. Dr. Ir. Wim Schaefer (TU/e)	Boris van der Gijp (fortis real-estate)	Diana Westendorp-Frikkee (adviesburo Overwater)
ir. E. Blokhuis (TU/e)	Han Olden (Stogo advies)	Ed Noordam (adviesburo Overwater)
Drs. C.J.T.M Kokke (TU/e)	Leo Nooteboom (Nicis)	Pieter Kerkstra (adviesburo Overwater)
ir. E.H.B.J.M. (Elfi) de Wit PDEng	Paulina van Dam (DHV)	Ir. J. Heijmans (Strukton)
Ir. T. van Leengoed (AT Osborne)	Dr. E. Louw (TU Delft)	M. Helsdingen (gemeente Den Haag)
A. Segeren (Planbureau voor de Leefomgeving)	W. Kelders (gemeente Den Haag)	Mark (AT Osborne)
Erwin van der Krabben (Radboud Universiteit Nijmegen)	Ing. J. Termeer (PRC)	Wieneke van Overmeeren (AT Osborne)
Evelien van Rij (TU Delft)	P. Overwater (adviesburo Overwater)	Jurgen van der Heijden (AT Osborne)
Ir. Linda van Hilten (AT Osborne)	Joost van Blokland (AT Osborne)	Ir. Linda Coppens (Brink Groep)
Drs. Laurens van Drongelen (gemeente Zoetermeer)	Ing. D.N.M. Bakker (YP)	Ing. Twan Spanjers (YP)
Ing/ Paul Redert (YP)	Ing. Koen Moons (YP)	Ing. Rob Wiersma (YP)
Inge Schreuder (YP)	Ing. Menno Meulebeek (YP)	Paul Derks (YP)
Ing. Ruud van der Kemp (YP)	Ing. Oscar van der Vaart (YP)	Marcel Sanders (YP)
Ing. Giel-Jan Bogaert (YP)	Ing. Ger Janssen (YP)	Ing. Jelmer Kooij (YP ³)

External interviewed people (6)

- **Dr. E. Louw** (researcher OTB Delft)
- **Mr. P.S.A. (Peter) Overwater** (CEO bureau Overwater)
- **Ir. A. Segeren** (researcher Planbureau voor de Leefomgeving)
- **Dr. E. van der Krabben** (Raboud universiteit Nijmegen)
- **Ir. A. Samsura** (Raboud universiteit Nijmegen)
- **Ir. A. Segeren** (researcher Planbureau voor de Leefomgeving)

³ YP means young professional, about 25% of the respondents where either students in their graduation phase or people that just finished their graduation phase and started working.

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APPENDICES

Strategic behavior of landowners

Strategic choice in the negotiation of a land transaction
Recommendation how municipalities could deal with urban landowners

Eindhoven, University of Technology
Department; Construction Management & Engineering

Table of Contents

Appendix 1: gesprek afstudeervoorstel	1
Appendix 2: gesprek met E. Louw (OTB institute).....	2
Appendix 3: gesprek met P. Overwater	4
Appendix 4: gesprekken met Arno Segeren.....	6
Appendix 5: gesprek met dr. E. van der Krabben & ir. A. Samsura	9

Appendix 1: gesprek afstudeervoorstel

Gesprek afstudeervoorstel 15 juli 2008 (15:00 – 16:00)

Gesprekspartners : Wim Schaefer (WS)
 Elfi de Wit (EdW)
 Cees Kokke ((CK)
 Jelmer Kooij (JK)

(EdW) -> De doelgroep van het product vind ik onduidelijk.

-> Input voor het model vind ik onduidelijk, welke input heb je nodig om je model te vormen?

-> Je moet je misschien niet richtten op functies, maar meer op de rollen van de spelers in je spel!

Er vormde een discussie over de validatie van mijn project. (CK) Je moet wel eerst de tijdsduur beschrijven van je proces voordat je een uitspraak kan doen over de mogelijke verbetering ervan. (WS) Het kan ook anders, door een spel te vormen waarin je een vooronderstelling opneemt, en door het spel meerdere keren te spelen krijg je verschillende uitkomsten. En kun je kijken welke uitkomst een tijdswinst oplevert.

WS Ik vind al interessant als de uitkomst van Jelmer de besluitvormingsprincipes zal onderbouwen van 1 actor in het spel. Ik hoop ook dat het zo dicht mogelijk bij Expert Systems in de buurt komt.

De uiteindelijke conclusie is dat ik mijn thema en probleemstelling moet herzien. Kijk goed naar wat je wilt bereiken en wie je probleemhebber is (doelgroep).

Appendix 2: gesprek met E. Louw (OTB institute)

Interview Dr. E. Louw

Locatie OTB onderzoeksinstituut Technische Universiteit Delft

Donderdag 13 november 2008

Doel van dit gesprek:

Samen met dhr. Louw discussiëren over gedrag van grondeigenaren op binnenstedelijke locaties.

Onderzoek 's-Hertogenbosch:

Het viel dr. E. Louw op dat in dit gebied eigenlijk geen gebruik is gemaakt van publieksrechtelijke methoden om land in handen te krijgen. De gemeente heeft jarenlang geen bestemmingsplan vastgesteld, op deze manier kon de gemeente de grond niet publieksrechtelijk overnemen. Maar tegelijkertijd hadden private eigenaren niet genoeg recht om zelf te ontwikkelen op het gebied. Uiteindelijk is dit volgens dr. E. Louw het succes geweest van het proces.

Uitleg onderzoek en stand van zaken:

Na enige onduidelijkheid over de afbakening van mijn onderzoek, en de keuze die ik hierin heb gemaakt zijn we het er over eens dat het een juiste en belangrijke afbakening is. Namelijk de onderhandeling tussen de gemeente en private landeigenaren (bedrijven) die niet zelf willen of kunnen ontwikkelen.

Dr. E. Louw geeft aan dat deze partijen in het begin vaak wel willen ontwikkelen, en dit ook als doel hebben. Toch blijkt later in het proces dat deze wens niet haalbaar of wenselijk is. Toch moet ik opletten dat een percentage deze wens wel heeft.

Nadat ik vertelde dat ik gebruik maak van; (Adams et al, 1999 – 2002), gaf dr. E. Louw aan dat ik rekening moet houden met de werking van het Engelse systeem. Namelijk dat de gemeenten in landen zoals Engeland zich absoluut niet gedragen als in Nederland. Deze gemeenten hebben nauwelijks publiekrechtelijke mogelijkheden om ontwikkelingen tot stand te brengen. Dus, de keuzecriteria die ik uit dit stuk heb gehaald moeten vanuit een ander licht worden bekeken. We hebben gezamenlijk de keuzecriteria doorgenomen, en volgens dr. E. Louw waren ze naar zijn mening op dat moment compleet.

Opmerkingen over keuzecriteria:

Een van de keuzecriteria is of de waarde die de vastgoedeigenaar verwacht wordt gerepresenteerd in het bod van de gemeente. Dr. E. Louw geeft aan dat ik rekening moet houden met de waarde die ik wil meten. Hoe groot verschil wil je deze waarde geven. Het is naar de mening van dr. E. Louw niet altijd zo dat er grote verschillen tussen zitten. Het is maar net hoe de grondeigenaar deze waarde interpreteert. Voor de een kan ruilverkaveling een hoge waarde bevatten, een ander ziet het meer in compensatie van verhuiskosten.

Dr. E. Louw geeft aan dat mijn onderzoek heel erg lijkt op het modelleren van het hold-out model. Hij geeft aan dat dit type onderzoek niet is gedaan in Nederland, maar hij kent het wel uit Engelse literatuur.

De aanvullende voorwaarden, en wat er allemaal onder de keuzecriteria waarde valt moet duidelijk omschreven worden, anders geeft dit basis voor onderduidelijkheid. De scheiding tussen verwachting van waarde en onderzekerheid over het bod vond Dr. E. Louw wel juist.

Mijn keuzecriteria geven aan dat mensen tot ruilverkaveling bereid zijn wanneer de locatie te groot of te klein is. Dr. E. Louw geeft aan dat dit ook in combinatie met grote locale groei, en gemeentelijke groei kan. Wanneer een bedrijf verwacht dat het binnen een paar jaar op deze locatie ruimte tekort komt, kan het eerder bereid zijn om te verhuizen.

Valideerbaar

Volgens Dr. E. Louw kan het onderzoek publiceerbaar worden gemaakt, als rekening wordt gehouden met de grootte van de steekproef. Hij kent geen vergelijkbaar onderzoek in Nederland, maar zoals eerder aangegeven, kent hij wel modelleringen van het hold-out probleem in Engeland.

Mogelijke overige referenties;

Overwater (bureau gericht op de grondmarkt)

H. de Wolff, voor invullen survey

Opmerkingen van dr. E. Louw na het invullen van de survey

“Bij mijn antwoorden heb ik ook eigenlijk maar op 3 a 4 criteria gelet. Verder vond ik het moeilijk om de 4 mogelijkheden in elke situatie in te kunnen schatten. Wat theoretisch een probleem is dat je met de 7 keuze criteria beide partijen in je spel evenveel informatie geeft, terwijl alle vastgoed theorieën uitgaan van ongelijke informatie tussen de actoren.”

Ik neem deze opmerkingen mee in de discussie, maar was erg blij met deze respons. Dat dr. E. Louw let op 3 a 4 keuzecriteria geeft mij aan dat de manier van vraagstelling werkt. Want dit is precies het doel van preference choice modelling. Ik geef niet beide partijen evenveel informatie in het spel, dezelfde partij (vastgoedeigenaar) moet rekening houden met het mogelijke gedrag van de andere partij (gemeente) en dit meenemen in zijn keuze voor een strategie.

Appendix 3: gesprek met P. Overwater

Interview P.S.A. Overwater

Locatie bureau Overwater te Strijen

Donderdag 27 november 2008

Doel van dit gesprek

Samen met Mr. P. Overwater praten over de 'keuze / beslissingscriteria' die ik heb opgesteld. En of hij relevantie ziet voor mijn onderzoek in de praktijk.

Keuzecriteria -> DC 1: Geschiktheid van huidige locatie

Ik heb dhr. P. Overwater uitgelegd dat dit keuzecriterium een samenvoeging is van twee eerdere. Namelijk van de economische vooruitzichten van het bedrijf & de economische vooruitzichten van de omgeving. Hierop reageerde mr. P. Overwater dat dit vanuit zijn visie een relevant keuzecriterium is.

DC 2: Emotionele verbondenheid met de locatie

Mr. P. Overwater zag ook belang in van dit keuzecriterium, hij benadrukte dat grond emotie is! Hij voorspelde dat dit keuzecriterium een grote rol gaat spelen in de uiteindelijke uitkomst. En dat zal blijken dat dit erg belangrijk is voor de vastgoedeigenaar zijn keuze.

DC 3: Mate van onzekerheid over de waarde van het land

Dit keuzecriterium kwam vooral naar voren in de Engelse literatuur. Het bleek dat vastgoedeigenaren niet wilden verkopen en hun land in bezit hielden omdat er onduidelijkheid heerst over de waarde van het land. De schrijvers (Adams et al. 2001) zagen dit probleem vooral voorkomen in de binnensteden van Engeland. Mr. P. Overwater ziet dit probleem niet in deze vorm in Nederland. Want zo zegt hij; 'als mensen onteigend worden door de gemeente hebben ze direct recht op bijstand van gespecialiseerde bureaus'. Deze bureaus zoals Overwater zelf hebben grote kennis van dit proces.

DC 4: Becijfer het vertrouwen in uw onderhandelingspartner

Mr. P. Overwater ziet groot belang in het vertrouwen. Zoals hij zegt, grond is emotie en om emotie te verkopen heb je onderling vertrouwen nodig. Hij voorspelt dat je deze en de eerste twee keuzecriteria vaak ziet terugkomen in de data.

DC 5: Het stuk land is als volgt van belang voor de planvoortgang

Minder van belang volgens Mr. P. Overwater. Na een discussie over de invloed van belangrijkere stukken land in ontwikkelingsprocessen waren we het er over eens dat gemeente altijd het heft in handen neemt. We bedoelen hiermee dat gemeente het land van een stuk plan zal proberen te verkrijgen buiten het belang voor de planvoortgang om. Maar we waren het er ook over eens dat dit keuzecriterium invloed heeft op de onderhandelingspositie van vastgoedeigenaren in het plan. Dus verband houdt met de keuze om actief of passief gedrag te vertonen.

DC 6: Aantal succesvolle overeenkomsten tot nu toe

Mr. P. Overwater is het er mee eens dat vastgoedeigenaren die als laatst onteigend moeten worden zich sterker in eventuele onderhandelingen voelen dan landeigenaren die aan de start van het proces worden aangeschreven. Relevant keuzecriterium voor de vastgoedeigenaar dus.

DC 7: Strategie van de andere landeigenaren

Mr. P. Overwater denkt dat dit keuzecriterium niet veel verschil zal maken in de keuze. Volgens hem zijn vastgoedeigenaren heel erg gericht op hun eigen situatie.

Relevantie van het onderzoek in de praktijk

De relevantie voor de praktijk vindt de heer Overwater minder zichtbaar. Hij kan zich vinden in de keuzecriteria maar geeft aan dat vastgoedeigenaren het recht hebben om professionele hulp in te schakelen van een deskundig bureau zoals Overwater. Waarin de consultant de vastgoedeigenaar vertegenwoordigt in de onderhandeling. Hij geeft wel aan dat zijn bureau vooral zaken doet in het landelijke gebied en minder in het binnenstedelijke. Maar toch betekend dit vaak dat zijn bureau wordt ingeschakeld. De afweging die in mijn onderzoek wordt gemaakt is naar zijn mening misschien wetenschappelijk een boeiende, maar in de praktijk zal een vastgoedeigenaar eerder luisteren naar zijn vertegenwoordiger dan naar zijn eigen afweging.

Appendix 4: gesprekken met Arno Segeren

Gesprek 1

Datum: 21 oktober, 2008

Planbureau voor de Leefomgeving, Den Haag

Doel van dit gesprek

In dit gesprek is het doel dat ik mijn onderzoek toelicht dat ik wil gaan verrichten en Arno Segeren zal commentaar leveren op mijn aanpak en kijken of we elkaar in de toekomst kunnen helpen met de voortgang.

Uitleg stedelijke transformatie en grondeigendom

Arno begint het gesprek door zijn eigen onderzoeken toe te lichten, hij vertelt over de verschillende cases die beschreven worden in het onderzoek van 'Stedelijke transformatie en grondeigendom'. Er komen in het onderzoek cases voor waar gemeenten erg veel moeite hebben ondervonden met het aankopen van grond. In het project Waalfront van gemeente Nijmegen zijn meer dan 20 onteigeningprocedures gestart. Dit heeft de kosten van plannen stukken omhoog gebracht en veelvuldig geleid tot verandering van het plan. Voorbeelden hiervan zijn dat er gekozen is voor een hogere dichtheid om de exploitatie sluitend te maken.

Tevens zijn er andere voorbeelden zoals in Alkmaar, waar op het terrein bedrijven zaten die helemaal geen aanstalten maken om het stuk land te verkopen. Arno noemt hiervoor vooral de emotionele verbondenheid als reden. Er zat een bedrijfseigenaar op het terrein die daar al meer dan 80 jaar zat met zijn familiebedrijf en voor hem was dit een duidelijke reden om het stuk land niet van de hand te doen voor de ontwikkeling van de stad.

Arno legt uit dat hun oplossing voor het probleem is dat er meer moet worden gedaan aan eigendomsgevoelig plannen. Hij legt uit dat er veel geld wordt gestoken in onteigeningsprocedures en tijd om eigenaren te overtuigen hun land te verkopen. Hij geeft aan dat hij vindt dat het in veel gevallen beter is dat eigenaren hun stuk land behouden in het plan. In plaats dat er planlijn wordt getrokken en dat de gemeente zich veel op de hals haalt terwijl ruim van tevoren duidelijk is dat de eigenaren niet willen verkopen.

Hij is onderzoek aan het doen naar een bijkomende oplossing voor dit probleem, namelijk de toegevoegde waarde van aanvullende voorwaarden in de onderhandeling tussen eigenaren en de gemeente. Aanvullende voorwaarden kunnen in onderhandeling met dit type eigenaren volgens Arno een positieve draai geven aan de onderhandeling. Wanneer geld geen optie is, kan bedrijfsverplaatsing het gesprek een positieve draai geven. Arno denkt dat de oplossing van het probleem in het binnen deze twee aanpakken ligt. Hij is er van overtuigd dat de plangeleide manier van plannen die gemeenten hebben overgenomen uit de VINEX tijd niet past in het binnenstedelijke bestel. Daarom zal er op een andere manier met plannen worden omgegaan, het succes van het plan houdt direct verband met de mogelijkheid van het aankopen van land. Daarom moet volgens Arno plannen ook direct het gevolg zijn van dit gegeven.

Onderzoek keuzegedrag van vastgoedeigenaren

In dit deel van het gesprek heb ik de voortgang van mijn onderzoek toegelicht en dat ik van plan ben om een model te vormen om het gedrag van vastgoedeigenaren in het binnenstedelijke gebied in kaart te brengen. Ik leg uit dat ik hiermee als doel heb dat gemeenten beter kunnen schatten hoe deze vastgoedeigenaren zich gaan gedragen en dat ik hiermee een procesverbetering beoog. Namelijk dat instrumenten in het bezit van gemeenten eerder kunnen worden ingezet. Of kan worden gekozen om stukken land niet aan te kopen.

Arno is erg geïnteresseerd in de manier van het vormen van het model. Omdat ik er op dit moment onvoldoende vanaf weet kan ik dat niet toelichten. Arno wijst me op mij op literatuur van Adams uit Engeland, die volgens hem erg diep en goed onderzoek heeft gedaan naar redenen van vastgoedeigenaren om wel of niet hun land te verkopen. Hij denkt dat deze onderzoeken mij verder kunnen helpen naar het zoeken naar de redenen waarom landeigenaren niet willen verkopen.

Gesprek 2

Datum: 4 december, 2008

Planbureau voor de Leefomgeving, Den Haag

Doel van dit gesprek

In dit gesprek leg ik Arno mijn gevonden keuzecriteria voor om reactie van zijn kant te krijgen en om ze te valideren. Tevens wil ik met hem praten over de aanpak van mijn survey waar hij erg in geïnteresseerd is.

Validatie en opmerkingen keuzecriteria

Ik vertel Arno als eerst over de samenvoeging die ik heb gemaakt tussen verschillende keuzecriteria die ik heb gevonden uit de literatuur met Adams. Als eerste geeft Arno aan dat hij zeven keuzecriteria voor zijn gevoel weinig vindt. We spreken over de werkelijke keuze die vastgoedeigenaren maken bij de verkoop van land. Hij geeft een voorbeeld van directeuren die hun bedrijf verplaatsen omdat hun vrouw wil verhuizen. Na een lang gesprek geeft hij toe dat je nooit alle individuele keuzecriteria kunt achterhalen.

We bespreken de keuzecriteria stuk voor stuk en naar de mening van A. Segeren is de lijst compleet. Hij geeft wel aan dat hij het vreemd vindt dat in de survey aan elke keuzecriterium dezelfde waarde wordt gehangen. Hij zegt dat uit zijn ervaring naar voren komt dat een keuzecriterium zoals emotionele verbondenheid een veel grotere impact hebben op de keuze van de vastgoedeigenaar. Hij vraagt of dat niet meer naar voren moet komen in de vraagstelling. Hierop geef ik aan dat juist uit de survey naar voren komt hoe belangrijk individuele keuzecriteria zijn voor de vastgoedeigenaren. De statistische onderlegger zorgt voor verschillende sets waar telkens bepaalde keuzecriteria uit naar voren komen.

Respondenten voor survey

Arno heeft meerdere contacten in de praktijk en de wetenschappelijke wereld en wil me graag helpen met het aanleveren van goede respondenten voor mijn survey. Ik krijg een lijst van 14 namen voor mijn survey (zie laatste pagina in het verslag).

Gesprek 3

Datum: 5 februari, 2009

Planbureau voor de Leefomgeving, Den Haag

Doel van dit gesprek

In dit gesprek leg ik Arno de data voor uit de survey, en bespreken we uitvoeriger hoe de survey is uitgevoerd en wat de uitkomsten zijn. We proberen logischerwijs te achterhalen of de uitkomsten kloppen met het beeld dat Arno heeft van het speelveld.

Validatie uitkomsten survey

Arno is geïnteresseerd of er uit is gekomen dat bepaalde keuzecriteria meer gewicht hebben, zoals ik in het vorige gesprek had aangegeven. We gaan eerst bespreken welke uitkomsten er naar voren komen voor de keuze van de vastgoedeigenaar, en daarna welke keuzecriteria naar voren komen als de vastgoedeigenaren kijken naar de keuze van de gemeente.

De vastgoedeigenaren maken hun keuze op de eerste twee keuzecriteria. De geschiktheid van de huidige locatie en de emotionele verbondenheid met de huidige locatie. Arno is het eens met deze keuzecriteria en geeft aan dat hij zelf ook vindt dat deze twee de belangrijkste keuzecriteria zijn voor de vastgoedeigenaar. Wel vindt hij het vreemd dat de andere 5 keuzecriteria niet naar voren komen uit de survey. Hij zegt dat keuzecriteria 6, namelijk in welk deel je bent beland van het proces ook erg belangrijk kan zijn. In onderzoeken uit Engeland wordt dit ook aangegeven als keuze voor de vastgoedeigenaren, omdat dit hun onderhandelingspositie versterkt.

Voor de gemeente voeren we eenzelfde gesprek, al vinden we het wel vreemd dat vertrouwen in de onderhandelingspartner voor de gemeente valide blijkt. Belang van het stuk land voor de voortgang van het ontwikkelingsproces vinden we een heel logische voor de gemeente. Maar het vertrouwen hadden we eerder valide verwacht voor de vastgoedeigenaar dan voor de gemeente. Dit omdat de gemeente een sterkere positie heeft in de onderhandeling. De gemeente heeft genoeg capaciteit en mogelijkheden om het proces in hun richting te drukken. Ze kunnen alleen niet direct de strategie van de vastgoedeigenaar beïnvloeden. Daarom komt het vaak voor dat onderhandelingen eindigen in onteigening.

We zijn het er over eens dat het beperkte aantal respondenten zorgt voor de weinige keuzecriteria die valide zijn. We merken ook dat er redelijk wat keuzecriteria vaak niet onder een 95% interval maar wel onder een 90% interval vallen.

Appendix 5: gesprek met dr. E. van der Krabben & ir. A. Samsura

Datum: 21 oktober, 2008

Planbureau voor de Leefomgeving, Den Haag

Doel van dit gesprek

Omdat dit het eerste gesprek is met deze twee heren tijdens mijn afstudeeronderzoek zal ik beginnen met het toelichten van mijn gehele onderzoek. Ik wil graag hun mening horen over de aanpak van mijn onderzoek en of de heren mijn keuzecriteria kunnen onderschrijven. En of ze mijn uitkomsten kunnen valideren met de kennis die zij hebben over dit onderwerp. De beide heren zijn zelf ook bezig met speltheorie en daarom erg geïnteresseerd in de methode die ik heb toegepast om mijn data te analyseren.

Keuzecriteria

Allereerst hebben we gesproken over de keuzecriteria en hoe de survey in elkaar zit. Dr. van der Krabben kan zich vinden in de keuzeset die is opgezet vanuit het perspectief van de vastgoedeigenaar. Samen hebben we de lijst nagelopen waar we spreken over de verwachtingen van de uitkomsten. Hij heeft wel enkele opmerkingen over de uitvoering van het onderzoek. Namelijk is het zo dat doormiddel van de ranking die ik heb uitgevoerd niet mogelijk om te zeggen hoe belangrijk een bepaalde uitkomst voor de vastgoedeigenaar is. Volgens hem kun je wel zeggen dat een bepaalde uitkomst wordt geprefereerd boven de ander maar niet in welke mate. Omdat ik 1 tot en met 4 heb gekozen impliceert mijn onderzoek dat ze allemaal van even groot belang zijn. Terwijl in de werkelijkheid onteigening veel zwaarder is dan bijvoorbeeld minnelijke verwerving.

De uitkomsten vinden de beide heren logische uitkomsten. Ook stellen ze vragen bij de weinige keuzecriteria die valide blijken te zijn net zoals A. Segeren. Ze vragen zich af of dat komt door de methode die ik gebruik of door het aantal respondenten. Toch zijn de heren het met mij eens dat ik niet te weinig respondenten heb gebruikt om antwoord op mijn vraag te krijgen. De weinige valide keuzecriteria hebben direct te maken met de verschillende antwoorden die zijn gegeven, volgens dr. van der Krabben heeft dit te maken met de moeilijkheid van de survey, en het aantal keuzecriteria. Zeven keuzecriteria blijken teveel te zijn om een goed beeld te krijgen van de situatie. Ik neem dit mee in de discussie omdat alle drie de interviews dezelfde respons geven hierover.

De uitkomsten van de gemeente en de vastgoedeigenaren zijn logisch volgens de beide heren, daarom zijn ze ook erg enthousiast over de uitvoering van dit onderzoek.